ORGANIC MARKETS AND QUALITY ASSURANCE

Growers and Processors as Partners in Organic Fair Markets

Proceedings

Marketing and Quality Assurance Track
19th Organic World Congress,
International Expo Mart and Centre,
Greater Noida, UP, India

09-11 November 2017

ORGANIC WORLD CONGRESS 2017
जैविक कृषि विश्व कुंभ

India Organic

An Organic World Through an Organic India
जैविक भारत के माध्यम से जैविक विश्व

एपीडा
APEDA

The Agricultural and Processed Food Products Export Development Authority (APEDA)
3rd Floor, NCUI Building 3, Siri Institutional Area,
August Kranti Marg, (Opp. Asiad Village),
New Delhi - 110 016, India

National Programme for Organic Production

एपीडा
APEDA

The Agricultural and Processed Food Products Export Development Authority (APEDA)

3rd Floor, NCUI Building 3, Siri Institutional Area,
August Kranti Marg, (Opp. Asiad Village),
New Delhi - 110 016, India

ORGANIC MARKETS AND QUALITY ASSURANCE

Growers and Processors as Partners in Organic Fair Markets

PROCEEDINGS

Market and Quality Assurance Track
19th Organic World Congress, International Expo Centre and Mart
Greater Noida, Uttar Pradesh, India
November 9-11, 2017

Agricultural and Processed Food Products Export Development Authority,
Ministry of Commerce and Industries, Department of Commerce
3 Siri Institutional Area, August Kranti Marg,
New Delhi 110 016, India

Rita Teaotia, IAS

सत्यमेव जयते

वाणिज्य सचिव
भारत सरकार
नई दिल्ली–110011
COMMERCE SECRETARY
GOVERNMENT OF INDIA
NEW DELHI-110011

MESSAGE

It is a wonderful milestone for all the stakeholders working in organic agriculture sector in India to welcome the global organic fraternity on the occasion of 19th Organic World Congress 2017 at International Expo Centre and Mart, Greater Noida.

India being traditionally organic, home to a large diversity of crops and plants, and blessed with a traditional knowledge base in organic cultivation practices, has inherent advantages and strengths. The 19th Organic World Congress being farmer centric, is expected to showcase the strength of the sector and instil confidence in the global organic food industry regarding the quality of India's organic sector.

APEDA being at the core of the organic movement through the National Programme for Organic Production has played a pivotal role in organic agriculture promotion and in putting India on the world map as a major organic product supplier. Now in the role of Principal Partner to the 19th Organic World Congress and organizer of "Marketing and Quality Assurance Track", I congratulate APEDA for its proactive role and contribution in the growth of organic sector in India.

I also congratulate APEDA for bringing out the proceedings of Marketing and Quality Assurance Track in the form of a book entitled "Organic Markets and Quality Assurance-Growers and Processors as partners in Organic Fair Markets". I hope the compilation will serve as a valuable reference document for developing new directions in marketing and quality assurance in the organic sector.

[Rita Teaotia]

New Delhi
02 November 2017

Room No. 143, Udyog Bhawan. Tel.: 23063664 / Fax : 23061796 / E-mail : csoffice@nic.in

S.K. PATTANAYAK
SECRETARY

सत्यमेव जयते

भारत सरकार
कृषि एवं किसान कल्याण मंत्रालय
कृषि, सहकारिता एवं किसान कल्याण विभाग
Government of India
Ministry of Agriculture & Farmers Welfare
Department of Agriculture, Cooperation
& Farmers Welfare

MESSAGE

Marketing is the key driver to the growth of organic sector. Farmers can benefit from the booming market of organic only when they are partners in the Value Chain and have access to direct market linkages. The 19th Organic World Congress 2017 being organized during 9-11 November, 2017 is one of the most befitting event for producers and processors of organic products to connect with the world of organic trade.

APEDA being the principal partner of Organic World Congress is playing a key role in bringing the world organic trade to the door steps to the Indian producers. I compliment and congratulate APEDA for their valuable contribution in the organization and successful conduct of the event.

India is exporting significant amounts of organic produce like oilseeds, tea, coffee, spices, rice, sugar, pulses, dry fruits, and medicinal plants. Government of India is also promoting organic farming through schemes like Parampragat Krishi Vikas Yojana (PKVY) and Mission Organic Value Chain Development for North Eastern Region (MOVCDER) under National Mission for Sustainable Agriculture (NMSA).

I am pleased to learn that APEDA is publishing the proceedings of the marketing track in the form of a book entitled "Organic Markets and Quality Assurance-Growers and Processors as partners in Organic Fair Markets". I convey my best wishes for the success of the event.

(S.K. Pattanayak)

New Delhi
17th October, 2017

Office : Krishi Bhawan, New Delhi-110001, दूरभाष / Phone : 23382651, 23389444 फैक्स सं / Fax No. : 23386004
E-mail : secy-agri@gov.in

अध्यक्ष
Chairperson

Telefax : 011-23220991
Email : chairperson@fssai.gov.in

भारत सरकार
भारतीय खाद्य संरक्षा एवं मानक प्राधिकरण
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
एफडीए भवन, कोटला रोड, नई दिल्ली-110002
Government of India
Food Safety and Standards Authority of India
Ministry of Health and Family Welfare
FDA Bhawan, Kotla Road, New Delhi-110002
Website : www.fssai.gov.in

Foreword

The organic movement is gaining increasing importance across the country. The interests of consumers, who are becoming more and more aware of the benefits of organic foods, need to be protected by coming down heavily on spurious products which are reportedly rampant in the market place. The Food Safety and Standards Authority of India (FSSAI) is, therefore, in the process of notifying the Food Safety and Standards (Organic Foods) Regulations, 2017. These Regulations would not only serve to certify the integrity of organic food products but would also control unscrupulous practices in the market place and thereby ensure credibility of organic food amongst the consumers.

I extend my best wishes to the organisers of the 19th Organic World Congress, 2017 scheduled from 9th to 11th November, 2017 at Greater Noida. I am also pleased to learn that APEDA is publishing the proceedings of the marketing track of the Congress in the form of a book entitled "Organic Markets and Quality Assurance - Growers and Processors as Partners in Organic Fair Markets".

I convey my best wishes for the success of the Congress.

Ashish Bahuguna

कृषि और प्रसंस्कृत खाद्य उत्पाद
निर्यात विकास प्राधिकरण
(वाणिज्य एवं उद्योग मंत्रालय, भारत सरकार)

एपीडा
APEDA

Agricultural and Processed Food Products Export Development Authority
(Ministry of Commerce & Industry, Govt. of India)

देवेन्द्र कुमार सिंह, आई ए एस
अध्यक्ष

D. K. Singh, IAS
Chairman

Message

The world of organic agriculture is growing steadily since last fifteen years and it is now spread over to more than 51 million ha area in 179 countries. Global retail sales of organic food and drink have reached 81.6 billion US$ in 2015 and is expected to cross 100 billion by 2020.

India with more than 1.4 million ha area under certified organic agriculture is 7th largest country in the world in terms of net cultivation area and ranks first with largest pool of practicing organic farmers. National Programme for Organic Production (NPOP) had been the main driving force behind this movement. With its growing strength and significant contribution to the organic sector India is proud to be the host of 19th Organic World Congress 2017 during 9-11th November 2017 and I welcome all the delegates to be the part of fascinating world of organic agriculture in India.

Agricultural and Processed Food Products Export Development Authority (APEDA) is the flag bearer of organic farming in India and the National Programme for Organic Production (NPOP) has played central role in organic farming promotion and putting India on the world map as diversified organic product supplier. Its quality assurance initiative under NPOP is internationally acclaimed and has recognition agreement with major importing countries.

APEDA being the Principal Partner of the 19th Organic World Congress 2017 is spearheading the "Marketing and Quality Assurance Track" which is attracting the organic food product industry and quality assurance network from across the globe. Marketing and Quality Assurance Track shall be hosting 45 presentations from key stakeholder from 21 countries. The present book entitled "Organic Markets and Quality Assurance-Growers and Processors as Partners in Organic Fair Markets" is a compilation of papers proposed for presentation and discussion in the Marketing Track of the congress.

I hope the outstanding contribution by eminent personalities will provide a great insight to the prospects, problems, constraints and opportunities for the sector and will serve as reference document for designing appropriate strategies for better future of organic food products

New Delhi
30th October 2017

(D. K. Singh)

तीसरी एवं चौथी मंजिल, एन. सी. यू. आई. बिल्डिंग, 3, सीरी इंस्टीट्यूशनल एरिया, अगस्त क्रांति मार्ग, नई दिल्ली-110016, फोन : +91-11-26513167 (निजी), 26514572, फैक्स : +91-11-26526187
ईमेल : chairman@apeda.gov.in, वेबसाइट : www.apeda.gov.in

3rd & 4th Floor, NCUI Building, 3, Siri Institutional Area, August Kranti Marg (Opp. Asiad Village), New Delhi - 110 016, Telefax : +91-11-26513167 (D); 26514572, Fax : +91-11-26526187
E-mail : chairman@apeda.gov.in, Website : www.apeda.gov.in

ORGANIC MARKETS AND QUALITY ASSURANCE

Growers and Processors as Partners in Organic Fair Markets

PROCEEDINGS

Market and Quality Assurance Track
19th Organic World Congress, International Expo Centre and Mart
Greater Noida, Uttar Pradesh, India
November 9-11, 2017

Editors

1. Dr. AK Yadav, Advisor (NAB), APEDA, New Delhi, India
2. Dr. Tarun Bajaj, General Manager, APEDA, New Delhi, India
3. Prof. Sukhpal Singh, Professor, IIM, Ahmadabad, India
4. Prof. Amar KJ Nayak, Professor, XIMB, Bhubaneswar, India
5. Rudi Dalvai, President, WFTO, Global Office, Godfried Bomansstraat 8-3, 4103 WR Culemborg, The Netherlands.
6. Natalia Leil, Chief Executive, World Fair Trade Organization, Global Office, Godfried Bomansstraat 8-3, 4103 WR Culemborg, The Netherlands.
7. Mathew John, IFOAM World Member, Keystone Foundation, India
8. Ashish Gupta, Muskan Jaivik, Himachal Pradesh, India

Published by

Agricultural and Processed Food Products Export Development Authority,
Ministry of Commerce and Industries, Department of Commerce
3 Siri Institutional Area, August Kranti Marg, New Delhi 110 016, India
For Circulation during 19th Organic World Congress, India

Disclaimer

INDEX

Part 1

ORGANIC WORLD CONGRESS 2017

जैविक कृषि विश्व कुंभ

Organic Food Markets as Engines of Growth

The Importance of Organic Agriculture for Developing Countries: A Statistical Overview

Helga Willer[1] and Julia Lernoud

About Authors

Julia Lernoud and Helga Willer work at the Research Institute of Organic in Switzerland, where they are in charge of data collection on organic agriculture and Voluntary Sustainability Standards.

Key words: Organic farming, developing countries, organic production, organic exports

Summary

Although the organic agricultural land covers only 1% of the global farmland, organic agriculture – with a constantly growing global market of over 60 billion euros in 2014 – plays an increasingly important role for developing countries. This is demonstrated by the fast growth of organic producers, high organic share of key commodities as well as increasing export activities, which are beginning to be well documented by more and more countries. However, major data gaps continue to make a full assessment of the potential and importance of organic agriculture a challenge. Some current data are presented in this paper, based on the data of the annual global survey on organic farming carried out by the Research Institute of Organic Agriculture FiBL.

Introduction

The organic area and organic market continue to grow globally, and organic agriculture has reached wide acceptance amongst farmers, consumers, market actors, policy makers and the public in many countries, particularly in developed countries. Among other reasons, governments support organic farming because it responds to consumer demand for high-quality food and environmentally friendly farming practices. However, currently more than 90% of global retail sales are in Europe and Northern America, whereas developing countries are often suppliers for these markets. In order to assess the current status and trends of organic farming in developing countries, data from the global survey on organic agriculture are analysed.

Material and Methods

Since 2000 key data on organic agriculture worldwide have been collected and published annually. The Research Institute of Organic Agriculture (FiBL) carries out data collection among a network of 200 data providers (including governments, certifiers, and the private

[1] Helga Willer, Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH-5070 Frick, www.fibl.org, www.organic-world.net. Email - helga.willer@fibl.org

sector), using a standardised questionnaire to capture data on area, operators, production, retail sales and international trade. Over the years, data availability has increased substantially (Willer & Lernoud 2016). However, major data gaps remain, in particular related to market data (production, domestic sales, international trade). In order to get a clearer idea about organic production (and hence market potential) for countries that do not supply such data, FiBL has recently started to calculate organic production volumes (in metric tons) for selected commodities that are relevant for developing countries - an activity related to FiBL's annual market report on Voluntary Sustainability Standards (Lernoud et al 2016). The calculated data show the estimated global organic production for these crops, the importance of these crops for individual countries, and also, how the selected organic products compare with products of Voluntary Standards Initiatives (like for instance Fairtrade International, UTZ etc).

Results

Data on organic agriculture are available for 172 countries (end of 2014; Willer & Lernoud 2016). According to the latest survey on global organic farming, almost 44 million hectares of agricultural land were managed at the end of 2014, constituting approximately 1% of the global farmland; in eleven countries more than 10 percent of the farmland is organic. Retail sales of organic food reached almost 63 billion Euros; however, consumer demand for organic products is concentrated in North America and Europe; these two regions comprise more than 90 percent of global revenues (Table 1). Asia, Latin America and Africa are important producers and exporters of organic foods. There were almost 2.3 million producers in 2014. Forty percent of the world's organic producers are in Asia. Whereas the organic area has quadrupled since 1999, the number of producers, many of them with small scale production, increased more than tenfold – an indicator of increasing importance of organic agriculture in developing countries.

In order to capture the importance of organic farming in developing countries, the countries on the Development Assistance Committee (DAC) list of recipients for Official Development Assistance (ODA) from the Organization for Economic Cooperation and Development (OECD) were analysed.[2] Whereas over a quarter of the world's organic agricultural land, 11.7 million hectares (11.2 % in the global South), is located in countries listed on the DAC list, 87 percent of all organic producers (more than 1.9 million) are in countries of the DAC list (Table 1). Most of the agricultural land is located in Latin American countries (almost 6.4 million hectares), with Asia (3.5 million) and Africa (1.3 million) in second and third place. Only 0.4 % of the agricultural land in the DAC countries is organic (against 2% in the developed countries).

However, looking at selected high value commodities from developing countries, the organic shares are considerably higher, and some countries reach double digit-shares (Table 2).

[2] The list is available at the OECD website at http://www.oecd.org/dac/stats/documentupload/DAC%20List%20of%20ODA%20Recipients%202014%20final.pdf

[3] For Latin America the data are incomplete, it may be assumed that the market is much higher.

Table 1: Key indicators for organic agriculture in the continents 2014

Continent	Organic agricultural land (hectares)	DAC countries: Organic agricultural land (hectares)	Organic producers (number)	DAC Countries: Organic producers (number)	Retail sales (Million Euros)	DAC Countries: Retail sales (Million Euros)
Africa	1'263'105	1'262'441	593'050	592'894	N/A	N/A
Asia	3'567'474	3'482'482	901'528	884'162	5'069	3'848
Europe	11'625'001	508'942	339'824	73'375	26'390	5
Latin America	6'785'796	6'380'178	387'184	387'055	731[3]	731
North America	3'082'419		16'660		29'585	
Oceania	17'342'416	85'159	22'115	19'213	1'044	N/A
Total	**43'662'446**	**11'719'202**	**2'260'361**	**1'956'699**	**62'816**	**4'584**

Source: *FiBL Survey 2016 (Willer & Lernoud 2016)*

Please note that for most of the DAC countries data on organic retail sales is not available, so it can be assumed that the total organic market is bigger.

Table 2: Estimated global organic production of selected key commodities 2014

Crop category	Estimated organic production [metric tons][4]	Organic share of total	Key producing countries by production volume and share of total production[5]
Bananas	1'036'500	1.0	Dominican Republic (38.2%), Ecuador (2.3%), Philippines (1.2%)
Cocoa	118'700	2.6	Dominican Republic (100%), Peru (20%), Mexico (10%)
Coffee	264'310	3.0	Mexico (34%), Peru (16%), Ethiopia (15%)
Tea	59'560	1.0	China (1.7%), India (1%), Myanmar (4.6%)

Source: *FiBL estimate based on national data sources*

In the Dominican Republic a very large part of the cocoa production is organic; and as cocoa represents one of the key agricultural export products of the country, this shows the indisputable economic significance of organic production for this crop. If compared to the data for Voluntary Sustainability Standards, many of which are focusing on only a very few products and do not have same rigorous production standards, it becomes obvious that organic has in many cases a comparable production (Lernoud et al. 2016).

[4] Where this data is not available, which is the case for most countries; these data are calculated on the basis of the available area data for the selected crops that are collected by FiBL in the framework of its survey. FAO yield data were used to calculate the production (assuming on average 70 to 80 percent of the conventional yields depending on the commodity and country).

[5] It should be noted that for some countries the shares can be considerably higher than the global share of some crops.

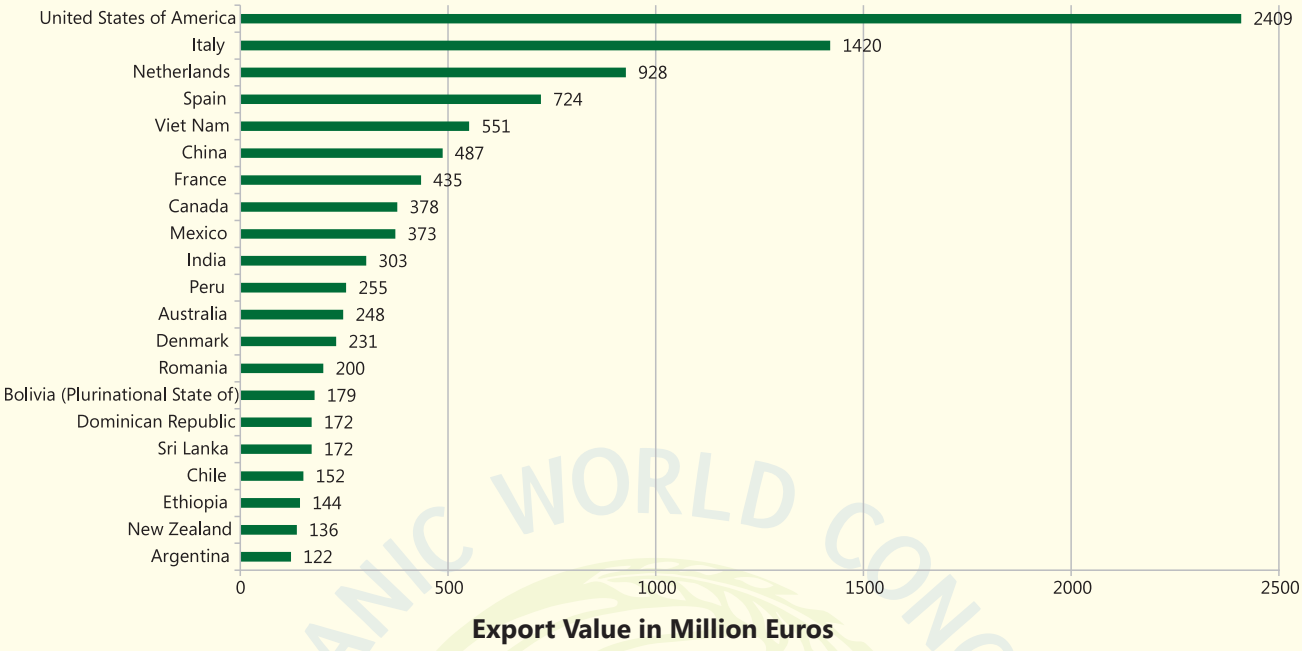


Figure 1: Organic export values 2014

(Source: Willer & Lernoud 2016. Please note that many countries do not have such data)

Export data show the importance of organic exports, and it is interesting to note that many developing countries - while not collecting data on the domestic market - provide export data, which shows the relevance of organic export for the economy. While 52 countries have data on the retail sales value, only 28 % percent of these countries with retail sales data are developing countries. Export data (value in Euros) is available for 46 countries, and 56% of these are developing countries. Based on the scarce export value data that is available, one could tentatively assume that one third of the organic export value is generated in developing countries. There are many developing countries among the top 10 exporters (Figure 1).

Conclusion

Even though only 0.4 percent of the farmland in developing countries is organic, the FiBL data show that in many developing countries organic farming plays an increasingly important role, in particular for selected commodities. Many high value crops are grown, reaching substantial organic shares and considerable export values. In the light of booming organic markets, it can be assumed that the market/export potential for organic products continues to be high. However, in order to be able to draw clear conclusions on the potential organic farming has for exports and domestic markets, more and better data than available so far are needed, covering for instance information such as economic and farm-level data, data on domestic supply and retail sales of organic food, export volumes and information on yields. Some countries have set up very good data collection systems – both for export volumes and values - for instance Peru, Costa Rica and the Dominican Republic: It would be recommendable if such good examples could be followed by other countries. There is a clear need for

governments to provide better data. With more and more countries implementing organic farming regulations, data collection activities are expected to be eased in the future.

Acknowledgements

The authors gratefully acknowledge funding for the data collection on organic agriculture worldwide from the Swiss State Secretariat for Economic Affairs (SECO), the International Trade Centre (ITC) and Nürnberg Messe as well as support from IFOAM – Organics International.

References

- Lernoud, J et al. (2016) The State of Sustainable Markets - Statistics and Emerging Trends 2015. International Trade Centre, Geneva, Switzerland.
- Willer, Helga and Lernoud, Julia (Eds.) (2016) The World of Organic Agriculture. Statistics and Emerging Trends 2016. FiBL and IFOAM – Organics International, Frick and Bonn.

Organic Agriculture in Asia Current figures and Trends

Julia Lernoud[1] and Helga Willer

About Authors

Julia Lernoud and Helga Willer work at the Research Institute of Organic Agriculture (FiBL) in Switzerland, where they are in charge of data collection on organic agriculture and Voluntary Sustainability Standards.

Key words: Organic agriculture, organic market, development of organic agriculture in Asia

Summary

Asia has 40 percent of the worlds organic producers, and between 2012-2014, its organic agricultural area has grown at a steady pace. The organic agricultural land in Asia amounts to almost 3.6 million hectares, which is 0.3 percent of the total agricultural area in the region, and eight percent of the global organic agricultural land. The organic market is at least 5 billion Euros. However, organic market data is not available for all countries, so we can assume that the organic market is much bigger.

Introduction

Under the Global Survey on Organic Agriculture carried annually by the Research Institute of Organic Agriculture FiBL, the latest data on organic agriculture in Asia is collected. Here authors present the latest data on organic agriculture in the region as of December 2014.

Material and Methods

Since 2000, the Research Institute of Organic Agriculture (FiBL) has collected and published annually data on organic agriculture worldwide. FiBL collects data on organic farming among a network of 200 data providers from around the world (including governments, certifiers, and the private sector). In order to capture data on various indicators, area, operators, production, retail sales and international trade, FiBL has developed a standardised questionnaire that provides a harmonized tool for the data collection process. Over the years, data on the indicators has become more available. However, for some countries and indicators, major data gaps remain, in particular, related to market data, like production, domestic sales and international trade (Willer & Lernoud 2016).

Current statistics: Key indicators

The organic agricultural land in Asia amounts to almost 3.6 million hectares, which is 0.3 percent of the total agricultural area in the region. Eight percent of the global organic agricultural

[1] Julia Lernoud, Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH-5070 Frick, www.fibl.org, www.organic-world.net. Email - julia.lernoud@fibl.org

land is in Asia. Compared with 2001 (420'000 hectares), organic land has increased almost eightfold, (Fig 2). Between 2013 and 2014, the organic area in Asia increased by 158'500 hectares or 4.7 percent, continuing to recover after the loss of half a million hectares in India in 2012. The country with the largest organic agricultural area is China (1.9 million hectares), (Fig 1). The countries with the highest shares of organic agricultural land are Timor-Leste (6.8 percent) and Sri Lanka (2.3 percent).

Asia: The ten countries with the largest organic area 2014

Source: *FiBL survey 2016*

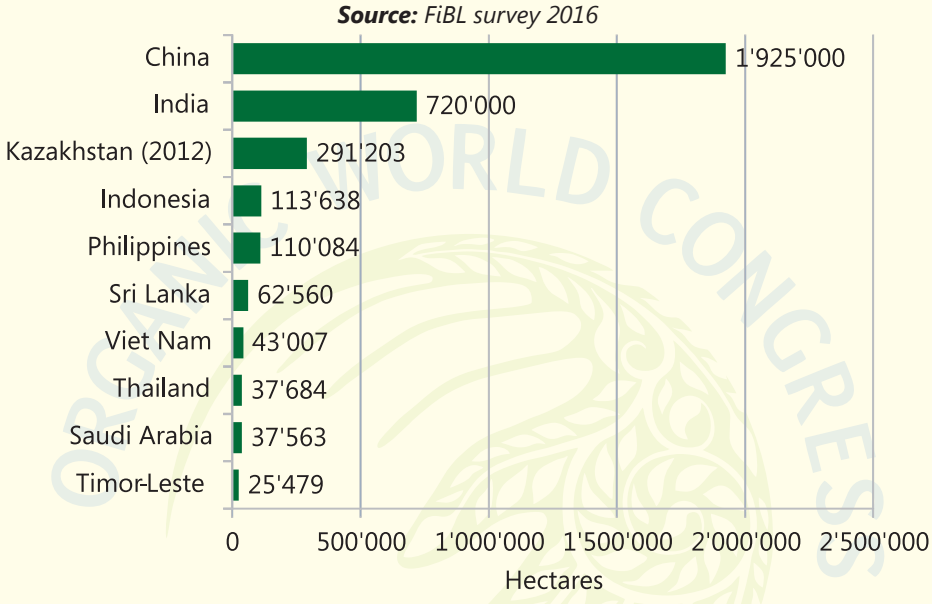


Figure 1. Asia: The ten countries with the largest organic agricultural land 2014

Source: *FiBL survey 2016; based on information from the private sector, certifiers, and governments.*

Asia: Development of organic agricultural land 2000 to 2014

Source: *FiBL-IFOAM-SOEL 2002-2016*

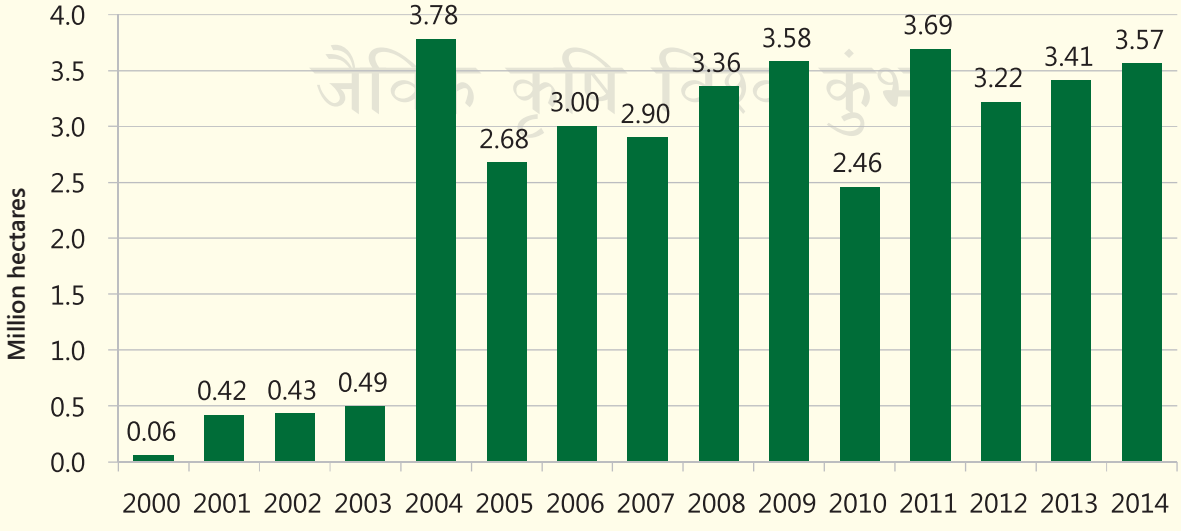


Figure 2. Asia: Development of organic agricultural land 2000 to 2014

Source: *FiBL survey 2016; based on information from the private sector, certifiers, and governments*

In 2014, 900'000 organic producers were reported in Asia. India is the country with the most organic producers (650'000), followed by the Philippines (almost 166'000) (Figure 3). Unfortunately, many countries do not report the number of producers or only report the number of companies, so it can be assumed that the number of producers is higher. Since 2004, when there were 100'000 organic producers, the number increased almost eight-fold.

Asia: The ten countries with the largest number of organic producers 2014

Source: *FiBL survey 2016*

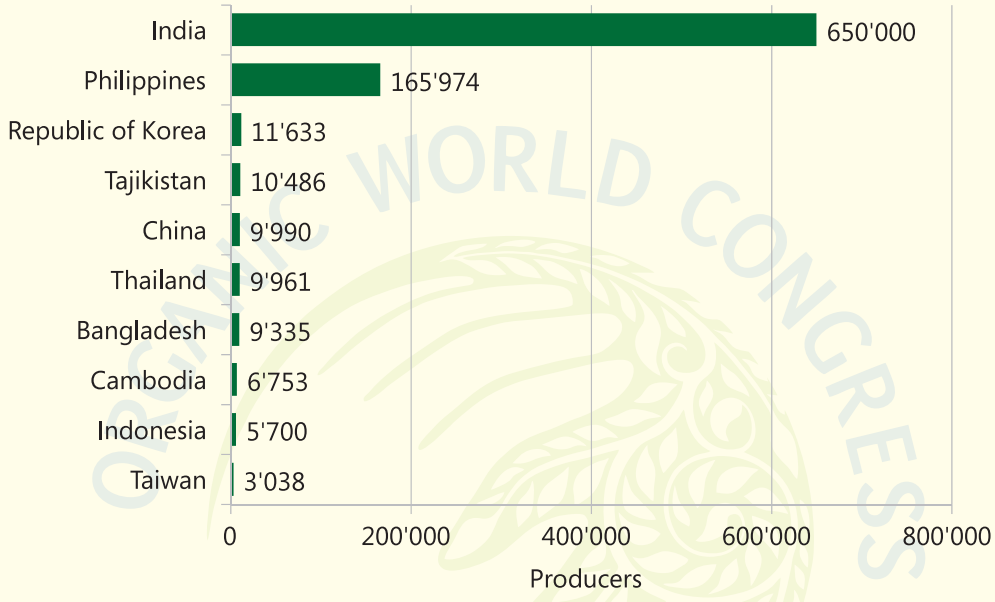


Figure 3. Asia: The ten countries with the largest number of organic producers 2014

Source: *FiBL survey 2016; based on information from the private sector, certifiers, and governments*

Land use and key crops

In 2014, 45 percent of all organic farmland was used for arable crops (1.6 million hectares), 1 percent for grassland/grazing areas (almost 28'000 hectares), and 15 percent (541'000 hectares) for permanent crops. Detailed information was not available for 37 percent of the agricultural land, so it can be assumed that each category has a far larger share of the total organic land (Fig 4).

The key organic arable crop group is cereals (mainly wheat and rice), with over 755'000 hectares reported in total, representing 0.2 percent of the total cereal area in Asia. Most organic cereals were grown in China (almost 566'000 hectares) and Kazakhstan (130'000 hectares). Oilseeds (mainly soybeans) are also an important crop group grown on at least 443'000 hectares, mainly in China and India, and represented 0.8 percent of the total oilseed area in Asia. The key organic cereals were wheat, rice and grain maize. Organic wheat represented over 30 percent of the total organic cereal area, and 0.3 of the total cereal area in Asia. The largest organic wheat areas were in China (almost 121'500 hectares) followed by Kazakhstan (almost 120'000 hectares). Organic rice was mainly grown in China (almost 181'500 hectares) constituting 80 percent of the total organic rice of the region.

Almost fifteen percent of the organic farmland was used for permanent crops; most of this land was used for coconuts (almost 122'000 hectares), coffee (113'000 hectares), and tea (at least 58'000 hectares). The Philippines was the country with the largest area of organic coconuts with 80'500 hectares, representing over 66 percent of the total organic coconut area of the region. Most of the organic coffee grown in Asia was found in Indonesia, where 81'500 hectares was reported, followed by Timor-Leste (more than 25'000 hectares); both countries represented almost 95 percent of the organic coffee area in Asia. Organic coffee represented 4.4 percent of the total coffee in Asia. Almost two percent of the total tea grown in Asia was organic; most of it was in China followed by Myanmar, and India.

In 2014, 6.3 million hectares of organic wild collection were reported in Asia. Unfortunately, no detailed data is available for 87 percent of the reported area. From the details available, wild fruits and wild mushrooms are the key commodities, furthermore, wild oil plants (44'700 hectares) and medicinal plants (18'400 hectares) play an important role.

Asia: Use of agricultural organic land 2014

Source: *FiBL survey 2016; based on information from the private sector, certifiers and governments.*

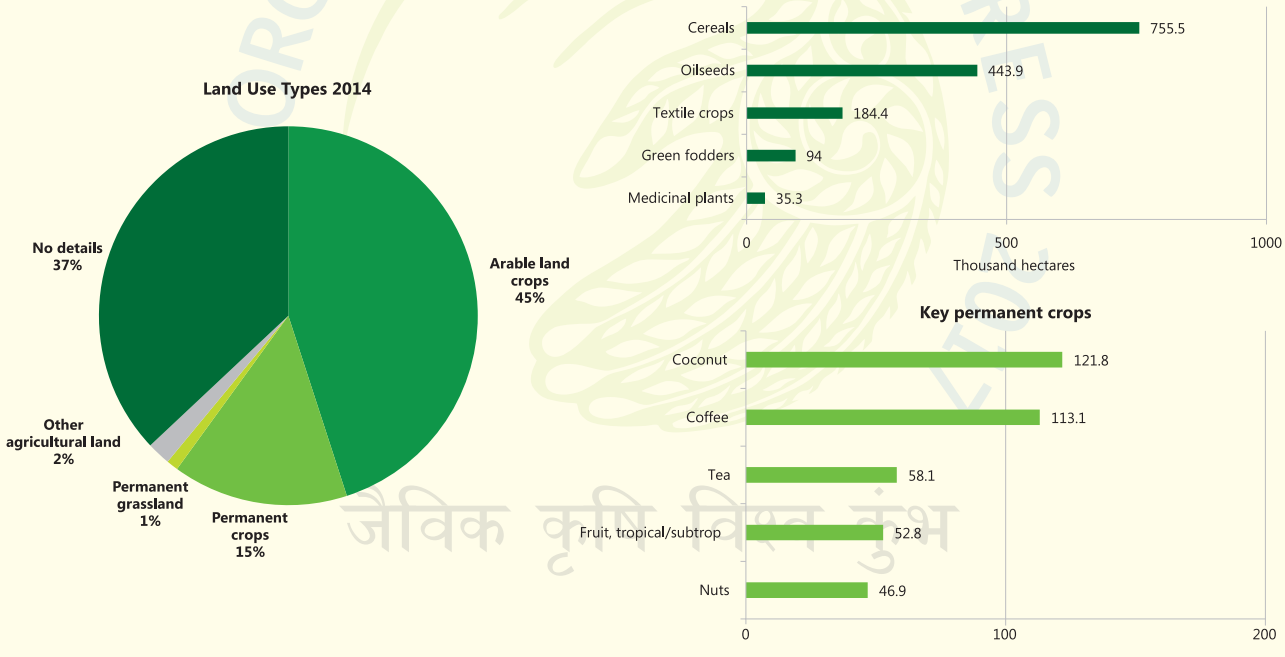


Figure 4. Asia: Use of organic agricultural land 2014

Source: *FiBL survey 2016; based on information from the private sector, certifiers, and governments*

Organic retail sales and exports

Market data is not available for all countries, but we can assume that the market is continually growing. The organic market is at least 5 billion Euros (7% of the global market), however, only eight countries provided retail sales values. For China 3.7 billion Euros were reported for 2014, making the country the world's fourth biggest market for organic products. Furthermore, Japan has a large organic domestic market valued at 1 billion Euros, and South Korea reported a market of 221 million Euros.

Most of the organic production in Asia is for export. However, China and Japan import many products from the region. Europe and North America remain key recipients of Asia organic exports. Key organic export commodities are rice, tea, coffee, tropical fruits, and spices. Unfortunately, only few countries provide data on exports and imports, 13 countries reported data on organic exports, less than 40 percent of the countries with organic production.

Conclusion

Even though detailed area and market data is not available for most of the countries, we can say that the organic sector is growing in Asia. However, is crucial that better and more detailed data become available to better understand the sector and focus the policy support.

Acknowledgement

The data collection on organic agriculture worldwide is funded by the Swiss State Secretariat for Economic Affairs (SECO), the International Trade Centre (ITC) and Nürnberg Messe.

Reference

- Willer, Helga and Julia Lernoud (Eds.) (2016): The World of Organic Agriculture. Statistics and Emerging Trends 2016. Research Institute of Organic Agriculture (FiBL), Frick and International Federation of Organic Agriculture Movements (IFOAM – Organic International), Bonn, Germany.

Organic Agriculture in India
An Overview

APEDA[1] Agricultural and Processed Food Products Export Development Authority, India

About APEDA

Agricultural and Processed Food Products Export Development Authority (APEDA) was established by an act of parliament during 1986 to look after the agricultural and processed food products export. APEDA is also the secretariat for the National Programme for Organic production (NPOP) and is the key government agency for promoting the growth of organic agriculture sector in India.

Key words: APEDA, Accreditation and certification, NPOP, Participatory Guarantee System, PGS-India

Summary

A country known for its wisdom in traditional agriculture, which was essentially organic, is picking up fast, the modern tenets of standard based organic agriculture and emerging as the hub for organic food products raw materials. Robust mechanism for accreditation and certification has earned international recognition. In terms of the total farm area and number of producers, India is the home for largest arable cultivated land under organic certification process and about half of the total growers in the world. In terms of policy support and Government interventions also India stand apart and is poised to have a well organized organic agriculture sector, supported with series of institutions and supportive policies of federal and provincial governments.

Introduction

Although, India had been traditionally organic and its farmers are 40 century farmers with large pool of traditional wisdom on best practices in organic agriculture, the modern standards based organic agriculture started only recently with the growing demand for organic food and fiber in the western world. National Programme for Organic production (NPOP) launched during 2001 laid the foundation for systematic development of organic agriculture sector in the country. NPOP, which provides for an institutional framework for accreditation and certification of various facets of organic agriculture processes has earned international recognition and enjoys recognition agreements with European Union, USDA, NOP and Switzerland. NPOP is being managed and operated by the APEDA under Ministry of Commerce and Industry, Government of India. Started with just 42,000 ha during 2003-04, it has grown almost 35 fold, touching a figure of 1.45 million ha during 2016-17. Almost all types of agricultural, horticultural and non-food crops are being grown under organic certification

[1] Agricultural and Processed Food Products Export Development Authority, 3 Siri Institutional Area, August Kranti Marg, New Delhi, India, www.apeda.gov.in, Email – akyadav@apeda.gov.in

process. Livestock, aquaculture, animal feed processing and handling, mushroom production, sea weeds, aquatic plants and green house crop production have also been brought under the ambit of organic certification. An overview of organic agriculture sector in India, as on March 2017 is presented here.

Methodology

The statistics being presented here has been drawn from the TRACENET, an on-line application tool being managed by APEDA under NPOP for management of entire organic certification system in the country. All certification bodies upload their data on this tracenet and issue necessary scope certificates and transaction certificates through this system.

Overall scenario

1. Area

By the end of March 2017, India has brought more than 4.45 million ha area under organic certification, comprising of 1.44 million ha (32.35%) under cultivation and 3.0 million ha (67.6%) under wild harvest collection. Overall status of area under organic certification process in different states of India is given in Table 1.

Table 1: Area under organic certification process (2016-17)

S. No.	State Name	Organic Area (ha)	In Conversion area (ha)	Total Farm area (ha)	Wild harvest area (WH) (ha)	Total WH+Farm
1	Andhra Pradesh	9812.8	7871.0	17683.8	155099.1	172783.0
2	Arunachal Pradesh	21.4	3989.7	4011.2	68300.0	72311.2
3	Assam	2544.0	21326.3	23870.3	60.0	23930.3
4	Bihar	0.0	1.2	1.2	678.0	679.2
5	Chhattisgarh	2339.7	10372.3	12712.1	167040.0	179752.1
6	Goa	14116.7	1645.6	15762.4	0.0	15762.4
7	Gujarat	36034.2	28206.8	64241.0	6253.9	70495.0
8	Haryana	4482.7	528.8	5011.5	20.1	5031.7
9	Himachal Pradesh	5903.7	6473.0	12376.7	2000.0	14376.7
10	Jammu & Kashmir	9550.0	13058.2	22608.3	159000.0	181608.3
11	Jharkhand	88.4	26725.4	26813.9	10000.0	36813.9
12	Karnataka	22478.2	58610.8	81089.0	859.7	81948.8
13	Kerala	13809.2	11003.4	24812.7	18889.1	43701.8
14	Lakshadweep	895.5	0.0	895.5	0.0	895.5
15	Madhya Pradesh	213968.1	250891.2	464859.4	1827837.9	2292697.3

S. No.	State Name	Organic Area (ha)	In Conversion area (ha)	Total Farm area (ha)	Wild harvest area (WH) (ha)	Total WH+Farm
16	Maharashtra	84338.7	139668.7	224007.5	68384.2	292391.7
17	Manipur	0.0	241.4	241.4	0.0	241.4
18	Meghalaya	1414.8	8214.7	9629.5	0.0	9629.5
19	Mizoram	0.0	210.0	210.0	0.0	210.0
20	Nagaland	1508.6	3191.2	4699.9	0.0	4699.9
21	New Delhi	9.2	0.0	9.2	0.0	9.2
22	Odisha	36710.3	55479.7	92190.1	7546.0	99736.1
23	Pondicherry	2.8	0.0	2.8	0.0	2.8
24	Punjab	434.5	598.0	1032.5	16616.0	17648.5
25	Rajasthan	46088.7	105521.1	151609.9	387912.2	539522.1
26	Sikkim	72145.4	3072.8	75218.2	0.0	75218.2
27	Tamil Nadu	2058.2	3654.5	5712.7	5062.8	10775.6
28	Telangana	4457.4	5230.3	9687.8	0.0	9687.8
29	Tripura	203.5	0.0	203.5	0.0	203.5
30	Uttar Pradesh	39929.4	16319.8	56249.3	45210.5	101459.9
31	Uttarakhand	18510.3	12397.0	30907.4	62679.0	93586.4
32	West Bengal	4759.8	416.1	5176.0	0.0	5176.0
Total		**648617**	**794920**	**1443538**	**3009449**	**4452987**

(***Source:*** *Tracenet, APEDA)*

2. Production

India is producing wide range of crops under organic management with oilseeds, sugar crops, fiber crops, cereals and millets and pulses occupy the large chunk of the basket. Category-wise commercial availability of different commodities for trade are given in Table 2.

3. Trade

Although export was the main driver for the growth of organic agriculture in the country for almost one decade, but now domestic market has also started to show strength and is growing at a CAGR of about 12-15%. But still the exports account for major revenue realization by the growers, processors and traders. As per the broad estimates Indian export kitty for organic food products is about US$ 369.8 million. Domestic market accounts for approximately US$ 225 million. Important commodities exported during the year 2016-17 and major export destinations are given in Table 3 and 4 and Fig. 1. Growth in total organic food product's export during last 4 years is depicted in Fig 2.

Table 2. Category wise commercial availability of different crop products

S.No.	Category Name	Total Production (in MT)
1	Oilseeds	299717.807
2	Sugarcane	281660.331
3	Cereal & Millets	195552.107
4	Fiber Crops (Cotton)	155136.889
5	Pulses	62329.045
6	Tea	39129.259
7	Spices & Condiments	36718.417
8	Medicinal & Aromatic Plants	29523.906
9	Fruits	27851.918
10	Vegetables	24339.49
11	Dry Fruits	8241.284
12	Coffee	6208.72
13	Ornamental Plants and Flowers	5517.076
14	Others	5030.906
15	Plantation Crops other than Tea & Coffee	2550.773
16	Fodder Crops	486.95
17	Tuber Crops (Potato)	110.934
Total		**1180105.812**

Table 3. Commodity wise export (2016-17)

Category	Volume (in MT)	Value in INR (Lakhs)
Oilseeds	132503.93	58812.34
Processed foods	73859.65	44792.97
Cereals & Millets	35356.76	21493.80
Sugar	31396.40	12596.03
Pulses	13468.09	4708.43
Tea	5918.99	25208.30
Spices & Condiments	4125.68	18212.56
Medicinal, Aromatic & Herbal Products	2898.48	12002.68
Coffee	2224.15	3653.57

Category	Volume (in MT)	Value in INR (Lakhs)
Dry Fruits	1558.30	24321.46
Vegetables	497.06	466.46
Essential, Aromatic & other oils	412.35	6582.35
Ornamental Plants & Flowers	213.36	1693.53
Edible Oils	148.02	585.66
Plantation Crops other than Tea & Coffee	30.25	88.06
Honey	23.64	54.91
Fruits	6.46	24.08
Tuber Crops	4.75	190.46
Others	5120.62	12330.01
Total	**309766.94**	**247817.67**

Table 4. Important export destinations and quantity exported (2016-17)

S.No.	Destination	Quantity Exported (MT)	Value (US$ million)
1.	European Union	124398	170.6
2.	United States of America	116595	145.5
3	Canada	42739	28.8
4.	Switzerland	9427	8.4
5.	Pakistan	7116	0.22
6.	New Zealand	1783	1.1
7.	Australia	1732	6.3

Fig 1. Important export Destinations and quantity exported

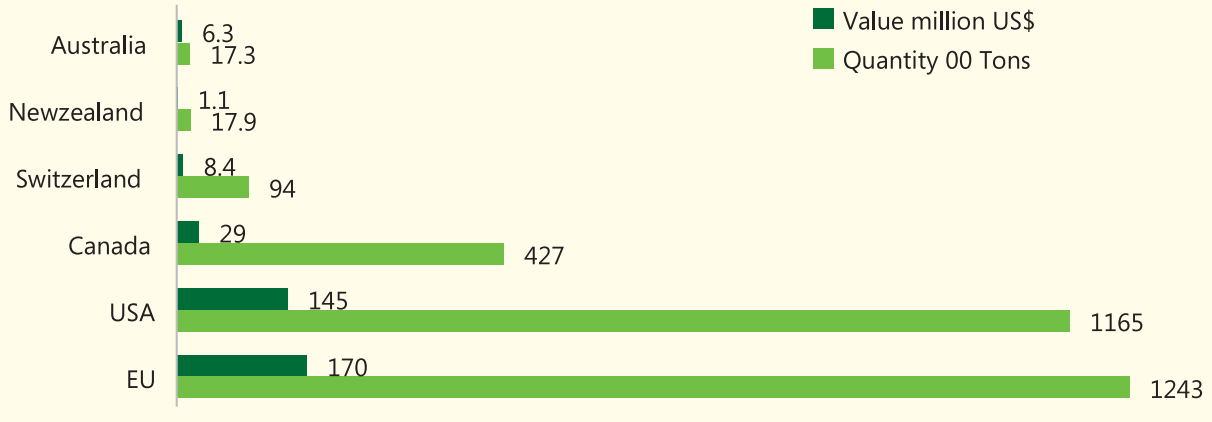
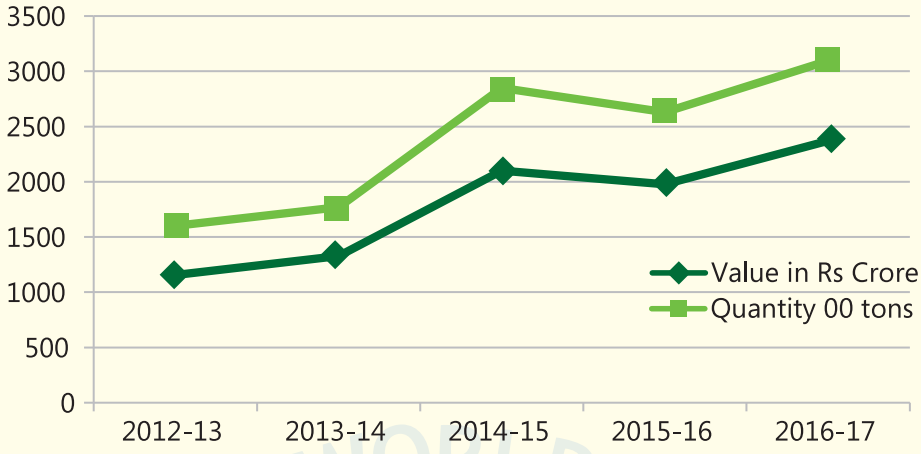


Fig 2. Growth of Organic Food Products export from India



4. Quality assurance

National Programme for Organic Production is the main stay for quality assurance for organic agriculture products in India and is being operated through 28 accredited certification bodies. National Programme for Organic Production (NPOP) provides an institutional mechanism for accreditation of certification bodies and inspection and certification process for organic production. Since its launch it has earned many laurels and international recognition. NPOP enjoys equivalence with organic food regulations of European Union and Switzerland and has recognition agreement on conformity assessment with USDA. Entire operation of NPOP is managed through an on-line Tracenet tool, which was first of its kind in the whole world at the time of its launch in 2006 and provides end-to-end traceability to users. A glimpse of organic agriculture certification scenario is given in Table 5.

Table 5 Organic Certification process under NPOP

Parameters	Quantum
Authorized accreditation body	1
Accredited certification bodies	28
Total operators	6674
a. Individual farm Producers	1512
b. Grower groups (farm production)	3315
c. Total farmers	1.09 million
d. Processor	885
e. Traders	898
f. Wild harvest projects	64

Participatory Guarantee System under PGS-India programme is another quality assurance initiative launched by the Ministry of Agriculture and Farmers Welfare (MoA&FW). National Centre for Organic Farming is the nodal implementing agency for PGS-India. Details of PGS-

India programme and the area and producers being certified is being covered elsewhere in the same manual.

5. Promotion Policy and Institutional Framework

Institutional promotion of organic agriculture started with the launching of "National Programme on Organic Production" (NPOP) by the Ministry of Commerce during the year 2000, which defined the National Standards for Organic Production (NSOP) and the procedure for accreditation and certification. India now has 28 accredited certification agencies for facilitating the certification to growers. For area expansion and technology transfer, Ministry of Agriculture, Government of India established a National Centre for Organic Farming (NCOF) having main centre at Ghaziabad and six Regional Centers of Organic Farming (RCOFs) located in different parts of the country. Ministry of Agriculture and Farmers Welfare also earmarked funds for setting up of organic and biological input production units, vermin-compost production units and for organic adoption and certification under various schemes such as National Horticulture Mission (NHM, now Mission for Integrated Development of Horticulture - MIDH), National Mission on Sustainable Agriculture (NMSA) and Rashtriya Krishi Vikas Yojna (National Agriculture Development Plan). To empower farmers through participation in certification process and to make the certification affordable for domestic and local markets, Ministry of Agriculture has also launched a farmer group centric organic guarantee system under PGS-India programme. To give domestic organic agriculture a push, the Ministry of Agriculture has recently launched a new scheme under NMSA entitled Paramparagat Kheti Vikas Yojna (Traditional Agriculture Development Scheme). Recently under Prime Minister's special initiative for North Eastern states a scheme "Development of Organic Value Chain in North Eastern Region" has been launched with an initial allocation of INR 3000 million.

To address research needs, Indian Council for Agricultural Research (ICAR) launched a Network Project on Organic Farming (NPOF-ICAR) during 2004 and started taking up research activities through its 13 collaborating centers across the country. Now the project is operating from 20 collaborating centers. To address the technological needs in Horticulture, a Network Project on Organic Horticulture has also been launched by the ICAR during 2014-15. Three states Agricultural University, namely University of Agricultural Sciences, Dharwad, and UAS Bangalore in Karnataka and CCS Himachal Pradesh Agricultural University have set up "Centre of Excellence on Organic Farming Research". Recently Government of India has also announced for the setting up of National Organic Farming Research Institute (NOFRI) at Sikkim, India, which is under process of being set up.

Many state Governments has also put in their efforts for the promotion of organic agriculture. Efforts initiated by the Government of Sikkim in converting the entire state into organic and Government of Uttarakhand of converting their hill districts into organic are some noteworthy developments. The area brought under organic certification by these states stands at 75,218 ha in Sikkim and 30,907 ha in Uttarakhand (as on March, 2017). Launching of organic farming

in Mission mode by the Government of Karnataka is also an initiative in the right direction through which more than 81,000 ha (as on March 2017) area has been brought under organic certification process.

12 State Governments namely Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Maharashtra, Madhya Pradesh, Gujarat, Himachal Pradesh, Sikkim, Nagaland, Mizoram and Uttarakhand have drafted the policies for systematic promotion of organic farming. Out of these, although 3 states namely Sikkim, Nagaland and Mizoram declared their intention to go 100% organic and Uttarakhand declared to convert their all hill districts to organic, but it is only the Sikkim which has been able to successfully convert their dream into reality.

Epilogue

The growth of organic agriculture sector in the country is synonymous of the success of NPOP. Its robust assessment and verification system has earned the name in domestic and international markets. Traceability systems introduced for the first time in the world during 2006 in the form of on-line data management has also contributed to the integrity and transparency of the system in the national and international trade.

Country and provincial Governments have also provided timely support in the form of policies, financial incentives, technology packages and availability of quality organic inputs. Growing awareness among consumers for safe and healthy food is driving the markets. The sector has not only attracted the attention of policy planners, research institutions, civil society organizations and consumers, but has also instill the confidence of growers in the strength and potential of organic agriculture as economically viable system for the future.

Managing Prices for Sustainable Agricultural Food Systems: Challenges and Opportunities

Allison M. Loconto[1], Ashish Gupta[2], Nachiket Udupa[3]

About Authors

Allison Loconto is a Researcher at INRA and a Visiting Scientist at FAO. She holds a PhD in Sociology and is currently the President of the Research Committee on the Sociology of Agriculture and Food (RC40) of the International Sociological Association (ISA). Her research is focused on the governance of transitions to sustainable agriculture with a specific focus on standards, institutional innovations and questions of responsibility.

Key words: Prices, smallholder, supply-chain, true-cost, sustainability, Food systems

Summary

To ensure the long term welfare of all stakeholders (producers, intermediaries and consumers) in food systems it is also important to consider the financial sustainability aspects of these systems. This paper addresses the specific financial aspect of managing prices and considers if prices can capture all aspects of financial sustainability, through concepts like 'true cost accounting', 'natural capital protocol' etc. We discuss current research available in this domain and explore various innovative mechanisms present in certain cases around the world where sustainable food system actors challenge the current price determination mechanism to find prices that represent the 'true value' of sustainable products. It then goes into the principles which should be followed when managing prices, namely, that the processes for managing prices should be both transparent and participatory. Different theories such as 'Disruptive Supply Demand method' and 'Energy Reduction to Pricing' are proposed as possible examples to enhance discussions in this field. Finally, challenges in developing such pricing systems are examined with examples, which elucidate how these principles are put into practice, and give possible opportunities to be considered as the way forward.

Introduction

Prices of all foods - and not just organic products - do not reflect their true cost of production. This is because there are many hidden costs, which are further elucidated later, that do not get factored into the prices. In order to be more sustainable economically, the price of produce must reflect the true cost of its production. Classical models of food price systems rely in

[1] Institut National de la Recherche Agronomique (INRA), France, www.inra.fr, allison-marie.loconto@inra.fr; Food and Agriculture Organization of the United Nations (FAO), Italy, www.fao.org, allison.loconto@fao.org

[2] Muskaan Jaivik SHG, India, www.jaivikhaat.bio, himachalse@gmail.com/Organic Way of Life/ IFOAM-OI PGS and Innovations Committee member

[3] Safe Food Campaign, India, nachiket.udupa@gmail.com

supply-demand parameters and general trade variables. However, today food production, value chain and markets have a deleterious impact on ecology, economy and social justice. These impacts are eventually add cost indirectly into the entire food system e.g. the health of the producers, health of consumers, soil ecology, carbon emissions, environmental impact etc. Classical pricing methods do not reflect the true cost of food if we take into account the overall impacts.

In Sustainable food systems, the number of variables which impact prices increase manifold - impact of health (human and environment), carbon miles (upto last mile trade between producer and consumer), cost to sustainable food (e.g. certification and control systems) and participatory smallholder care (fair price to small holder producers in specific and fair price to all farmers at large). The need to account for these variables thus disrupts the classic supply-demand model of price determination, where the only variable taken into consideration is the quantity of the product.

Today, the question of inflated prices for sustainable food remains as they are often higher than conventional market prices. However, in this paper this theory is challenged at the bottom of the pyramid, where small-scale farmers and their markets tend to determine price in a "real time" manner, without accounting for the sustainability aspect in prices. Simultaneously, it is argued that the price conundrum may be split up into the price the consumer pays and the 'price of sustainability' which is paid back to the producer as part of alternative models such as "Payment for Ecosystem services," for example. There may be various methods of building the true cost into the food system, and realizing the mechanisms in which cost is recovered. This is arrived at using a method called true cost accounting, which considers all the impacts of production such as ecological (effects of various kinds of pollution and the effect on biodiversity), social (effect on health and livelihoods) as well as economic (the cost of production and hidden costs like subsidies).

The authors of the paper are a group of innovators working on the issue of pricing and this paper is a reflection of their experiences and research into pricing mechanisms. The paper suggests alternative mechanisms of arriving at prices closer to the true value primarily by making the process of pricing more transparent and participatory.

Results and Observations

Pricing of food in general is a challenge of global proportions. At local markets where farmers sell directly, most prices are determined on past price estimates and real time negotiations with end consumers to trade off price with quantity/quality of sale. In case smallholders are aggregated into large organization, like cooperatives, which trade in large quantities of produce, they attempt to sell in aggregated markets where price discovery is done either by intermediaries, such as brokers, based on auction discovery or through commodity exchanges. Certain large organizations also try to reach end consumers so to derive maximum price

advantage for the producers by removing or absorbing intermediate costs for market access. In most such scenarios, smallholders have reduced individual capacities to participate in price discovery of their produce. Most of the time, it is this problem which leads to distorted market access and eventually to despair by the farmers. In any case, the current prices on the market today reflect only one aspect of the market - usually supply and demand - yet there are additional variables that should impact prices both directly and indirectly. These externalities are typically ignored in conventional price discovery systems.

In order for farmers to be able to equitably calculate prices, one needs first to understand what current conventions and expectations are for recuperating the costs of production. Generally, smallholders expect one of three criteria to be met for market access (see box case 1). In sustainable food systems, it is preferred that all three criteria are satisfied as a best case scenario; and at a minimum, any two out of three criteria are satisfied for a transaction to take place. The criteria address only the fair economic aspects of the transaction, but we acknowledge that there are other values also at play when determining whether or not an exchange will be accepted.

Existing Domain Research

In the above section we suggest that these externalized variables are equally important considering the state of global ecology, fair market access for smallholders and the overall economics of food access. The following sections discuss examples from the literature where actors are trying to internalize the externalized variables in cost calculations in order to achieve such an impact.

Natural Capital Protocol ("Natural Capital Coalition | Protocol" 2017)

The Natural Capital Protocol correlates the stocks of natural capital - renewable and non-renewable natural resources - with business transaction frameworks. The mechanism takes price value of commodities and services, and provides a framework to normalize externalities to arrive at market values for commodities and services. Valuations are not restricted to financials only but overall flow impacts on natural resources and its dependent actors. Flows of benefits or services take into account Eco-system services, abiotic services such as wind or geothermal services or Biodiversity. Cost impacts in terms of such flows are given back to businesses as inputs which can factor negative impacts or positive benefits into their bottom lines or product margins. e.g. if a company depends on water for manufacturing, the framework helps calculate the impact of recycling of water has on the environment and internalizing any external hazards which would otherwise be ignored due to lack of any regulatory framework. As of March 2017 the World Business council for Sustainable Development has put out a toolkit for evaluation of NCP for businesses and invited feedback on it ("Natural Capital Protocol Toolkit - World Business Council for Sustainable Development" 2017).

Box Case 1

Three criteria to define when a transaction is acceptable

There exist certain common minimum criteria to transact between buyers and producers, especially smallholders. An acceptable transaction for a producer should be definable in their interest in order to satisfy the price, volume and time to access funds. These criteria must be kept in the forefront of deciding any transaction in the sustainable food system space. For smallholders in agri-chains in India and perhaps in the rest of the world three main criteria apply. These criteria are transactional in nature and are defined to satisfy the parity of exchange of produce for money or other kind of barters. These three criteria are:

1. Producer manages to sell all marketable produce grown in a season;
2. Producer manages to get the right price for the produce to satisfy their input cost, cost to market access, plus profit;
3. Producer manages to get paid for the transaction in a timely manner that is to their satisfaction.

Now, an ideal scenario requires that all the three of the above criteria be met to the satisfaction of the producer. However, given market conditions, at least two out of these three are acceptable to most producers. In case this does not happen it causes stress and smallholders' economic risk increases manifold if at least two criteria are not satisfied. It is good to remember this as a general case to apply in any kind of interaction with smallholders since they have few buffers to absorb market shocks. Any transaction should leave some negotiating space for interactive price determination and should keep these simple criteria in mind while interacting with smallholders.

True/Full Cost Accounting

True cost accounting is defined as a process for determining Social Return on Investment. True cost accounting analysis was developed for determining the social impact of investments made due by philanthropic or other means (Gowdy 2000). What started as incorporation of social cost accounting into Traditional Non-Profit Accounting structures has also been shown to be a viable method of calculation of costs accrued to products and services measured for impact of social and/or environmental costs. One such case is the measurement of True Cost Accounting for Organic Citrus grown in Egypt (Bandel T Nerger R Eitner 2015). Here the authors innovate and show how organically grown citrus sequesters more carbon from the atmosphere, prevents soil erosion, protects the health of the farm labours and consumers and provides for more than €100 000 worth of environmental and social benefits whereas a chemically grown citrus for the same area causes €4 800 000 of equivalent damages. Surprisingly, the cost accrued for one kg of citrus produced organically comes only at € 0.11, which is not too high to recover through competitive sale prices. The authors conclude that

organic agriculture is not just a 'nice to have' alternative but an economic and environmental necessity.

Food Wastage Footprint

In a recent study the 'Total Value' system was used to create a mechanism to identify those aspects of material usage in the supply chains, which are hidden or go unmeasured, so to internalize actual value calculations for products and processes ((E&Y) 2016). It takes into account externalities over and above the accounting value captured by the companies by also including social or shared values. Examples also show how product chains around waste generated by the companies can have a large impact when the typically ignored externalities are internalised into the companies' bottom lines. Thus, the triple bottom line is used to calculate the true cost of waste in a supply chain. The FAO has a Food Waste Footprint (Food and Agriculture Organization of the United Nations 2013) tool where the accounting methods calculate the externalities of the food waste and calculate that USD 1 trillion of economic waste, approximately USD 700 billion worth environmental damage, and USD 900 billion of social costs are created by the quantities of food wasted around the world in the current 'business as usual' scenario. Adverse health effects due to pesticide exposure alone costs USD 153 billion annually, which shows the amount of economic impact the current agriculture and food system has on a global basis. This tool demonstrates two key points: 1) such costs can easily be reversed by switching over to sustainable agriculture methods, and 2) if these costs are internalized into existing food product prices, there is no choice but for food prices to rise.

Other Models

Similar models and tools also exist in the literature and showcase how the impacts of externalities on prices can be calculated. These include: the FAO Sustainability Assessment of Food and Agriculture systems (SAFA) ("Sustainability Pathways: Sustainability Assessments (SAFA)" 2017) FAO-EXACT ("EX-ACT: EX-Ante Carbon Balance Tool (EX-ACT)" 2017). Both are used as means to calculate externalities and assist with extrapolation of price points into services and products for agriculture.

Case Studies on Innovative Models of Price Determination

In this section authors showcase how certain innovative models of various scales assist sustainable agriculture systems and smallholders to have greater power in price determination on a collective basis. Such systems around the world have shown in the short and medium term that there are methods through which sustainable agricultural systems carve a niche and provide fair prices to farmers, especially smallholders, while keeping the externalities due to existing agricultural systems in check.

- **Large model -** Hansalim Cooperative, South Korea – Hansalim Cooperative creates transparent pricing between producer and consumers. This is achieved by first offering equity shares in the cooperative to both the producers and consumers so that they have a stake in various operations of the cooperative including price determination. The motto of Hansalim is "Hansalim goes the producers' way", and facilitates price discovery so that the producer continues to safely and comfortably maintain production. The cooperative employees, consumers and producers hold annual meetings to determine prices for the upcoming season. There are also revolving buffer funds available from the cooperative for Production and Price stabilization funds which allow for producers to have cushions in case of severe market volatility in prices. Conventional imported goods in South Korea are susceptible to volatile prices, however the prices of domestic produce remains relatively stable within the Hansalim framework. Close to 75% of the final market price is accrued back to the producers in this model. The overall market sales turnover of Hansalim reported in 2016 was 362 million USD (Hansalim 2016). In such large models, even governments have a role to play in price determination by externalizing social costs, in India such a case exists (see: Box Case 2).

- **Medium model -** Dharani FaM Cooperative, run with the assistance of Timbaktu Collective in Southern India, assists PGS certified organic farmers in aggregating and marketing their produce under the brand "Timbaktu Organic". The Cooperative offers its members correct weighing practices for their produce and 25-30% price premiums over existing market prices. In addition there is a 3%-7% additional annual retainer incentive for the producers. These prices are typically fixed before the start of the season in conjunction with the farmers. Despite offering such margins, the overall price of sustainable food produce is about 20% less than large branded produce in the market. The farmers have a transparent access to procurement, pricing and marketing mechanisms at all times. The overall market sales turnover of Timbaktu Collective in 2016 was reported as 310,000 USD (Timbaktu 2017).

- **Small model -** Jaivik Haat is a private social enterprise that runs an organic/natural food retail supply system in New Delhi, India. It provides a window of retail to any small and marginal farmer who is producing agro-ecologically, especially the PGS certified farmers. It provides transparent market access to these producers and offers 60-70% of the final price to the end consumer. Its operational margins are about 35% of the final market price. Price setting happens in two models: in the first model producers (or their groups) set the price considering their input cost and satisfy themselves with it, Jaivik Haat then adds its markups to manage the supply chain.

Box Case 2

In India, the procurement of certain conventional market produce through open markets from farmers across India is an example of a 'transparent intermediary' function. Price setting of a number of commodities is done by the central government in advance as a "Minimum Support Price" offered from the Commission for Agriculture Cost and Prices (CACP) ("Commission for Agricultural Costs and Prices" 2017). The CACP has a sound model to calculate costs accrued to farmers. The prices cover about 27 crops including paddy, wheat, legumes and commercial crops like jute, sugarcane etc. The basic idea is to function as a support tool for farmers to ensure price control by the government functioning as a direct purchaser of produce from the farmers. In case of volatility in open market prices, the government also issues periodic bonuses in price over and above the calculated prices.

The basic calculation of MSP relies on various factors including input cost to farmers, price parity, historical prices, demand-supply etc. The CACP calculation methodology to consider thus is -

- Cost A1 = Cost of Cultivation, including input, labour, depreciation, taxes, interest, misc.
- Cost A2 = A1 + Rent paid for land lease
- Cost B1 = A1 + Interest on value of fixed capital assets (excluding land)
- Cost B2 = B1 + rental value of owned land and rent paid for leased in land
- Cost C1 = B1 + imputed value of family labour
- Cost C2 = B2 + imputed value of family labour
- Cost C2* = Cost C2+ Additional value of labour based on market rates
- Final Cost C3 = Cost C2* + 10% of C2* (towards managerial costs by farmer)

While the concept of this scheme is widely appreciated in India, there are lacunas in implementation depending on market factors and government deficits. The price thus calculated does have a serious impact in determining open market prices. Also while this model does not account for externalities it is considered as a 'socially fair' system of calculating prices for farmer on an socio-economic basis and is an alternative model price calculation based on actual supply scenario.

In the second model if the farmers are unable to set the prices, due to low confidence, then Jaivik Haat takes their produce on credit and attempts to sell it at the best possible market price in real time markets. 60-70% of the final average prices are returned back to producers after the sales are realized. In both these models also consumers play an indirect role in price determination through a feedback mechanism. In the first case, if the producer sets the prices

too high then the produce is picked up by the consumers in volumes of sale. This feedback is then given to choose to lower the produce price to ensure that the volumes get sold. Thus the market helps determine the price in a heuristic manner. In the second case, Jaivik Haat attempts to negotiate the best possible price from the market depending on opportunity costs. The resultant value thus discovered after the sales is given back to the producers up to 60%-70%. Thus, the market and consumers help negotiate a real cost based on actual transactions and not pre-determined estimates set by third parties (Gupta 2017).

Challenges and Opportunities

In this paper, authors examined some of the underlying assumptions that determine prices for sustainable products. It is underlined that the classic model of identifying price as the equilibrium between supply and demand focused only on quantity does not capture the true value of any product, much less a sustainable product. It is important to note that a number of initiatives and innovations are underway that can help us to better determine the costs production and consumption.

In general authors find two approaches being used: First, calculative tools such as the 'natural capital protocol', 'true cost accounting', and the 'food wastage footprint' are seeking to internalize the social and environmental costs to production and consumption. The rationale behind these tools is that if we can arrive at a more accurate cost, then prices can be determined with greater transparency.

The second approach is an organizational one. Here, rather than trying to turn all value into a quantitative cost for what is to be traded, actors are redefining who should be determining the price. Models based on collective action and more active participation by producers, consumers, transparent intermediaries and even government in the negotiation of price is also proving capable of producing more equitable prices for producers.

The important lesson here is that there must be transparent discussions about what is being valued and how a price can capture that value.

These results are important for the organic sector because we find evidence that organic prices do not necessarily have to be higher than conventional prices, but they do need to be more transparent about what is being valued, in effect the real prices reflecting 'true value' including externalities. Within the organic section we should be promoting both approaches to pricing (transparent accounting and participatory negotiation) as equitable prices are most often the result of both processes.

References

- Bandel T Nerger R Eitner. 2015. "Full Cost Accounting Assessment of Organically Grown Citrus from Egypt." www.soilandmore.com.

- "Commission for Agricultural Costs and Prices." 2017. Accessed April 8. http://cacp.dacnet.nic.in/.
- "EX-ACT: EX-Ante Carbon Balance Tool (EX-ACT)." 2017. Accessed April 8. http://www.fao.org/tc/exact/ex-act-home/en/.
- (E&Y), Enrst And Young. 2016. "Total Value Impact Valuation to Support Decision-Making." http://www.ey.com/Publication/vwLUAssets/EY-total-value/$FILE/EY-total-value.pdf.
- Food and Agriculture Organization (FAO) of the United Nations 2013. *Food Wastage Footprint: Impacts on Natural Resources : Summary Report*. Food & Agriculture Org.
- Gowdy, Heather. 2000. "True Cost Accounting: The Allocation of Social Costs in Social Purpose Enterprises." In , edited by The Roberts Foundation, 104–14. The Roberts Foundation.
- Gupta, Ashish. 2017. "Jaivik Haat - Organic Food Retail." *www.jaivikhaat.bio*.
- Hansalim. 2016. "Hansalim Annual Report 2016 - 2016 Hansalim Story." Hansalim. http://www.hansalim.or.kr/wp-content/uploads/2016/08/2016-hansalim-storyEnglish.pdf.
- "Natural Capital Coalition | Protocol." 2017. Accessed April 8. http://naturalcapitalcoalition.org/protocol/.
- "Natural Capital Protocol Toolkit - World Business Council for Sustainable Development." 2017. *World Business Council for Sustainable Development*. Accessed April 8. http://www.wbcsd.org/Clusters/Ecosystems-Landscape-Management/Natural-Capital-Protocol-Toolkit.
- "Sustainability Pathways: Sustainability Assessments (SAFA)." 2017. Accessed April 8. http://www.fao.org/nr/sustainability/sustainability-assessments-safa/en/.
- Timbaktu. 2017. "Annual Report 2015-16 – The Timbaktu Collective." Accessed April 8. http://www.timbaktu.org/annual-report-2015-16/.

The Role of Private Sector in Linking Smallholders with Markets

Frank Eyhorn[1], Mustak Khan[2], Ashish Shrivastava, Chen Fye Tham[3]

About Authors

Frank Eyhorn (PhD) is a Senior Advisor for Sustainable Agriculture at Helvetas Swiss Intercooperation and Vice-President of IFOAM Organics international. He leads the team of the Organic and Fairtrade rice project in India and Thailand.

Key words: rural development, fair trade, partnership, business case

Summary

Private sector companies can be key actors in developing organic value chains with smallholders. The Swiss retailer Coop and its partners support smallholders in India and Thailand in converting their rice-based production systems to sustainable organic farming. Farmers improve and diversify their incomes while managing natural resources more sustainably. They receive fair prices for their products and invest in their future development. The initiative provides a viable business case for all value chain actors involved. If set up and managed well, thriving agribusinesses can help smallholders to improve their livelihoods, and offer a perspective for rural youth.

Introduction

Coop, the second largest retailer in Switzerland, in 2011 launched an innovative project to support more than 4500 smallholder rice farmers in Northern India and Eastern Thailand to convert to organic farming and to sell their produce at fair trade conditions. This initiative is part of the company's strategy to convert its rice brand to fairtrade and organic. Over the past years, Coop's rice processing and trading company Reismuehle Brunnen has continuously increased the share of sustainable rice, and today, it is the largest supplier of organic and fairtrade speciality rice in the European market. Mandated by Coop, the Swiss development organisation Helvetas implements the project in collaboration with its sister organisation Inter-cooperation Social Development India and with local farmer organisations, processing companies and research institutions. In India, the key partner is the company Nature Bio-Foods Ltd, which buys the paddy directly from the farmers, mills it in their own premises and exports it to Reismuehle Brunnen. Under its "Ecolife" brand it also sells rice and other products in the emerging domestic organic market. In Thailand, the main partner is the farmer co-operative Rice Fund Surin, which runs its own rice mill and sells the rice to various clients abroad, but also in the domestic market.

[1] https://www.helvetas.org/topics/keystone_mandates/rice_project.cfm
[2] http://www.reismuehle.ch
[3] http://naturebiofoods.com

Social and environmental impact as a unique selling proposition

The purpose of the project is to improve the incomes and livelihoods of marginalised smallholders, enhance the environmental performance of the production systems and provide consumers with an attractive product of high quality (Helvetas 2015). For the sustainable basmati project in India the partners therefore chose a remote region (Nainital District in Uttarakhand) located in the foothills of the Himalayan range (Helvetas 2014). Starting with less than 200 pilot farmers in 2011, the project involved more than 4,000 households in almost 100 villages in 2016. Working with large numbers of farmers with very small holdings (average below 1 ha) involves higher transaction costs for extension and transport compared to sourcing from larger farms in the plains. However, it also allows offering consumers a product that has a clear development impact. Since the hill farms do not rely on groundwater for irrigation the selection of a remote area avoids the risk of pesticide residues that are of increasing concern in the Gangetic plain. Farmers in the hill region had traditionally grown some basmati rice, but most of them switched to coarse rice varieties due to lack of market access. Traditional basmati – similar to jasmine rice in Thailand – has lower yields than coarse rice, but thanks to its unique features (fragrance, long grains) it achieves higher market prices and therefore is an interesting cash crop for farmers.

The System of Rice Intensification (SRI)

- Single seedlings are transplanted with wider spacing at an early stage
- Alternate wetting and drying instead of continuous flooding
- Mechanic weeding with simple tool

Results:

- More sturdy plants with more tillers, higher yield
- Less damage by pests and diseases, less lodging
- Less costs for seeds and weeding
- Reduced water input and greenhouse gas emissions
- Better grain quality, higher milling turnout

Further developing the production system

In close collaboration with the extension system managed by the local partners, the project helps farmers to optimise production methods in order to increase yields and profitability as well as reduce water consumption and greenhouse gas emissions. Following a Participatory Technology Development approach, farmers were supported in identifying and testing promising innovations like alternative crop nutrition and pest management practices. Variations of the System of Rice Intensification (see box) were found to be economically and environmentally viable and are increasingly being adopted by farmers (Singh et al. 2016).

Improved nutrient and water management approaches have been identified that allow further optimizing the production system (Ditzler et al. 2017, Helvetas 2016). In addition, the rice farmers are encouraged to further diversify their farms by growing pulses, cereals, vegetables and spices.

Fair & good – for people, planet and business!

The project already achieved significant results at farm level. Lower production costs in organic farming and higher product prices ensure that participating farmers earn substantially more than before. Every year the project collects data from representative samples of organic and conventional farms in order to compare their economic performance. The data in India consistently show that organic farmers gain 50-100 per cent higher net incomes from rice than their conventional peers (see Figure 1). Since basmati is only grown on 20 per cent of the farmland on average, the increase in overall farm income is just 20-30 per cent. However, farmers started diversifying their cropping patterns, which reduces their vulnerability to weather and market price fluctuations and contributes to a more diverse diet. The farmer organisations and local business partners are increasingly successful in developing organic market chains for alternative crops like vegetables, pulses and spices, particularly in domestic metropolitan areas. In future, this should provide farmers as well as businesses the opportunity to gradually move to higher-value crops and to earn additional income while using the extension and certification systems set up for the rice value chains.

Gross margins in organic basmati vs. conventional coarse paddy (Rs/ha)

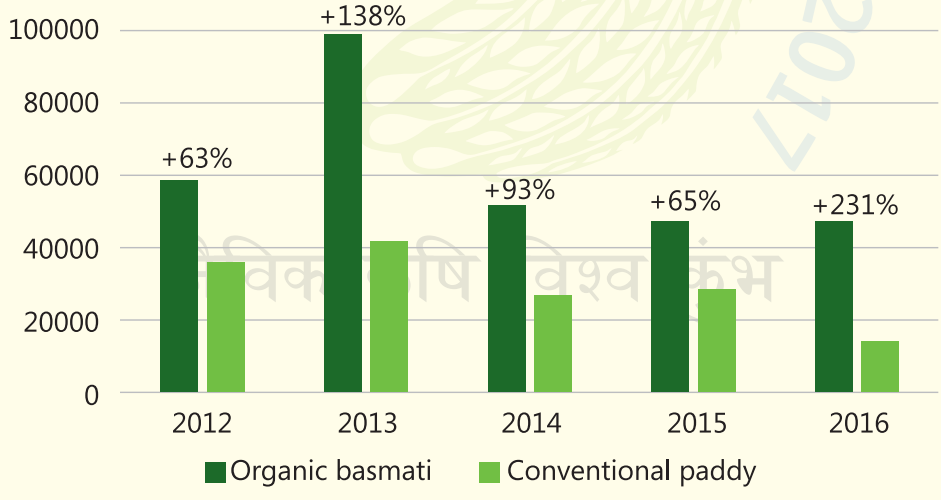


Figure 1: Net profits (revenues minus input costs) in organic basmati compared to conventional hybrid paddy in Indian Rupees/ ha, 2012-2016. In 2013, general market prices for basmati were extraordinarily high due to a shortage in supply.

The project enables farmers to increase yields, reduce labour requirements (through farm mechanisation) and improve water management. Capacities of the local organisations have been strengthened with regard to quality management and business planning. In addition to the fairtrade price and organic premium that are paid to the individual farmer, the farmer organisations receive a fixed fairtrade premium to be used for community development. They have invested these funds to improve irrigation infrastructure and agricultural equipment,

and to develop new income opportunities like tailoring and small-scale processing. They are hence increasingly taking the role of a development actor striving to improve the livelihoods of farming communities.

An external project evaluation confirmed in 2015 that, thanks to its market-oriented approach, the project has successfully established a system of sustainable production and trade while improving the livelihoods of farmers. The innovative set-up creates a win-win-win situation for farmers, businesses and the environment. Consumers get an attractive product with proven positive impact at production level.

Agreements provide the backbone of the value chain

In line with the fairtrade system, the farmers are organised in producer organisations that democratically elect a Board or Executive Body. In Thailand, the farmers sell their jasmine paddy to their co-operative Rice Fund Surin, of which they are a member. Rice Fund Surin takes care of input supply, certification, processing and marketing. Since the producer organisation in India is not yet in a position institutionally to manage the commercial activities, Nature Bio-Foods signs production contracts with the individual farmers. The company also provides training and technical advice to the farmers, manages the Internal Control System that guarantees the organic integrity of the production and arranges for organic and fairtrade certification by accredited agencies. All partners involved have signed Memorandums of Understanding (MoU) that define objectives, roles and responsibilities, and the pricing system (a guaranteed minimum price and defined premiums on top of the actual market price). Helvetas facilitates these arrangements and supports capacity building and monitoring. The fact that Reismuehle Brunnen guarantees the partners to purchase specified minimum volumes for several years is the key reason why all of them are ready to invest in the development of the value chain. At the same time, the MoU protects the investment of the private sector parties by providing them with exclusive purchase and marketing rights for the agreed period.

A viable business model

The project took great care to limit its role to the facilitation of improving capacities and systems, and not to take up functions in the value chain that are needed in the long term (Eyhorn and Elzakker 2010). All costs for training, extension, certification, processing and marketing are borne by the local businesses and are integrated into the pricing. This ensures that the local actors will continue the value chain independently once the project ends in December 2017. Motivated by its success, many farmers are eager to join – in India, more than the extension teams are able to cover. One can already observe that conventional farmers are increasingly following the example of their neighbours and adopting organic production techniques. The approach chosen has also proved viable for the co-operatives and companies involved. Their turnovers have grown considerably, which enables them to buy more produce from more farmers. Nature Bio-Foods has become one of the largest companies in organic production in India, sourcing various products from more than 80,000 certified organic farms in 13 States.

Reismuehle Brunnen has substantially increased their sales of organic and fairtrade rice and continuously widened their client base. Since all involved private sector actors have a vital business interest in thriving farms and value chains, this set-up made it possible to develop viable systems in a relatively short time – and with hardly any public funding.

Challenges and constraints

Despite all these encouraging results, one needs to acknowledge that progress hasn't always been smooth. It is a tremendous challenge to build viable businesses on very small holdings that operate in a harsh and insecure environment. Agriculture is losing importance in these areas, and many young people are moving out of the sector. Producer organisations struggle to deal with a complex set of tasks because their Boards and executives have limited experience in managing an agribusiness of this size. Since margins in staple food processing and trade are very small, it is difficult to recruit and maintain qualified staff even for the local companies involved. Managerial capacity has therefore often been the most limiting factor for using opportunities to their full potential. Nevertheless, the initiative shows that private sector engagement can be an important driver for sustainable rural development. If set up well, thriving agribusinesses can help smallholders to improve their livelihoods, and offer a perspective for rural youth.

References

- Ditzler L, Breland TA, Francis C, Chakraborty M, Singh DK, Srivastava A, Eyhorn F, Groot JCJ, Six J, Decock C (2017): Identifying viable nutrient management interventions at the farm level: the case of smallholder organic Basmati rice production in Uttarakhand, India. Agricultural Systems (submitted).
- Eyhorn F, Elzakker B (2010): The Organic Business Guide. Developing sustainable value chains with smallholders. www.organicandfair.org.
- Helvetas (2014): Video clip: Fair and good. Rice for a better life.https://www.youtube.com/watch?v=jHruxxpsVk0.
- Helvetas (2015): Fact Sheet: Sustainable production of organic and fairtrade rice in Thailand and India. https://assets.helvetas.org/downloads/coop_rice_factsheet_final.pdf.
- Helvetas (2016): Fact Sheet: Multi Stakeholders join forces to increase water productivity in rice and cotton (WAPRO). https://assets.helvetas.org/downloads/wapro_factsheet.pdf.
- Singh DK, Akhtar Z, Gupta S, Srivastava A, Chakraborty, M (2016): Production strategies of organic basmati rice in Tarai region of Uttarakhand, India. Organic Agriculture, March 2017, Volume 7, Issue 1, pp 21–30.

Analysis of Ecologically Organic Dryland Orange Fruit Value Chain: Evidence from Northern Ethiopia

Kebede Manjur[1] Gebrehiwot, Weldegebria[2], Tewodros Tadesse[3], Sarah Tewolde-Berhan[4]

About Author

Kebede Manjur is a doctoral student at International Development Studies at Utrecht University the Netherlands. He has extensive experiences in different collaborative researches and published different articles in the areas of livelihood, gender, sustainable land management, rural infrastructures, agricultural training and agricultural extension issues.

Key words: Ecological, organic, Value chains, Orange, Fruits, Tigray

Summary

This study aimed at analyzing ecologically organic dryland orange fruit value chain and its associated challenges in Northern Ethiopia. Data were collected from farmers, experts, traders and consumers. Results of this study indicate that distribution of benefits among the value chain actors differ substantially. Above all, little focus was given for the organic orange fruit development by support institutions mainly in the areas of product differentiation, price determination and branding for the organic product. Hence, organic certification, market linkage and strengthening producer's cooperative are paramount important to sustainably promote Ecological Organic fruit production.

Introduction

Ethiopia is the home of diverse agro-ecologies; as a result many parts of the country are suitable for growing temperate, sub-tropical or tropical fruits. More than 61 thousand hectares of land was under fruit crops in Ethiopia in 2015. In terms of annual production about 4.7 million quintals of fruits were produced in 2015. Bananas, papaya, mangoes and orange accounted for 63.11%, 8.07%, 12.55% and 7.46% of the fruit production, respectively (CSA, 2013, FAO, 2013). Production of Organic orange is common in Gundagundo area, which is located in Tigray region northern Ethiopia. It is a very remote area known for its monastery and its sweet orange fruit (Ygzaw et *al.*, 2016). The orange in the study area have a unique flavor and hence highly demanded by consumers (Ygzaw et *al.*, 2016). Despite potential in terms of agro-ecology and its importance in the livelihood of all actors along the value chains,

[1] Department of Rural development and Agricultural Extension, Mekelle University
[2] Department of Rural development and Agricultural Extension, Mekelle University
[3] Department of Natural Resources Economics and Management, Mekelle University
[4] Department of Food Science and Post harvest Technology, Mekelle University

still the benefit gained by smallholder farmers is very small due to many challenges such as less emphasis given to brand and certify the organic product. Besides, in terms of evidence, to the level of our knowledge, no in-depth study has been done so far to document the situation of ecologically organic[5] orange value chain in the study area. Therefore, this study will have paramount importance in informing the concerned actors in the wake to promote Ecologically Organic Agriculture (EOA) value chains.

Material and methods

This study was conducted in Gundagundo area Eastern Zone of Tigray regional state of northern Ethiopia in 2015. Both qualitative and quantitative types of data necessary for the value chain analysis were collected from secondary and primary sources (FAO, 2013, Freeman, 2013). Reviews on published papers and existing value chain reports of the district agricultural offices and marketing agencies such as production, inputs, cost of production, and price of the selected enterprise were made to improve the quality of the study. However, secondary data were not available in the required form. On the other hand, primary data were collected following participatory approach such as using interview, focus group discussion and key informants interview in which the key value chain actors participated in the value chain mapping process as a group and as an individual, depending on the context and the need. Besides, workshop was organized for mapping of the value chain for the selected commodity, identification of value chain actors, support service providers, constraints and opportunities along the value chain. Furthermore, checklist was prepared to guide the discussion and additional data were collected using snow ball sampling from the value chain actors including producers, experts, wholesalers, retailers and processors. Quantitative data obtained from different sources are triangulated and analyzed using frequency, percentage and mean to examine the cost, sale price and the value added by each actor within organic orange value chain. Analysis of price and profit was also computed per unit product to show how profitable engaging in the enterprise would be. On the other hand, narrative analysis was made to analyze the qualitative types of data and to enrich conclusion of the research findings.

Results

In the study area, there are four orange market channels. Gundagundo orange fruits are sold directly to consumers or local assembler in the adjacent production area town. Consumers, retailers and processors mainly juice houses in the big towns depend on the local assemblers. In all destination towns, there are number of super markets and juice houses that sell the fresh fruit and processed juices directly to consumers. Beside this, consumer also buys fresh fruit directly either from the wholesaler or retailers in different shops and open market. The average orange production cost was estimated at USD 14.71 per quintal in Gundagundo and

[5] In this paper ecological organic fruit is a fruit which primarily produced from biological farming practices that includes uses of organic wastes and labor intensive management practices

Marwa villages. The price of orange at the farm gate is 0.14 USD per one piece (which is equal to 0.40 USD per kilogram)[6] whereas on average traders sell at 1.9 USD/kilogram at *Adigrat* and *Mekelle* towns. The end market of Gundagundo orange EOA value chain mostly remain within Tigari region. As depicted in Table 1, processors followed by wholesalers are found to be the first and second beneficiary of the orange value chain despite limited effort added on the entire process of the commodity chain.

Orange value chain actors add 310.91 USD per quintal as orange passes from one actor to another actor. On average producers obtain up to 29.32 USD of profit per quintal of orange and share 9% of the total value added. While the wholesalers and processors obtain up to 56.82 and 218.18 USD of profit and contribute 18% and 70% of the total orange value addition process, respectively. Retailers earned 2% of the value and stood fourth in terms of contribution (Table 1). Strength, weakness, opportunities and threats (SWOT) analysis of the ecologically organic orange value chain in the study area as presented in Table 2.

Table 1: Costs and margins of organic Gundagundo orange along value chain in Tigrai

S. No.	Items	Producer	Wholesaler	Processor	Retailer	Total value added
1	Cost of production	14.71				
2	Purchase cost		45.45	106.82	106.82	
3	Other material cost		0	54.54		
4	Total material cost	14.71	45.45	161.36	106.812	
5	Marketing cost	1.42	4.54	2.27	0.23	
6	Total Cost	16.14	50	163.64	107.04	
7	Sales price	45.45	106.82	381.82	113.64	
8	Margin/value added	29.32	56.82	218.18	6.59	310.91
9	Percent value added	9.4	18.3	70.2	2.1	100%

Core messages and conclusions

Gundagundo orange is highly demanded fruit as it is very delicious, bigger in size and appealing in colour and has best quality as compared to other orange cultivars but consumers' do not consciously prefer it because of its organic in nature. Consumers have little knowledge with respect to its organic product and the role it plays to health due to lack of awareness. In the study authors noticed that farmers, who are involved in the supply chain functions, have little negotiating power and make little money resulting in no incentive to improve their products, and face a great deal of risk in marketing their produce.

[6] On average three pieces of Gundagundo orange weights one kilogram.

Table 2: SWOT Analysis of Ecologically Organic Agriculture Orange Value Chain

Strength	Weakness	Opportunities	Threats
• Rich indigenous knowledge of producers in organic orange production techniques such as manure, compost preparation and traditional irrigation facilities design	• Less attention by support institutions in promoting organic orange production • Lack of farmers motivation to produce more despite the potential they have • Poor price incentives • No point of strategic cooperation and competitions among value chain actors	• Agro ecological suitability • Abundant labour • National policy supports for sustainable agricultural development	• Poor infrastructure facilities • Insects- pests and diseases • Absence of certification to Ecological Organic Agriculture

The market price of orange is determined traditionally by bargaining between the buyer and seller. Despite low market incentive producers are forced to sell what they produce in the nearby local markets due to lack of modern storage, distance and poor market integration, no certification given and lack of promotion for the best quality organic product. Finally, certification for the organic and best quality, linking to market, intensive training, forming and strengthening organic orange producer's cooperative union are recommended to make producers more beneficiary and to sustain organic nature of the orange.

References

- CSA (Central Statistical Agency) (2013) : *Agricultural sample survey*. 2012 / 2013 area and production of major crops: Federal Democratic Republic of Ethiopia. Statistical bulletin, Addis Ababa, Ethiopia
- FAO (2013): Value Chain Analysis for Policy Making Methodological Guidelines and country cases for a Quantitative Approach
- Freeman, Dena, (2011): Value chains for development ethnography of pro-poor market interventions in Ethiopia. Anthropology of this Century, Issue 6, London.
- Kaplinsky, R (1999) : "Globalisation and Unequalization: What Can Be Learned from Value Chain Analysis." Journal of Development Studies 37(2): 117-146.
- Kaplinsky, R. and Morris, M (2001): Handbook for Value Chain Research, Ottawa: IDRC.
- Ygzaw,W., Hruy, H., Aregay, N.,Hadush, M., Abraha, E., Gebre-Hiwot K (2015): Evaluation of Fruit quality of Gunda Gundo Orange in contrast to other orange fruits. Journal of the Drylands 6(1): 429-433, 2016

Short and Small Supply Chains The case of Bac Tom

Tran Manh Chien[1]

About Author

Mr Tran Manh Chien is originally a value chain specialist for NGOs such as GRET (French) and CIAT (International Center of Tropical Agriculture). During 2009 he shifted to business to fill the gap in the supply chains. Now he is the CEO of Bac Tom stores chain founded by him, and he continues working as a value chain specialist.

Key words: supply chains, short small, stores chain

Summary

The paper presents the failure of conventional long and large supply chains such as Big C and Metro in meeting the increasing demand of quality and safety. The emerging short and small supply chains by store chains fits in well with the market. This also fits well with the gap by development projects which support farmers to produce foods of high quality but provide no perspective of markets. However a lot of constraints remain. Therefore many recommendations are followed at the end of the paper as per the perspective of the author, who has experience of working with governments, NGOs and private sector.

Introduction

Over the last 10 years, there is a growing trend of short and small supply chains in which, quality is of the greatest interest by consumers. This is because large and long supply chains such as Big C and Metro have failed to meet with the awareness of safety and quality for perishable foods. A lot of stores and supermarkets are claiming safe foods but with limited information due to long supply chains with short term strategies of stakeholders involved. They want to sell a huge volume of wide range of products in a short time with competitive prices. However when consumers ask about where the produce come from and how to control the quality, they are not answered. The typical large and long supply chain with no contract is as follows:

Producers (~ 0.1 hectar) -> Collectors -> Primary Wholesalers (night market) -> Wholesalers -> Retailers -> Consumers.

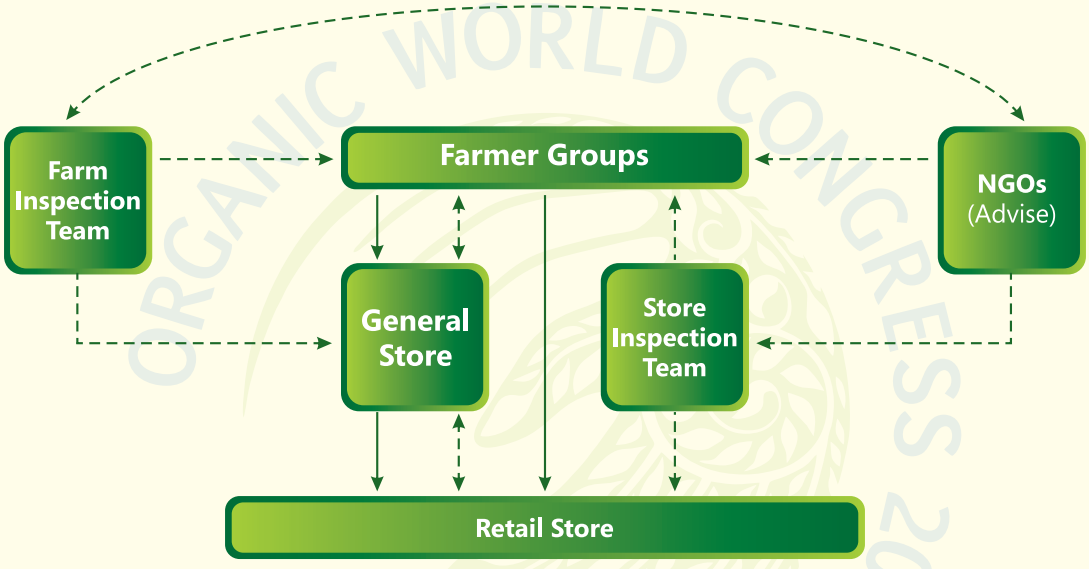
Additionally the buyers do not care about their produce before supermarket gates. Prices and appearance are two main elements for their purchasing decision. A couple of legal papers are required and available for consumers. However these papers are not reliable and trusted by consumers. Therefore, the need to improve the trust by the consumers is at the first priority in order to market foods of high quality.

[1] Vietnam Organic Participatory Guarantee System (PGS Vietnam), www.vietnamorganic.vn Email - chientran@bactom.com

The failure of large and long supply chains

- Quality control and certification systems by government are not trusted by consumers
- 80% consumers do not trust official certificates by government (ADB survey 2009 for consumers in Ha Noi)
- No certification system for organic farming yet in Viet Nam. Ministry of Agriculture and Rural Development have been working for several years for this but no recognition yet.
- The majority of fresh produce in the market cannot be traced due to long supply chains and no recording from farm gates to the market

Supply Chains: Short and Small



- Very small scale farming as majority, therefore realocation is necessary and it takes a lot of time and energy
- Farmers are mainly women and old, therefore it is hard for them to make a change
- Consumers get used to open and convenient markets

Minimarts of fresh foods: Small and Short

These stores were founded to supply consumers with products of good information about quality and control systems. Take Bac Tom as an example. The name is sourced from "The cabin of Uncle Tom". The idea is that we are always loyal to our host - customers, the same way that Uncle Tom was doing with his host family in the famous Novel of America. The first store was founded in 2010 by a value chain specialist. There are now 20 stores (April 2017).

These stores are all new in the market. Their supply chains can be displayed as simple as following: Farmer groups -> Retail Stores -> Consumers. Farmer groups contract with Retail Stores to make sure that they comply with the quality standards, the range of produce and the seasonality as requested. Therefore the information of farming is available to buyers.

At the beginning when author started to work with farmers, it was a big challenge to make farmers happy with the volume and selling prices. Farmers do not yet trust their buyers. Therefore it was not easy to convince farmers to comply with PGS. Bac Tom had to go ahead with the contract and pay in advance or credit for small farmer groups of 5-10 members with ~ 0.5 hectar/ group. Additionally, training in advance is necessary to provide farmers with advantages of reallocation, new management styles and quality inspection system; market opportunities are most important for farmers before shifting from conventional to organic farming.

In the mean time, the quality and detailed information of products must be clear to consumers. In order to do so, the farm management team is responsible for inspecting the produce from the farm, while the quality team is responsible for checking the produce at the general store and retail stores. The information gathered is then displayed in retail stores and the media (website, facebook). Especially facebook is emerging as a powerful tool in marketing. It can be useful for small firms as it does not cost much and most of young people in Vietnam are get used to with it. Although most farmers are not get used to with social networks but consumers are. In order to disseminate the messages, staffing is crucially important. Sales staff must be trained to understand very well about produce. Particularly they must go to the field and talk with farmers to gain deep knowledges of production.

Farm tours are developed for pupils and parents to better understand about the farm and then disseminate the message of quality. Soon consumers become very much interested in discovering the farms and the way the quality is controlled.

Regular meetings are also an important tool for sharing experiences and reflect feedbacks from consumers. Satisfying consumers is always on the first priority.

In addition, the collaboration with NGOs is very important in making use of development projects. They have a good understanding about farmers. Therefore they help organize farmers in groups and empower them to work with the market. Working with NGOs is also good for retailers as consumers tend to trust NGOs more than traders who conventionally don't have a positive position in Vietnam.

Very recently our PGS network and retailers are working with digital tracibility which help trace back the producers and production procedure by QR code and smart phone. Fortunately many farmers now get access to smart phones which is necessary for the employ of QR code.

Diversity of produce

When you gain trust from consumers, it does not mean that you are sustainable. Particularly it is true in vegetable supply chains. Vegetables are cheap in Vietnam, and they are bulky. Therefore retail stores which sell vegetables only are very difficult to gain profits. They must expand to other products such as fruits and meat. Many stores had opened and then closed

due to their shortage of produce range. Bac Tom was originally a vegetable store and quickly diversified to a wide range of fruits and meat. By that way, consumers can do shopping in one place and save time. This trend has resulted in a new type of minimarts which are specializing in fresh and perishable foods: vegetables, fruits, meat (pork, beef, chicken, duck, fish, sea fish)

Profile of stakeholders and produce

- 90% of our customers and staff are women; 85% of our customers and 95% of our staff are under 35
- 90% of our producers at farms are women; 80% are above 35
- 60% of veggie are organic and 40% are safe (natural)

Recommendations

- Re-allocation for larger concentrated areas per household
- Organic standards and certification systems should be available
- Standards are recognized in other countries in Mekong region for export opportunities and produce exchange
- Certification bodies should be trusted by consumers
- Standards and certification systems for small farmer groups should be available in a way that the cost is acceptable and the recording is appropriate
- More investment in promoting and marketing instead of focusing at farmers and production level
- Farmers are empowered to be as tour guides on their farms and also a marketer for healthy foods. This will help bring in more customers to visit the farm
- Foundation of a group of sustainable agriculture enterprises for sharing experiences and products

Maximizing Net Incomes for members of a Farmer Producer Organization: Is there an optimal market distance?

Amar KJR Nayak[1]

About Author

The author is Professor of Strategic Management and National Bank for Agriculture and Rural Development (NABARD), Chair Professor, Xavier Institute of Management, Xavier University Bhubaneswar, India

Key words: Optimal Market Distance, Net Income for Producers, Characteristic Distance, Transaction Cost, Producer Organizational Design, Sustainability

Summary

Although marketing efforts of Farmer Producer Organizations (FPOs) during the last one decade have increased significantly, net incomes of small and marginal farmers do not seem to have increased much. In the light of current policy direction and performance of FPOs, this article delves into the question of whether there is optimal market distance for respective FPOs; where the transaction cost can be minimized and net income for small producers maximized. Based on action research on one producer organization and empirical observations of 20 FPOs across India, the article discusses the variables that define the characteristics distance between small producers and market and the method to optimize distance. It also highlights the need for simultaneous optimization of other co-design variables of an FPO for long term sustainability.

Introduction

Market and Monsoon have been considered the two monsters of agriculture and small farmers in India. With increasing climate changes, increased input cost of agricultural production, and increasing dynamics of agricultural commodity markets, the financial viability of the small and marginal farmers to continue in agriculture has been appearing to be bleak. Indeed there have been many initiatives to tackle these two problems. On the agricultural practice, there is a gradual movement from external input based agriculture to low cost on-farm based input agriculture. On resolving marketing problems, there have been many initiatives for aggregation of small produces, value addition of agricultural produce and institutional mechanisms for marketing.

[1] Professor of Strategic Management and NABARD Chair Professor, Xavier Institute of Management, Xavier University Bhubaneswar, Email: amar@ximb.ac.in

Author acknowledge the contribution of grant support from NABARD, Rabo Bank Foundation and Sustainability Trust as well as the institutional support of XIMB and NISWASS for this study.

Marketing has been perceived as the most difficult issue faced by the farmers and the farmer producer organizations (FPOs) in the country. One of the expectations of the FPOs is to help farmers manage their business without the interference of many middle men. The FPO should act as a means to provide market linkages to the small farmers and improve their collective bargaining capacity.

In the recent years, the focus of the Government of India, state governments and the various development agencies has been towards promoting farmer producer organization as producer companies. NABARD through its Producer Organization Development Fund (PODF) has been supporting producer organizations across the country. The Department of Agriculture & Cooperation through its Small Farmers Agribusiness Consortium (SFAC) has created a fund to initiate about 200 producer companies in the country. The Ministry of Rural Development through its National Rural Livelihood Mission and the State Livelihood Missions has been in the process of reorganizing the SHGs to producer groups and then producer organizations. The various international development agencies including the UN agencies such as World Bank, UNDP, & FAO have also been investing in these organizations.

Various state governments like Madhya Pradesh, Maharashtra, Karnataka, Bihar and Odisha with support from the World Bank have initiated producer organizations/companies in their respective states. The producer companies of Madhya Pradesh were supported by MP-DPIP. Maharashtra government has also adopted this under the CAIM project in six districts of Vidharba region. International development organizations like the Rabo Bank Foundation have supported nearly forty (40) producer companies in the country. UNDP has also financed a few producer companies in U.P. and Rajasthan. Many of the civil society organizations that were involved in formation of producer organizations viz., self-help groups, farmers clubs, common interest groups, primary cooperatives, etc, are slowly graduating to facilitate formation of producer companies on behalf of the state governments and development funding agencies. In other words, there seems to be a lot of financial commitment from different organizations and institutions to promote producer organizations in India during the last decade.

Despite these efforts, empirical observations do not show much increase in the net incomes to the members of Farmer Producer Organizations. In the light of this phenomenon, the article questions if there were an optimal market distance and landscape for farmer producer organizations where maximum net incomes can be realized. Further, it elaborates the characteristic distance of small producers from the market in terms of market information, knowledge, resource base, product quality, volume of product, marketing skills, etc and their affect on overall transaction costs.

Research Methodology

Action research on one producer organization and detailed case studies of another 20 producer organizations form the basis of this study. Action research in one farmer producer

organization viz., Nava Jyoti PC Ltd. was undertaken during the period 2010-2014. This was complemented by detailed case studies of 17 producer companies and three leading dairy cooperatives during the last three years (2011-14). The producer companies were chosen from a total sample of 258 producer companies through a systematic gradation process. Field visits were made to 15 states in India and experiences and views from multiple stakeholders from each of the sample producer organizations were recorded and analyzed. The observations from these methods have been triangulated to analyze the optimal market distance and landscape for the emerging FPOs in India.

Empirical Observations

1. Action Research in Nava Jyoti PC

Nava Jyoti PC (NJPC) is a farmer producer company consisting of about 700 small and marginal tribal farmers/producers of two Gram Panchayats viz., Nuagada and Gulluguda in Padampur Block, Rayagada district, Odisha.

Stimulus/ Intervention: Besides experimenting on the various organizational design variables, determination of optimal market landscapes had been one of the key areas of study. Marketing of NJPC products were undertaken in three different markets in an attempt to get the best net price for the small and marginal farmers/producers. **First,** the surplus produce of NJPC community was sold in Bhubaneswar market, the state capital that is about 350 KM from NJPC. **Second,** after one year of this experiment, marketing of NJPC products were done in Rayagada market, the district capital that is about 120 KM from NJPC. In both these markets, a sales executive was appointed, a house was taken on rent and other administrative support was provided. **Third,** having observed high expenses in the distant markets, the market focus of NJPC in the third year of marketing was the local community market; that is within 20 KM radius from NJPC facility.

Response/Observations: Selling NJPC products in markets away from the community required appointing a Sales Executive in the respective markets. The NJPC Board tried to identify one of the existing coordinators who could undertake this assignment. None of the existing coordinators from within the community showed interest to work in Bhubaneswar; the state capital, expressing that they would not be able to work alone in the state capital. Hence a person from outside the NJPC community; who was already living in Bhubaneswar was appointed to undertake the marketing work for NJPC. Similarly, initially; no one from among the existing coordinators was willing and prepared to work as a marketing executive in Rayagada, the district capital market; hence a person from Rayagada was appointed to undertake this task of selling in Rayagada. However, after a systematic a six week training of coordinators from the community on various aspects of managing NJPC, one of the local coordinators showed the interest to take up the marketing responsibility in Rayagada. He however required continuous support and supervision to satisfactorily carry out his work.

The transaction cost of marketing substantially increased in both Bhubaneswar and Rayagada and it included salary expense, house rent, electricity, product transport, local travel, telephone, and support and coordination expenses. Transaction costs of marketing as a percentage of total turnovers were recorded in all three market locations (Table 1). Further, the net price realized for each product was recorded in all the three different markets (Table 2).

Table1: Marketing Transaction Cost as percentage of total Revenue in different Markets, Nava Jyoti PC, 2010-2014

S. No.	Cost Component	Local Community Market	District Capital Market	State Capital Market
1	Sales Executive Salary	10%	15%	30%
2	Administrative Overhead *(House Rent, Electricity, Transport, Telephone, Travel, Coordination & Supervision)*	5%	20%	30%
	Total	**15%**	**35%**	**60%**

2. Market Landscapes of FPOs in India

Empirically, the market landscape of the FPOs in India has been quite varied. Most producer organizations have indeed more than one market to sell their produce. However, they tend to focus on some particular markets. Some producer companies have been selling in the local community market and nearby urban markets whereas others have been selling in the distant markets including state capital market, national markets and export markets. A few producer companies have also tried selling across the different market landscapes in an iterative process to gradually discover that selling in local markets seem to pay off better to the producers.

Local Market: Some of the producer organizations such as Amalsad cooperative, Gujurat and Sangham of DDS, Zaheerabad have kept themselves to local markets. Amalsad Cooperative's philosophy has been to meet the needs of the members first.

Accordingly, Amalsad exported its products after almost twenty years of operating in the local market. Sangham believed in food security of the local community and hence has been largely marketing in the local markets. A creative institutional marketing mechanism has been observed among the producer companies promoted by MP-DPIP. These producer companies such as Hardol PC, Neshkala PC, Rewa PC, Khujner PC, and others sell their seeds to local farmers through the local SHG groups. This indeed is an interesting model of local production and local marketing. Kudumbashree of Kerala facilitates producers to sell their goods through home based shops, in fairs or through retail shops in the neighborhood market.

Table 2: In season Selling Price, Transaction Cost, & Net Price of different Products in different Markets, Nava Jyoti PC, 2014 (in Rs/KG)

S. No.	Product	Local Community Market			District Capital Market			State Capital Market		
		Selling Price	Transaction Cost (15%)	Net Selling Price	Selling Price	Transaction Cost (35%)	Net Selling Price	Selling Price	Transaction Cost (60%)	Net Selling Price
1	Pigeon Pea / Arhar (whole)	60	9	51	62	21.7	40.3	55	33	22
2	Pigeon Pea / Arhar (dal)	80	12	68	70	24.5	45.5	88	52.8	35.2
3	Cow Pea / Jhudungo (whole)	70	10.5	59.5	60	21	39	80	48	32
4	Black Gram (whole)	60	9	51	60	21	39	80	48	32
5	Black Gram (dal)	80	12	68	75	26.3	48.8	84	50.4	33.6
6	Turmeric Powder	120	18	102	90	31.5	58.5	190	114	76
7	Vegetables (beans, bottle gourd, bitter gourd, ladies finger, & brinjal): Dec 2012	30	4.5	25.5	15	5.25	9.8	18	10.8	7.2
8	Cashew Seed	90	13.5	76.5	90	31.5	58.5	PNT	--	--
9	Hill Broom	50	7.5	42.5	50	17.5	32.5	35	21	14
10	Mahua dry flower	22	3.3	18.7	22	7.7	14.3	PNT	--	--

PNT: Product Not Transacted in this market

Nearby Urban Market: In some companies, like Devnadi Producers Company Ltd., the producers go to the residential colonies in Nasik to sell vegetables. The vegetables are sold within four hours of harvesting; an excellent example of direct marketing. Similarly, Sangham of DDS in Zaheerabad focuses on selling in the local market before sending it to Hyderabad that is about 3 hours from Zaheerabad. The Healing Heritage of Odisha markets its products in rural areas through its producers and in urban areas through retailers. It also supplies raw drugs to many pharmaceuticals companies like Dabur, Himalaya and Natural Remedy. Similarly, Grameen Aloe Company sells its product through the producer as well as through the retailers. In the rural area and in trade fairs and exhibitions, the product is sold by the farmers directly. But in urban areas, the company has tie-ups with some retailers and medical stores.

National Market: In case of VAPCOL, once the producer company processes the produce, it sells across the country. Kabini Producer Company has tie-ups with other companies across the states and it supplies vegetables and cotton bales based on their demand. Producer cooperatives like AMUL, KMF, and Mulukanoor have large markets within their respective states. AMUL not only covers the national market, with its own outlets and other retailers but also exports to many other countries. Indeed, AMUL's promotion and branding is no less compared to or even better than the large multinational corporations in India.

Export Market: However, some producer companies enter into agreement with other large intermediaries, viz., large consumer companies or wholesalers. Some of the early producer companies like Vanilco and IOFPCL have typically focused on large export markets. Masuta has been selling its tasar silk across the domestic and international markets. It has also created a subsidiary, Eco Tasar to market its products in far off, high end markets. Amalsad, a primary cooperative society after about 20 years of its operations in the local community, began to export its produce. Similarly, AMUL today exports its products to a large number of foreign countries. Fab India, a large international organization of weavers has been exporting garments to various countries of the world. However, the small weavers of Srikakulam district supplying fabric and garments to Fab India have not been getting their payment for over six months for the woven clothes that they have supplied to Fab India. While the local weavers with their limited skills and resource base would like to weave clothes that may meet demands of local market; for which they could get a good earnings, Fab India as the promoting organization has little support to facilitate weavers to weave clothes within their capacity and market them in the local markets. Fab India largely supports the master weavers who can produce for international markets. There is little empirical evidence that selling in far off markets has increased the net incomes to the small producers/farmers in the current stage of producer companies in India. During detailed interviews with chief promoters of a few producer companies viz., Vanilco and Mahila Umang, the Chief Promoters revealed that after making losses in far off markets and export markets, they have now begun to focus in the local and nearby markets.

3. Gross & Net Incomes to Farmers

The current average turnover or average gross income for the sample producer organizations including producer companies and cooperatives is about INR 1492 per member per month. Assuming that the average cost of production for the farmers is 40% for agricultural products and 50% for diary activity, the average net income is only INR 830 per member per month. For producer companies, the current average net income is only about INR 480 per member per month. Even for the three well old and established dairy cooperatives in India, the present net income per month per member is only about INR 2060 assuming 50% of gross income is the cost of operations (Nayak, 2015).

4. Analysis & Discussion

Optimal market landscape of NJ PC: The observations of data on cost of sales transactions, selling price and net price suggest that the optimal market for NJPC is the local community market. Cost of transaction is quite high as compared to the selling price in both the district capital market and state capital market. Accordingly, net selling price for all products in the local community market is higher than the net price realized in both the district and state capital markets (Table 1 & 2).

Farmer Producer Organizations in India: From the observations of producer organizations across the country, it is rather difficult to ascertain the optimal market landscape for maximum per unit income for a producer. Most producer companies do not seem to have identified their optimal market landscape where they can optimize their per unit net incomes for member of their respective producer companies.

It has been observed that the more FPOs move away from the local conditions, the cost of selling increases to resolve the various complexities associated with operating in the distant markets. Different types of costs such as packaging cost, transportation cost, increased handling cost, storage cost, manpower cost, cost of seeking information, additional processing cost, cost of interest, cost of damage and losses, cost of institutional deficiencies, etc. While the cost of production remains the same, the cost of selling and marketing significantly increases as the producers move to far away markets (Nayak, 2012b).

For items with lower shelf life such as vegetables and fruits, the net price realization in distant markets is not at all in favor of the small producers or their producer organization. Instead, the small producers obtain relatively better net income by selling their vegetables and fruits within the local market. While demand for the vegetables is high in the large urban markets; the supply is also very high during the vegetable and fruit season and hence there is drop in price of these items in these markets.

Optimal Market Boundary

Optimal Market boundary is determined by the characteristic distance. The characteristic distance is a composite distance between the producers and the market. This distance could

be in terms of market information, knowledge, resource base, product quality, product volume, marketing skills etc. As individual small producers congregate and collectively form a producer organization, some disadvantages of the producers, viz., product volume gets mitigated. However, the other disadvantages are not mitigated.

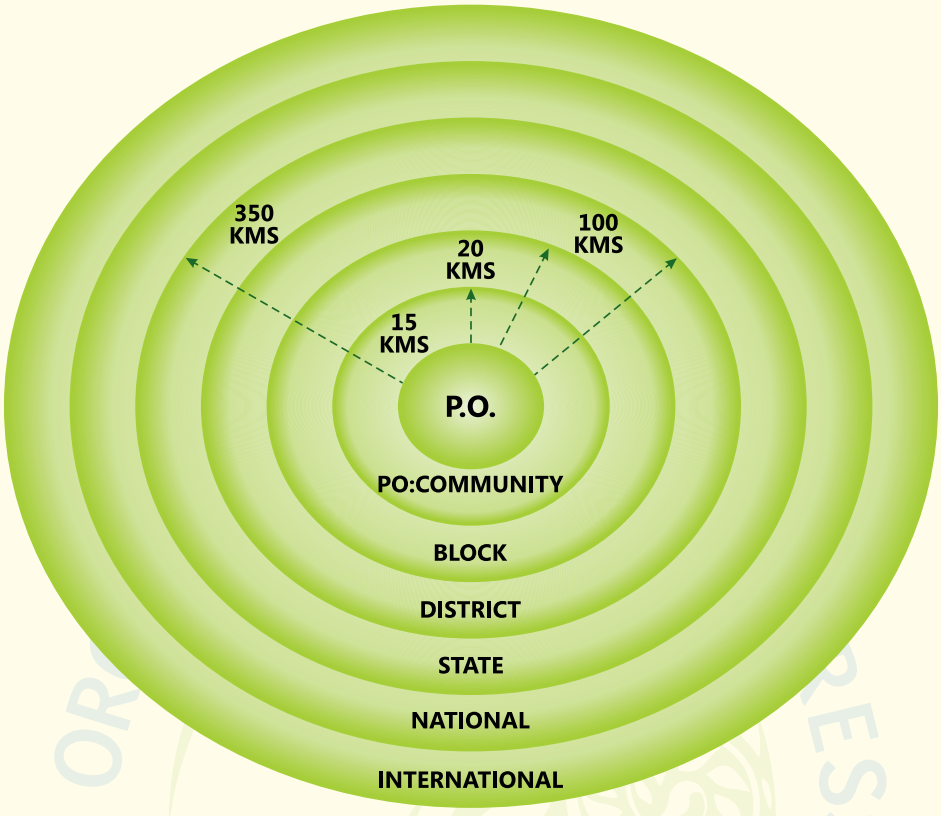
The characteristics of the market can be understood in term of location or type of market and nature of market; where the producers and the buyers transact. Depending on the location or type of market and whether buyer is a bulk buyer or retail buyer the characteristic of the market will vary. The distance between the two characteristics, determines the bargaining power of one over the other. On a similar line, the notion of psychic distance in the mainstream literature of marketing with reference to industrial organizations (Ricart, et al, 2004) has been discussed.

The chain of intermediaries associated with typical industrial products is what we normally superimpose while resolving the marketing problem of agricultural produce. Rightly so, in most cases, the small producers sell their produce to local traders. The produce then moves from the local trader to wholesale buyer, then goes to processor/miller for value addition, and then moves to consumer market through a chain of wholesalers, distributors and retailers. The large chain of intermediaries naturally raises the difference between the farm gate price and final market price by over three times. In case the processed food item goes back to the farmers village, the price of the same item goes up by over 5 times.

Given the various constraints of small producers, identifying the appropriate market landscape for marketing their collective produce through producer organization is probably the key to ensure better net income for the producers. The market landscape includes the variable of distance of a market from the point of production and the nature of market or customer/ buyer that purchases the produce.

Distance of market from the point of production can be determined by the type of market. The type of market could be the village market, cluster level weekly market (haat), block level market, district level market, state level market, national market, international market, and global market. The distance of market within the cluster can be within 15 KM. Block market can be at a distance of 15-20 KM. The distance of the district market can be up to say 100 KM; whereas the distance of the state level market will be say up to 350 KM. Accordingly, the distance of national market, international market and global markets will be further away from the production cluster. Figure 1 depicts the market map for a producer organization. As the producer organization moves further away from the cluster of production, the institutional issues that the producers face becomes more and more complex and the cost of marketing increases. The marketing cost and the overall transaction cost of selling in far off market may increase so much that the net income for the small farmer may not increase even if the sales price is much higher in far off market than the sale price in the local market as in Table 1 & 2.

Figure 1: Market Mapping for a Producer Organization



While marketing within the local cluster, the producer organization largely interacts with the members of the same agricultural community. Moving further away, the producer organization will gradually have to interact with unfamiliar buyers and consumers in the semi-urban markets, urban markets, industrial markets, and global markets. Depending on the type and nature of market, perception and demand on product and service by the customer or consumer may greatly vary. In other words, with greater market distance from the local cluster, the complexity for the producer organization increases. The complexities associated within a product market could be due to variables such as demand, quality of product, quality of service, perception & value, behavior, competition (other competing suppliers, wholesale traders, awareness, supply conditions, product price etc). Inability of the producer organization to manage these complexities usually reduces the capacity to bargain or negotiate better in distant markets.

In addition to opportunity cost due to psychological distance in distant markets, the producer organization has to bear additional cost of transaction due to the physical distance of markets. Costs such as packaging cost, transportation cost, increased handling cost, storage cost, manpower cost, cost of seeking information, additional processing cost, cost of interest, cost of damage and losses, cost of building product awareness, cost of institutional deficiencies, etc are all part of selling in distant markets. Unless, the per unit sale price realized in the far away markets is much higher than the cost of production and the cost of selling and marketing in the far away markets, an increase in net income to the small producers may not be feasible (Nayak 2012b, 2012c).

Value Networks & Market Landscape

Because of the relatively concentrated location of markets for industrial products, industrial producers need to move their produce from the factories to specific markets. In such a situation, value chain is a relevant concept. However, agricultural produce have a relatively dispersed market than industrial products, as demand for food is from people around a farm. Anon linear value network seems to be relevant for agricultural produce/products than the linear value chain in case of industrial products as was observed in NJ PC action research and in case studies of other producer organizations such as Amalsad cooperative, Hardol PC, and Rewa PC that sell within the local community markets. In other words, markets for agricultural produce could be visualized as landscape of markets instead of a specific point of market in any geography. Farmer producer organizations therefore need to scan the landscape of markets around the places of their production and gradually expand the landscape of their markets rather view their markets as linear value chain leading to a specific wholesale market.

Design co-variables for market optimization

Given the characteristics of small producers, the above section described the optimal market landscape for a producer organization. However, along with market, the other co-variables of market viz., size, scope, technology, management and ownership of producer organization need to be simultaneously optimized. Empirical evidence, although fewer in number, suggest that producer organizations that have balanced all these variables simultaneously exhibit better result for the smallholder farmers/producers. Systematic action research in Nava Jyoti, a producer company in Odisha and a naturally evolved Amalsad cooperative in Gujarat provide evidence on these characteristics and improved performance.

The co-variable, Size refers to number of members in the producer organization and the geographical contiguity of these members for ease of communication, greater participation and involvement in decision making by the producer members (Schumacher, 1975, Reserve Bank of India, 1915, Mehta, 1960, Nayak, 2010, 2011, 2014). Scope refers to the varieties of production activities and subsequent product basket of the producer organization. Given small land holdings, smaller resource base, and environment friendly attitude, the marginal producers can only produce small quantities of items. The surplus after consumption by the family is still smaller (Marx, 1927, Kondratiev, 1921, Schumpeter, 1942, Panzar & Willig, 1975, Teece, 1980, North, 1984, Nayak, 2013c, 2014). Technology in the given context refers to process of farming, type of farm inputs, type of farm machinery and processing technology for value addition activities (Howard, 1940, Shiva, 1993, IAASTD, 2009, Collette, 2011, Gopalakrishnan, 2012, UNCTAD, 2013, Nayak, 2012a, 2014). Ownership refers to level of shareholding by the producer members in the producer organization (Sethi, 1979, 1986, Ostrom, 1990, Nayak, 2010, 2011, 2014). Management refers to how the producer organization is managed, whether by professionals from outside or by trained youth from the producer community (Taylor, 1997, Barnard, 1968, Chandler, 1993, Nayak 2013a, 2014).

5. Summary

In the overall analysis; depending on the characteristics of producer organizations, there seem to be an optimal market boundary where relatively better net selling price could be realized. In the present context of small producers and their markets, Farmer Producer Organizations (FPOs) need to carefully optimize the physical distance in case of direct marketing and minimize the characteristics distance between the FPO and their respective markets. Further, FPOs could create more value for the labor put in by their members if it were to develop the perspectives of value network and market landscape rather than value chain in a linear market perspective.

The dysfunctions of larger size (Nayak, 2008, 2014) of producer organizations in the social-cultural-environmental context of small producers could lead to inefficiency and ineffectiveness beyond an optimal market boundary.

Reference

- Chandler, Alfred D. Jr. (1993): *Visible Hand, The Managerial Revolution in American Business,* Harvard University Press, Boston
- Collette, Linda et al (2011): *Save and Grow: A policy maker's guide to the sustainable intensification of smallholder crop production,* Food & Agricultural Organization, UNO
- Gopalakrishnan, S., et al (2012): Plant growth-promoting traits of bio control potential bacteria isolated from rice rhizosphere, *Springer Plus* 2012, 1:71
- Howard, Albert (1940): Agricultural Testament, Oxford University Press
- IAASTD (2009): Agriculture at a Crossroads, *International Assessment of Agricultural Knowledge Science and Technology,* Island Press, Washington, DC
- Kondratiev, Nikolai Dmitriyevich (1921): *New Economic Policy, 10th Congress,* All Russian Communist Party
- Marx, Karl (1927): *Economic and philosophic Manu script of 1844*
- Mason W.T. & Mason, M. (ed) (1994): *Does Ownership Matter?: Japanese Multinationals in Europe,* Oxford University Press, USA
- Mehta, V.L(1960): *Committee on Cooperative Credit,* Government of India
- Nayak, Amar KJR (2010): Participation and Development Outcomes: Evidences from the Poor Districts of India, Journal of Management & Public Policy, vol. 1, No.2
- Nayak, Amar KJR (2011): Optimizing Asymmetries for Sustainability: Design Issues of Producer Organization, National Seminar on Productivity in Indian Agriculture, College of Agricultural Banking, Pune, Reserve Bank of India, September 2-3, 2011

- Nayak, Amar KJR (2012a): Integrated Low Cost Agriculture for Internal Consistency and External Synergy for Sustainability of Smallholder Farmers: Case of Nava Jyoti Agricultural Community, *XIMB Sustainability Seminar Series, Working Paper 4.0,* August 2012
- Nayak, Amar KJR (2012b): Optimal Market Boundary with minimal Characteristic Distance between Small Producer and Customers: A strategy to realize higher value by both small producers and consumers from a transaction, *XIMB Sustainability Seminar Series, Working Paper 3.0,* August, 2012
- Nayak, Amar KJR (2012c): Institutional & Organizational Asymmetries: Small Producers and Sustainability of Rural Agricultural Communities, *XIMB Sustainability Seminar Series 2.0, Working Paper, July, 2012* and Keynote Address at the National Workshop on Markets that Empower Farmers (& Consumers), XIMB-ASHA, XIMB, July 30, 2012
- Nayak, Amar KJR (2013b): Economies of Scope: Context of Agricultural Science, Smallholder Farmers, and Sustainability, *Research Training Seminar Series, XIMB,* Bhubaneswar, November 15, 2013 & *National Livelihoods Conference, New Delhi,* December 11, 2013.
- Nayak, Amar KJR et al (2013a): *Management @ Grassroots,* Xavier Institute of Management, Bhubaneswar
- Nayak, Amar KJR (2014): Logic, Language and Values of Cooperation versus Competition in the context of recreating sustainable community systems, *International Review of Sociology,* March 2014, Routledge, London. pp 1-14.
- Nayak, Amar KJR (2015): All India Survey on Farmer Producer Organizations and Natural Farming in India, NABARD Chair Unit, Xavier Institute of Management, Bhubaneswar
- North, D. C. (1984): Transition costs, institutions and economic history. *Zeitschrift fur die gesamteStaatswissenschaft/Journal of Institutional and Theoretical Economics,* 140 (1), 7-17
- Ostrom, Elinor (1990): *Governing the Commons: The Evolution of Institutions for Collective Action,* Cambridge University Press
- Panzar, J. & Willig, R (1975): Economics of scale and economics of scope in multi-output production. *Econ. Disc. Paper no. 33,* Bell Laboratories
- Penrose, Edith (1995): The Theory of the Growth of the Firm, Third Edition, Oxford University Press, New York.
- Reserve Bank of India (1915): *Report of the Committee on Cooperation in India,* Reserve Bank of India, Bombay.
- Ricart, J.E., Enright, M.J., Ghemawat, P., Hart, S.L., & Khanna, T (2004): New frontiers in international strategy, Journal of International Business Studies, 35, 175-200

- Schumacher E. F (1975): 'Small is Beautiful', Sphere Books Limited, London.
- Schumacher, E.F (1973): *Small is beautiful: A study of economics as if people mattered,* Blonde & Briggs Publisher
- Sethi, J.D (1979): 'Gandhi Today', 2nd Edition, Vikas Publishing House Pvt. Ltd., New Delhi.
- Sethi, J.D (1986): 'Trusteeship and the Crisis in Economic Theory', in *Trusteeship: The Gandhian Alternative,* Gandhi Peace Foundation.
- Sethi, J.D (1986): 'Trusteeship and the Crisis in Economic Theory', in Trusteeship: The Gandhian Alternative, Gandhi Peace Foundation.
- Shiva, Vandana (1993): *Monocultures of Mind: Perspective on Biodiversity and Biotechnology,* Palgrave Macmillan
- Smith, Adam (1776): *Wealth of Nations,* Oxford University Press, Reprint 1993, Oxford
- Taylor, F.W (1997): *Principles of Scientific Management,* Dover Publication, USA
- Teece, D (1980): Economics of scope and scope of enterprises. *J. Economic Behavior Organizatio*n
- UNCTAD (2013): Wake up before it is too late, *Trade and Environment Review,* UNCTAD
- Wernerfelt, Birger (1984): 'A resource-based view of the firm', Strategic Management Journal, Vol.5, 171-180 Barnard, Chester I (1968): *Functions of the Executive,* Harvard University Press, Boston

Organic value chain analysis- A case of the Zimbabwean Organic sector

Nayakanda Fortune[1]

About Author

Author is the chairperson of IFOAM Southern Africa and the founder director and spear header for the development of Zimbabwe Organic sector. Author is also the founder and executive director of Zimbabwe Organic Producers and Promoters Association (ZOPPA Trust), a Zimbabwean organic movement. She also initiated the first ever organic cotton and organic tobacco development project in Zimbabwe and trained people from other African countries. Author has also developed the local organic guarantee scheme that enabled small holder farmers to access niche markets

Summary

Organic value chain analysis found that despite progressive laws in Zimbabwe, gender inequalities still exist and the level of participation in organic markets was strongly influenced by gender norms reinforced by implementing agents and other stakeholders. Lack of policy, educational and regulatory support leaves no level playing field and organic agriculture is left on its own to struggle and survive. Absence of technologies, inadequate extension support and markets more friendly to conventional produce are major hindrances to the competitiveness. Political instability, high transportation costs, absence of capacities for legal documentation, poor standards knowledge and lack of commitment by authorities to support organic agriculture are also important factors affecting the development of organic value chain.

Introduction

This paper seeks to share the findings of organic value chain analysis that was carried out by the Zimbabwe organic Producers and Promoters Association (ZOPPA Trust) on behalf of the Zimbabwe organic sector. As the world organic sector is growing as a result of consumers becoming health conscious, the Zimbabwean market was also growing at the backdrop of increase in non communicable diseases. While there is increase in demand both locally, regionally and internationally, the Zimbabwean organic sector failed to supply the growing market, even though it seemed well positioned to do so. In an effort to find out the reasons to why the Zimbabwean organic sector could not supply the organic market, ZOPPA created a platform to allow organic market actors, service providers, policy makers and other stakeholders to discuss and agree on the course of action for growth of organic business. This they did by interacting and questioning the status quo of the organic value chain and try to bring agreed solutions that will see the sector grow.

[1] fortunate@zoppa.org.zw

Process description

The main aim was to facilitate the development of a national organic sector strategy that will give the direction and focus needed to realize the sector's potential. Five discussion forum meetings were held between 5 months. The participants included farmers, and representatives from government, the private sector, service providers, overseas importers and civil society. These were preceded by pre-forum capacity-building sessions for marginalized stakeholders. In parallel a situational analysis of gender and market systems was carried out.

The pre-forum meetings helped farmers and extension officers identify with each other's issues and boosted their confidence to interact in the main forum with other stakeholders without intimidation. The main forum objectives were to analyze the Zimbabwe organic value chain and understand the status quo, identify challenges and explore opportunities, develop solutions and capitalize on the opportunities and to develop a strategy for the Zimbabwe organic sector. A main achievement of the forums was to help stakeholders realize that they need each other in order to improve efficiency in their work. A considerable amount of bonding, networking and sharing of problems and ideas was achieved.

The gender study found that despite progressive laws in Zimbabwe, gender inequalities still exist in the agriculture sector and the level of participation in organic markets was strongly influenced by gender norms reinforced by implementing agents and other stakeholders. The study recommended that men be encouraged to be more active as producers while women should have their capacity built to participate more in entrepreneurial aspects of the value chain. Generally, to support the organic sector public-private partnerships and more support from government should be encouraged.

The situational analysis identified a number of opportunities which put Zimbabwe in a strong position with respect to marketing organic products particularly with respect to opening up international export markets. Numerous challenges were also identified and solutions to them were sought

Methodology

The forum used three different value chains for analysis focusing on identifying blockages (challenges and roots causes) and possible solutions on the market. While input from all stakeholders was required, all at once, input from importers and certifying agents was not available because they could not be part of the discussion forums. They were interviewed separately and their input came in later and was discussed in the next forums to inform possible solutions.

Challenges

Some challenges identified were value-chain specific but most of them were shared across value chains. Most challenges were cited by local market actors and summarized as follows;

i. Lack of Policy and regulatory support

Government was found to lack commitment to support organic agriculture and the limit in implementation of policies on organic farming (where they are available) at grassroots level. As a result of this, support services (such as extension services, input suppliers and buyers) do not take the sector seriously. A case in point being the signing of the AU Declaration on Organic Agriculture support by Minister of Agriculture Mechanization and Irrigation Development in 2010 but there is no implementation on the ground to that effect. This has been evident in many instances as follows;

- Government input schemes do not consider organic producers.
- Government's decision on agriculture product imports does not consider what local organic producers are trying to sell thereby exposing them to unnecessary competition.
- The Ministry of Health, which should be a strong proponent of organics but does not support the consumption of organic foods or educate people or even patients about the health benefits of organic foods.
- The Ministry of Health which continues to use hazardous chemicals such as DDT in malaria prevention, a situation that makes isolation of organic produce very difficult.
- Lack of policy support by government results into local media not seeing relevance of organic agriculture and therefore make no effort to cover it.

ii. Unavailability, inaccessibility and cost of working capital

While there are some agriculture finance facilities, they are not very accessible as farmers struggle to come up with bankable business proposals. Organic agriculture is also considered a risky investment and does not get funding.

iii. Poor water availability

Zimbabwe generally experience inadequate water resources for irrigated agriculture and the situation is getting worse as the effects of climate change and poor watershed management progress reducing production consistency. The coping strategies used by farmers in the past are no longer being followed or enforced.

National policies and frameworks on water are not supportive of farmers. A case in point is the privatization of water which has made it too expensive for farmers to carry out their activities. Unclear implementation of rules and regulations on water use has left users unclear of the water rights. This coupled with poor enforcement of the laws by the Zimbabwe National Water Authority (ZINWA) has led to lack of trust between ZINWA and the farmers and often leads to unequal distribution of water.

iv Unavailability and inaccessibility of suitable land

While land is a crucial resource which Zimbabwe has in abundance, organic agriculture is not benefitting. Although there is much unused land that has been lying idle for some time and thus could qualify to be organic, the indiscriminate use of chemical

inputs is contaminating all land. If there was apportionment of certain areas of the country according to organic status, there would be more land available for organic production without having to observe the conversion period. The availability of land for organic agriculture is prone to a further threat if GMOs are to be accepted in the future. Also noted was the fact that land is/has been allocated according to social or political affiliation so not every potential farmer can access it.

v. Lack of stakeholder support

The Ministry of Agriculture, which provides agricultural extension, does not provide the necessary support to organic farmers because extension staff is not trained to do so. In cases where officers are trained in organic methods they do not advise farmers unless given (unofficial) financial incentives because there is lack of policy and hence resource commitment. Due to this private sector and civil society farmer support organizations are not keen to work with government agriculture extension. Bypassing of grassroots government structures has led to lack of trust between organizations and government extension officers on the ground. The animosity between the two parties has often left farmers unsupported and unprotected. In addition, agriculture research does not benefit organic farmers leaving them with nowhere to get answers to address their production problems.

vi. Lack of security

Theft, particularly of livestock is a challenge. Livestock are the farmers' source of manure, draft power and financial security (especially in the absence of loan facilities). Stock theft is not being addressed by the authorities and this demoralizes the farmers and derails their efforts. Additionally, farmers face exploitation from market touts and middle men who dictate prices. The authorities do nothing to protect farmers.

vii. Technical knowhow on organic product and production

Soil fertility management and pest and diseases control forms the basis of any production but due to the absence of clearly defined organic input dosages, the quality of produce is seriously compromised. While some private sector companies have invested in production of organic fertilizers and soil conditioners, the lack of research into actual dosages for maximum benefits in different situations (soils and climate) leave a large gap in their use as the appropriate remedies.

Affordability, accessibility and availability of pest and diseases controlling measures affect farmers especially in the absence of a financial support facility. The use of locally available plant-based pesticides is not applicable in all agro ecological zones.

viii. Lack of capacitating of extension workers on organics

Formal Zimbabwean agriculture education focuses on conventional agriculture which leaves farmers and extension officers unable to address issues pertaining to soil fertility management and pest and disease management under organic.

ix. Market challenges

Markets pose monopoly challenges and where there is an opportunity; farmers find that prices are dictated to them from inputs to their products. The flooding of markets with imported produce has put farmers at risk from price and logistics competition. Due to lack of a defined organic market, there is no price differentiation between organic and conventional produce. The lack of a premium price for organic producers is de-motivating and in some cases markets say they are not interested in the organic status, however, consumers may be asking for organic produce.

Delay and postponement of payments from buyers puts unnecessary pressure on producers. By the time producers get their money, all the profit is eroded and in most cases, the farmer cannot go back to production due to lack of capital. Farmers are weak in negotiating these payment terms, or enforcing them because in most cases, the buyers have more power. There is poor communication between farmers and the buyers. Farmers are sometimes short changed by retail/ wholesale buyers. When farmers deliver the required amount the wholesalers then take less than their original order, leaving farmers with excess produce and nowhere to sell. Thus farmers end up either throwing produce away or selling it at a loss.

On the other hand, production levels have been low, affecting market confidence in the organic producers. Lack of supply consistency affects market planning and prices. While there are many producers around the country, the lack of farmer organization affects supply quantities and consistency. Some farmers are affected by lack of market competitiveness when their products are for export. There is also monopoly of the markets at the local scene. Lack of market information on such markets leaves them trapped in the same markets whether or not they are treated fairly.

X. High Transport costs

Poor road networks lead to high vehicle maintenance costs pushing up transport prices. Poor producer coordination in production and marketing leads to individual supplies with low quantities with no scope for absorbing huge costs that could easily have been spread if the hired truck was filled with produce from many producers.

xi. Certification services

Certification services are beyond the reach of many producers because of limited service providers as well as the costs that are involved.

xii. Information sharing is limited

A lot of information is being generated across the value chain but it is not being shared for the benefit of different players. This has led to wasting of resources and duplication of efforts.

xii. Sustainability

The sustainability of organic sector in Zimbabwe is at stake as the interest lies with old producers while the young generation is not so keen.

Challenges noted by importers

Importing and prospective companies were interviewed over the phone on what challenges they face in dealing with Zimbabwe. The challenges were stated as below;

i. Political instability.

There are often radical changes in economic policy which deter international importers. However businesses who have direct experience of working in Zimbabwe found this less of an issue than the aspiring ones. The international media plays a role in exasperating this issue.

ii. High transportation costs.

High transportation cost associated with getting products out of the country. High duties are also applied to goods being brought into the country. Due to limitations on imports, part container loads containing small quantities have to be made by air which is costlier than sea freight, therefore a larger business structure is required. This makes Zimbabwe unable to compete with Asia regarding organic food.

iv. Legal Documentation

There is a perceived lack of clarity (from Zimbabwean Ministry of Agriculture) on required documents and procedures for an exporter to export goods. The unavailability of documentation online makes it worse. Importers often have to acquire legal services to complete the process.

v. Weak online presence.

There is a lack of online, reliable and up-to-date information about the Zimbabwean organic sector which makes it difficult to develop contacts and build relationships.

Challenges noted by certification companies

Certification companies are also stakeholders as they give guarantee for organic quality. One company was interviewed on the challenges that they experience in the Zimbabwean organic sector as they do their work. The following were cited;

i. Absence of standards knowledge

Farmers in areas that did not use external inputs in the past think that everything in their locality is organic. Therefore, lack of standards application compromises the organic status of products from those areas.

ii. Absence of area demarcation according to production systems.

Lack of designated organic zones in the country brings confusion and compromise organic quality of products.

iii. Lack of commitment by authorities to support organic agriculture compromises quality in mixed farming areas.

Value chain opportunities

In interviews with importers, they indicated number of opportunities that they see in the Zimbabwe organic sector which can be exploited and below is what they identified;

i. Zimbabwe's strong policy on Genetically Modified Organisms (GMOs) that discourages it – Being GM free there is huge potential for export of Zimbabwean organic foods.

ii. Zimbabwe has an abundance of unique natural products and underutilised species (particularly berries and fruits). There is considerable potential to add value to natural raw products and turn them into novel products such as baobab flavoured chocolate.

iii. More could be explored and capitalised on within the tourism market including encouraging restaurants to sell more traditional organic Zimbabwean foods such as sadza made from millet or sorghum served with indigenous chicken and vegetables in peanut butter sauce.

iv. There is an opportunity to come up with an organic sector export strategy. Initially this should focus on a couple of value chains to build up a model for replication.

v. Low Taxes and no duties paid on imports cuts down on import costs giving Zimbabwe an added advantage

vi. English as the official language in Zimbabwe ensures ease of communication and the high literacy rate of Zimbabweans gives it an extra advantage over other countries.

vii. The strong work ethic of Zimbabwe's workforce and the high level of trustworthiness and reliability make Zimbabwe appealing to work with.

Conclusion

The process concluded that since each value chain faces specific challenges the problems need to be tackled on a value chain basis. For organic agriculture sector to succeed the value chain challenges need to be systematically tackled and a multi stakeholder approach is the best way to do so.

Tapping the Consumer Cooperative Movement in India for Transparent Marketing and Fair Pricing

Sunil Kumar [1]

About Author

Sunil Kumar is dual post graduate with over 21 years of work experience in Food and Organic Industry. Currently he is employed in Kejriwal Bee Care India Pvt. Ltd. as General Manger-Organic, Health and wellness.

Summary

There are more than 2000 stores in organized retail across all the major cities of the country where Organic food is currently sold. There are more than 10 National level E commerce companies selling Organic food along with over 30 regional grocers. There are more than 150+ Organic stores selling Organic food across major cities with Chennai and Bangalore constituting 70-80% of the organic stores spread over country. However it is very small percentage of retail coverage considering that there are over 8 million retail outlets across the country. In addition to this there are many un tapped channels where organic can be sold- mainly DTH Model (direct to home), consumer cooperatives, organic farmer clubs/markets etc. But similar to conventional market, domestic organic market also suffers from VICIOUS CIRCLE OF MARKETING SYNDEROME.

Introduction

The Paper is based on in depth analysis of various marketing channels and avenues available for selling organic food in the domestic market in India. The paper also covers the current channels available for sales and the new avenues available for selling authenticated organic food along with vicious circle of marketing. The information has been collected from Sales managers of various organic food companies such as: Sresta Organic, Amira Organic, Pro Nature Organic, Organic Tatva etc. Information has also been collected from ICCOA Articles, APEDA Reports, Yes Bank reports and Newspaper cuttings. The paper also analyzes the vicious circle of marketing that domestic organic industry is currently suffering from and the shortcomings of the ORGANIC sector with best possible suggested solutions in brief.

Main Issues

Organic has become Buzzword all across the world and trend is fast catching up in metro cities in India. The world Organic market stands at over USD 75 billion with USA and Germany being the top 2 markets. However countries like India, China, Japan, Australia, New Zealand, etc are seeing rapid changes and continuous growth. Here author analyzes the size of domestic market; number of outlets etc. where organic is sold, new emerging channels, various challenges and the VICIOUS CIRCLE OF MARKETING in Organic sector in India.

[1] sunilk@kejriwalgroup.co.in

Domestic market scenario

a. Estimates size of Indian domestic organic market - INR 4.5 – 5.0 billion.

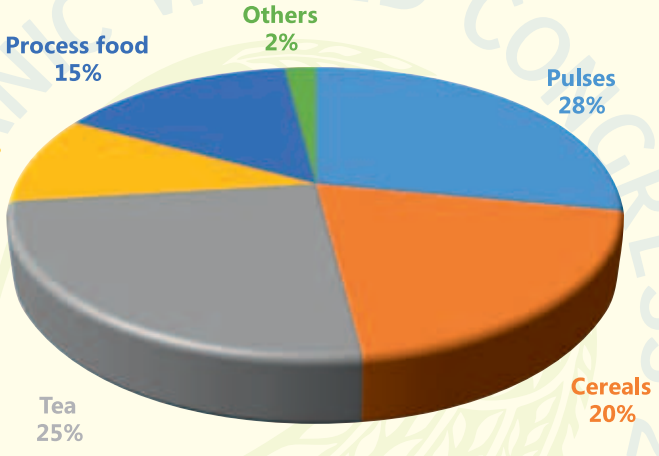
b. Major Buying cities - Delhi NCR, Mumbai, Bangalore, Hyderabad, Chennai, Rishikesh, Dharamshala, Mangalore to name a few.

c. Main Domestic Players - Organic India, Fab India, Sresta Organic, Pro Nature, Organic Tatva, Pure and Sure etc.

d. Number of Organic SKU's - 150 to 300.

Category-wise sales contribution - Pulses lead the race but process food is fast catching up. Share of different commodities being sold in India market is shown in Fig. 1.

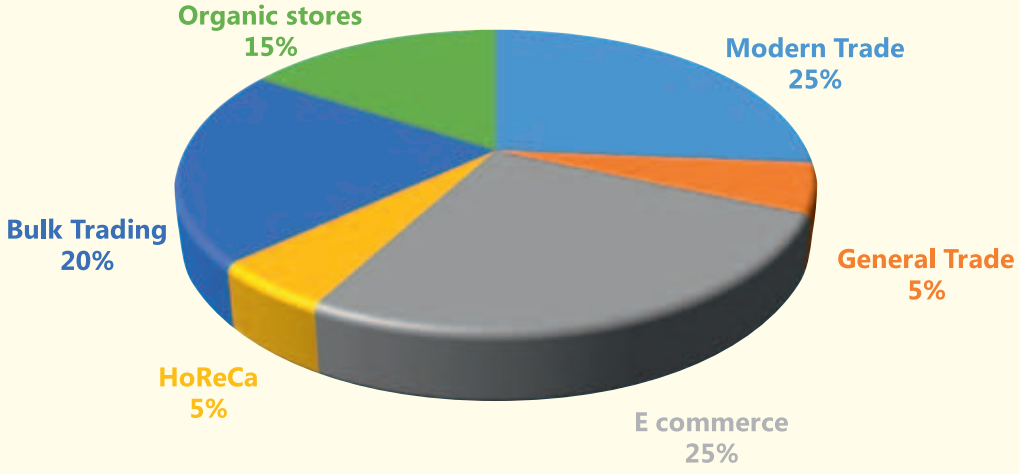
Fig 1. Contribution of Commodities in %



Channel wise sales contribution –

- Modern Trade, Organic stores, E commerce and Organic stores are the drivers.
- Share of organic sales through general trade is very low although Indian market is dominated by over 8 million of such stores.
- Channel wise sales contribution in Domestic Organic food market is shown in Fig 2.

Fig 2 Percentage Sales Through Various Channels



Market spread-:

- Modern Trade with over 1500 stores keeping organic on their shelves and E commerce serving over 1800 pin codes for supplying organics are the leaders.
- General trade includes about 400 A-class big departmental stores in metro cities
- HoReCa includes likes of American School, Some hospital chains etc.
- Penetration in general trade is low as organic is expensive and is considered very niche product. Due to slow off take retailers are hesitant to keep the organic products.
- Share of sales in different trade formats are given in Fig 3.

Fig. 3 Number of outlets selling organic

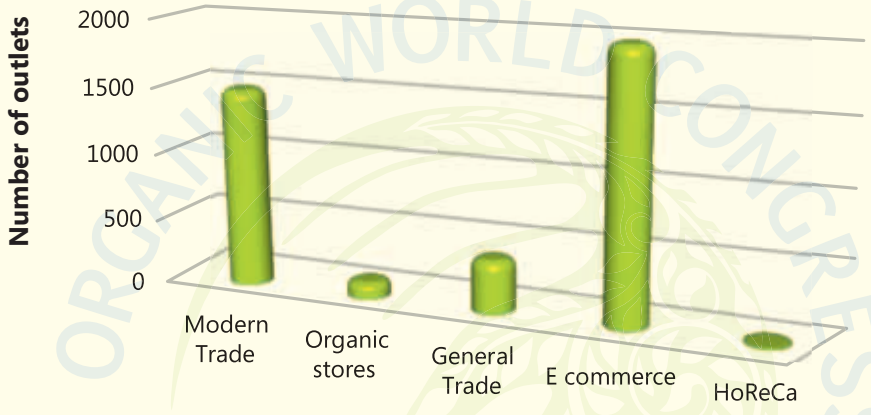
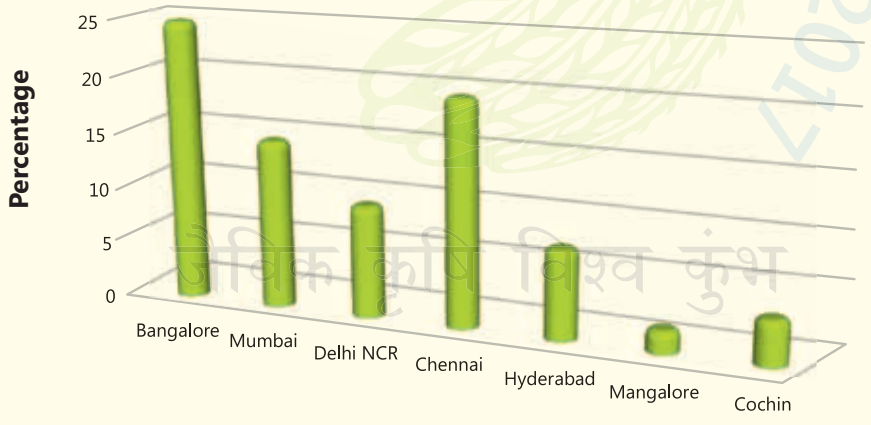


Fig 4 shows city-wise sales: South India leads the Race.



VICIOUS CIRCLE OF MARKETING Continues to Hurt the Indian organic domestic Market-:

- It is like chicken and egg story.
- Low investments in marketing of organic products are the main cause for small size of organic domestic market.
- Fig 5 depicts the Vicious circle in which ORGANIC sector is trapped.
- The circle is so vicious and rigid that unless large and effective investments are made in marketing of Organic products, the market size of domestic organic market will continue to be small as compared to population and economy size.

Other challenges of Indian Organic sector

- Sector is Exports driven and limited commodity specific e.g. about 90% comes from soybean and its related products.
- Exports share to overall organic basket is less than 26%.
- Sector has high production of about 1.18 million tones but consumption, in both exports and domestic demand is hardly 40%.
- Sector has multiple regulators such as APEDA/ MOFPI/FSSAI and Agriculture Ministry etc.
- Organic Products lack authenticity as many fake products are traded as organic
- Price of organic food is too high and making it just a FAD and not a necessity.
- Consumers are confused about certifications.
- Market is full of traders and there is clear cut absence of farm-to-fork approach.
- Framers do not get buyers and premium for their produce. Consumers do not get competent price and reliable ORGANIC – clear cut absence of connect between producers and consumers.
- In a vast country like India with multiple food and cultural heritage, it is difficult to make diet 100% Organic.
- Organic food market lacks investments in marketing as it is still a low income/loss making proposition therefore seller has to depend upon exports for meeting the expenses of his/ her unit.
- There is lack of transparency in prices and consumer does not trust organic brands easily.

What are Alternative/New Channels

a. **Consumer Cooperatives -** One such Cooperative for organic exists in MANDYA village,

which is about 100 KM away from Bangalore in Karnataka state of India. There are about 700+ farmers in this society and it has opened 3 organic stores for their produce. SKU are sold by brand named "ORGANIC MANDYA". The society collects Rs 1000 from each farmer and almost all the farmers are equal shareholders barring the 5 founder members, who left their lucrative jobs in USA and returned to their native village Mandya where they had their farming land. They are managing this society besides doing Organic Agriculture.

b. **Organic Push Carts Model -** Also called as ORGANIC THELI WALA (Organic cart man), one live example is TRUE TRADE- a Hyderabad based organization model. They operate 50 stores cum *Theliwalas* (hand driven cart) in Hyderabad by the name of "GREENS". The organization has also introduced 10 such carts in Bangalore, mainly for posh areas like Koramangala etc.

c. **DTH through on-line channel -** Goods are sold directly to consumers -DIRECT TO HOME Through on line organic store. Physical goods are kept in a godown/shop/ small shop – here location not that important. Consumers are educated through mailers/blogs about benefits and which organic product to use in case of a specific disease. The model is still unexplored; however, there are 2 organic stores in Delhi NCR who are making full use of this model and doing business for over Rs20million per annum from just 350 square feet outlet. The Model has tremendous scope considering that the real estate cost is too high, lot of traffic in cities and consumers hardly get time to visit the outlets.

d. **Organic farmer clubs -** A group of farmers/consumers joins hand to create ORGANIC. Each Group has 35 members and they promote organic food in various innovative ways such as POISON FREE STALLS, Nukad plays (street plays) etc. A senior person called as "CAPTAIN" of the club heads each group/ club. He/ She is responsible for sale of authenticated organic food through stalls /farmers market at a reasonable price.

Conclusion

Indian organic market is still at a very nascent and early stage. It is still evolving and may take another 5-6 years with lot of new ideas and innovations in marketing to get matured and stabilized.

Commercial Organic Agriculture in the Whirlpool of Large and Niche Market

Dr. P Bhattacharyya[1]

About Author

Dr. P. Bhattacharyya is a known biofertilizer and Organic Farming expert in India and is former Director of National Centre of Organic Farming, under Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India. Currently he is Scientific Consultant, SCOPE Organic Informatics Kolkata, India.

Key Words: Paramparagat Kheti Vikas Yojna, Mission Organic Value Chain

Summary

Market demand for organic products has expanded rapidly over the past two decades. Many multinational companies have come up with various organic products in global organic trade. It is expected that by 2020, the world organic market value will reach 100 billion US$. Organic farming in India has gained lots of momentum which is encouraging. But the irony is that many organic farmers throughout the world especially in Asian Countries including India do not get the access of major market chains either due to lack of infrastructural facilities or owing to lack of awareness . Further different certification systems are not well understood by farming communities which is a matter of serious concern. Recently, through intervention of International Task Force (ITF), the GOM (Global Organic Market Access) project have made a set of recommendations for harmonization, equivalence and other forms of cooperation to reduce barriers in organic trade. Simultaneously, Government interventions are also helping to create capacity building for strengthening infrastructural facilities and provide training to farmers engaged in niche market.

Introduction

In World Food Summit (1996) as organized by FAO, the term "Food Security" was defined as "physical and economic access at all times, to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life". Against this backdrop, organic agriculture is considered as safe production under holistic management system which is environment friendly. As consumers are also becoming conscious for food quality, health and environment, the demand of organic food from all countries of the world is gaining significant momentum.

Market demand for organic products has expanded rapidly over the past two decades. It is interesting to note that world- wide sales of organic product which was just US dollar 10

[1] Ex Director, National Centre of Organic Farming, MOA, GOI & Scientific Consultant, SCOPE Organic Informatics Kolkata Email: paritoshb.21@gmail.com

billion in 1997 has now increased to USD 81.6 billion (in 2015) with 50.9 million ha of organic agricultural land. America is the largest organic market with significant growth of 11.5 %. Other important organic trade countries are Germany, France, China, Canada, UK, Italy etc. The driving forces of the World Organic market are: i) Strong market growth, ii) Growth in World exports of Organic products from tropical origin, iii) Price premium and consumer behavior and iv) Organized distribution channels. Super markets in the developed countries are fast growing distribution channel for organic products. Large multinational companies are also increasingly offering products including cosmetics, herbal products etc., even on online and have their own quality protocols.

a) Indian Organic Market

During the year of 2000, the organic farming status of India was at nascent state. About 42000 ha and 76000 ha of cultivated land were certified in 2003-04 and 2005-06 respectively. Apart from this, about 2.43 million ha forest land for wild collection was also certified organic and the quantity of organic products exported was just 6792 metric tons. Thereafter, considerable progress has taken place in Indian organic sector. Currently, organic farming in India is experiencing a real boom. Many farmers are turning to organic practices. Now, India has the largest number of organic producers (10,80,000). India ranks 10th among the top ten countries in terms of cultivable land under organic certification, although majority of the area belong to forests for wild harvest collection.

Among the States, Madhya Pradesh is sharing maximum area under organic certification, followed by Maharashtra, Rajasthan, Odisha, Gujarat, Karnataka and Sikkim. At present, the number of accredited third party certification agencies is 28. During 2016-17, the organic food export realization was 370 million US dollars.

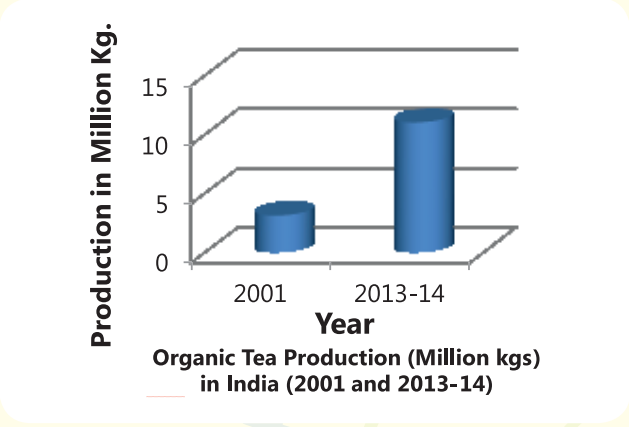
A) Export Market

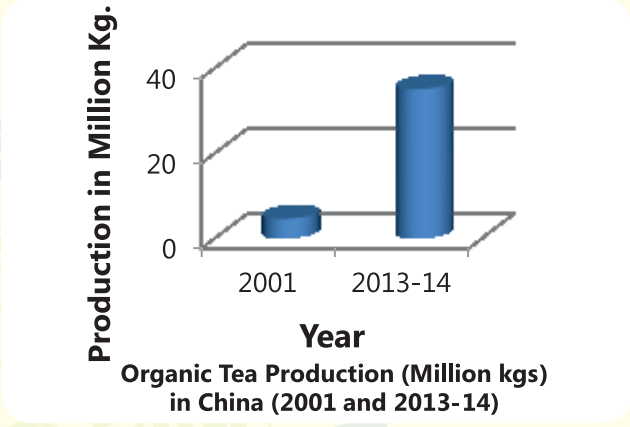
i) Organic Tea:

Considerable achievements have been made in organic tea sector. Total world production of organic tea was 9 million kg roughly in 2001 and India produced 3.15 million kg of organic tea while China produced 4.5 million kg in the same year (Export Import, Bank Report 2003 Bank Report). But during last two decades, organic tea production in the world has increased significantly. Currently (2015), world organic tea production is 50 million kg (approximately), where China contributes 70% (35 million Kg) and India shares 22% (11 million Kg). In India, organic tea contributed 2% of the total organic products exported in 2012-13 (Bhattacharyya, 2016). At present, the number of certified organic tea gardens in India is 77 (while in 2001, it was 50 only). In fact, only 1% of the total tea produced in India is organic tea and about 15000-16000 ha area is under tea cultivation.

Organic Tea Production status in India and China

Organic Tea Production (Million Kg/year)	2001	2014
World	9.0	50.00 (apprx.)
India	3.15	11.09
China	4.5	35.0





*[**Source:** Export and Working Group on Organic Tea (FAO) May, 5-6, 2014 Rome]*

ii) Organic Spice

The spectacular progress has been made in case of spices also. India produces a large amount of organic spices under default organic and most of it is done by tribal groups through backyard farming, which remains unaccounted. In 2001-02, India produced 115 metric tons of organic spice on a certified, cultivated area of 658.4 ha (Export Import, Bank Report 2003 Bank Report). Currently (2011-12), the country exports around 1400 metric tons of organic spice, valued at 47 crore. USA, Germany, Netherlands are the major countries where Indian organic spices are exported.

iii) Organic Coffee

As regards coffee, nearly 1.7 million bags of organic coffee were traded in 2009, a substantial increase of 335% since 2001. The current trade is much more.

B) Domestic Organic Market

Domestic Organic Market in India has tremendous potential. It has been reported that only 26% of the total organic production is exported; rest is consumed domestically. The present domestic market is estimated at US dollar 543 million. A survey conducted by the International Competence Centre for Organic Agriculture (ICCOA) in 2005 indicated that there is already ready market with 1000 Crore for organic products in the country.

As per FiBL-Yes Bank analysis, the lead organic companies in India are: Conscious Foods (Mumbai, Maharashtra), 24 Letter Mantra (Hyderabad, AP), Morarka 'Down to Earth'

(Jaipur, Rajasthan), Organic India (Lucknow, UP), Fab India (Delhi), Navdanya (Delhi) etc. The total turnover of these companies is nearly 1000 crore. Recently Patanjali has also emerged as one of the best organic market agency in India.

C) Constraints faced by Niche market

Out of 140 million ha net sowing area of the country, only 14.4 lakh ha area is under organic farming. This is just 1% of the total cultivable area in the country. We have to keep in mind that about 90 percent farmers belong to small and marginal categories. There are many areas in the country where organic agriculture is being practiced by 'de-fault'. But their efforts are largely unaccounted. But still, they are the driving forces for organizing niche markets (small markets) in different parts of the country. Unfortunately, they do not get the access of major market chains either due to lack of awareness or they are afraid of agents / brokers who exploit them. In absence of infrastructural facilities or capacity building they organize local Jaivik markets sporadically in isolated manner. Most of the farmers have no knowledge on Standard, Certification or market development. May be, some of them have little understanding on third party certification process and also they are not financially equipped to bear the expenses of certification. Even consumers have no idea of quality protocols, but they purchase organic products on the assumption that these products are hygienic, tasty and safe.

In West Bengal, every Sunday, some villagers arrange organic markets in different parts (Ultadanga, Baguihati, Middleton Street etc) either with or without local government assistance. But quality is still doubtful. Some farmers are selling GAP (Good Agricultural Practice) based products in the name of organic. Therefore, the integrity of these niche markets is in question. These market organizers have no facilities of storage, warehousing, transportation etc. This is the high time to give appropriate shape of these niche markets, as system demands.

Government Intervention:

Since last few years, the Government has changed its mindset and is encouraging Organic Farming in the country. Sikkim has been declared as the Organic State with the support of local government. Apart from the routine role of APEDA (Ministry of Commerce) and NCOF (Ministry of Agriculture), the Government is also extending adequate support for promoting Organic Farming through state governments. Some of the schemes launched for organic farming promotion are as under:

a) Notification of PGS Certification

Participatory Guarantee System (PGS) is a farmer friendly approach for organic certification which is based on active participation of stakeholders and is built on foundation of trust. It represents an alternative approach to third party certification. In fact, the idea of implementing PGS certification for strengthening domestic market stemmed from FAO – India Project (2006) under Ministry of Agriculture. Afterwards, in March 2011, National

Centre of Organic Farming under Ministry of Agriculture, Government of India launched a PGS – India quality assurance system along with development of holograms like PGS India Green and PGS – India Organic. Recently, the Government of India has launched the PGS – India website www.pgsindia-ncof.gov.in in July 2015. This website has been designed to facilitate farmers for online registration and approval of PGS – certification from Regional Councils under PGS – India Program.

b) PKVY-A Central Sector Scheme

Recent Government intervention on Organic Farming is Parampara Krishi Vikash Yojona (PKVY [Traditional Agriculture Development Scheme]) which has been launched in the year 2015-16 with an outlay of Rs 300 crore. The aim of the scheme is to motivate farmers to take up organic farming with usage of local indigenous resources, adopting eco-friendly low-cost technology. It is expected that with the support of PKVY, niche markets in domestic organic sectors will get oxygen for their establishment.

c) Mission Organic Value Chain Development for North Eastern region

Looking to the potential of expanding existing phase of Organic Farming in North Eastern Region of India, the Government has launched a Central Sector Scheme entitled "Mission Organic Value Chain Development for North Eastern Region" with an outlay of Rs 400 Crore. The scheme aims at development of Certified Organic Production in a value chain mode. This will act as facilitator for developing Niche Markets especially in North Eastern Organic Sectors.

Involvement of Non-Government Organizations

The trade fair plays a significant role in organic products trading. The International Competence Centre for Organic Agriculture (ICCOA) and Nurenberg Messe, has made significant contribution by organizing "Biofach India together with India Organic" trade fair since last 10 years in collaboration with different government and non–government partners. In this regard, the active participation of "Organic Farming Association of India" (OFAI) is also worth mentioning in strengthening different niche markets for better trade in organic sectors.

Conclusion

According to "India Organic Food Market Forecast and Opportunities, 2017", Indian Organic food market is anticipated to grow at a significant CAGR of around 19% during 2012-2017. By 2020, The World organic market value will reach 100 billion US dollars. We expect, Niche markets will also develop their capacities in coming days to ensure increased availability of organic food to domestic and international buyers.

Part 2

ORGANIC WORLD CONGRESS 2017

जैविक कृषि विश्व कुंभ

Ensuring Integrity through Certification

Mapping the Growing Sector of Voluntary Sustainability Standards Current State and Trends

Julia Lernoud and Helga Willer[1]

About Author

Julia Lernoud and Helga Willer work at the Research Institute of Organic Agriculture (FiBL) in Switzerland, where they are in charge of data collection on organic agriculture and Voluntary Sustainability Standards.

Key words: Voluntary Sustainability Standards statistics, organic farming, market data

Summary

According to the 2015 survey, carried out by the Research Institute of Organic Agriculture (FiBL) in cooperation with the International Trade Centre (ITC), Voluntary Sustainability Standards (VSS) are growing worldwide. Organic agriculture is the largest and most diverse label, with almost 44 million hectares and certifying at least 27 commodity groups. Rainforest Alliance/ SAN is the second largest label in terms of area certified with over 3 million hectares. Under the 2015 survey, 14 standards were covered and a special focus was given to eight selected commodities: bananas, cocoa, coffee, cotton, oil palm, soybeans, sugarcane, and tea. In this paper, an overview of the key results is presented.

Introduction

The market for sustainable products is growing worldwide. Consumers are more aware, and the number of Voluntary Sustainability Standards (VSS) is growing. According to Standards Map, currently more than 200 VSS exist worldwide, some focussing on a unique commodity or market sector, others, like Fair-trade or Rainforest Alliance cover a wider range of commodities (International Trade Centre 2016). Where does organic farming stand in this growing sector?

Method

The Research Institute of Organic Agriculture FiBL, in collaboration with the International Trade Centre (ITC) carries out a global survey covering 14 VSS[2], including organic, from the agricultural and forestry sector annually. The latest trends are reported in the publication "The State of Sustainable Markets" report, produced in collaboration with ITC and the International Institute for Sustainable Development (IISD).

The survey covers data on area, producers, production, retail sales value and exports. However, not all VSS have data on all these indicators, so the key ones are area, production and producers. For this survey, all 14 VSS surveyed provided data on VSS-compliant area and producers.

[1] Julia Lernoud and Helga Willer, Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH-5070 Frick, www.fibl.org, www.organic-world.net. Email - helga.willer@fibl.org, Email - julia.lernoud@fibl.org

[2] Better Cotton Initiative (BCI); Bonsucro; Cotton Made in Africa (CmiA); Fairtrade International; GLOBALG.A.P.;Global Coffee Platform (GCP); organic; ProTerra Foundation; Rainforest Alliance/SAN; Roundtable of Sustainable Palm Oil (RSPO); Round Table for Responsible Soy (RTRS); UTZ.

Eleven of these initiatives also provided data on production volume, six provided information on production volume sold under the label, and three shared data on retail sales. Collection of retail sales data remains difficult across different VSS, as retail-level data is typically held by companies, limiting the access to such data.

Multiple certifications plays a major role between different VSS. Currently, there is no accurate data on the levels of multiple certification across major standards, with some exceptions like Fairtrade and organic, where Fairtrade International quantifies how much of their production is double certified with organic. According to Fairtrade International, 52 percent of all Fairtrade certified producers reported to have organic certification (Fairtrade International 2015).

The joint survey was carried out in 2015 (Lernoud et al. 2016) building on the previous work of IISD (Potts et al. 2014). This paper presents the data of this report with some updates that were received since its publication early 2016.

Current state and trends

Currently organic is the largest VSS, with 43.7 million hectares worldwide, representing almost 1 percent of the global agricultural area (see Figure 1). Rainforest Alliance/SAN has 3.2 million hectares, making it the standard with the second-largest area, and GLOBAL GAP covers 3.1 million hectares, representing 0.06% of the global agricultural area each. They are followed by the Roundtable on Sustainable Palm Oil (RSPO) with 2.6 million hectares (Figure 1). Due to the unknown extent of multiple certifications between the VSS it is not possible to communicate a global total for the VSS-certified area.

Since 2008, all VSS included in this survey have shown growth in standard compliant area. The Roundtable on Sustainable Palm Oil (RSPO) has shown the greatest expansion, with an almost 30-fold increase of its area between 2008 and 2014. The Better Cotton Initiative (BCI) area has increased 20-fold between 2010 and 2014. The area of Rainforest Alliance/SAN's grew by more than 900%, and the UTZ area has increased by 650% over the same timeframe.

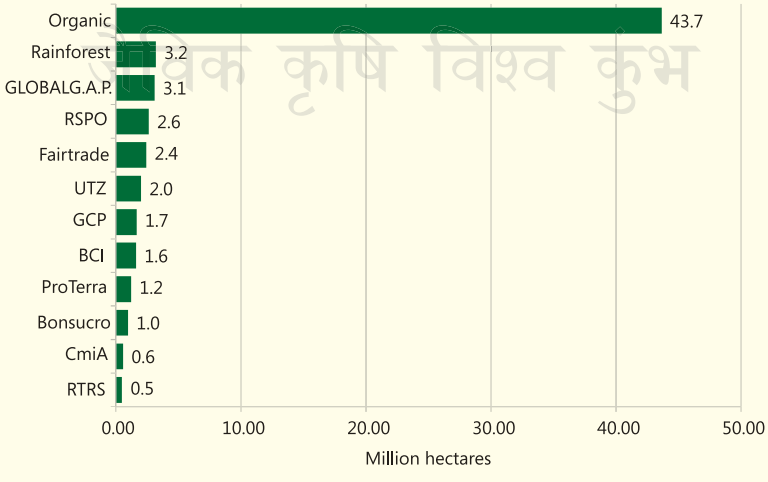


Figure 1. Total certified area per VSS, 2014 (only agriculture)

Source: *FiBL-IISD-ITC survey 2015 based on data from Better Cotton Initiative (BCI); Bonsucro; Cotton Made in Africa (CmiA); Fairtrade International; FIBL; GLOBALG.A.P.; Global Coffee Platform (GCP); ProTerra Foundation; Rainforest Alliance/SAN; Roundtable of Sustainable Palm Oil (RSPO); Round Table for Responsible Soy (RTRS); UTZ.*

Note: *For organic, please note that a large part of the organic agricultural land are permanent grazing areas, (60%).*

Sector-specific analysis

If we focus on the growth of a specific commodity, tea certified by Rainforest Alliance/SAN experienced the largest growth, expanding tenfold between 2010 and 2014. This was followed by UTZ certified cocoa, which grew sevenfold in the same timeframe. Better Cotton Initiative (BCI) certified cotton grew by fourfold between 2011 and 2014 (no data available prior to 2011). Furthermore, coffee certified by the Global Coffee Platform coffee increased by almost 300% between 2010 and 2014, and between 2011 and 2013, enjoyed a growth of 0.5 million hectares per year.

If we see the global share that each VSS has on a commodity level, the highest share was noted for UTZ cocoa, representing 15% of the global cocoa area. In coffee, Global Coffee Platform certified 14.4% of the global coffee area. High shares were also noticed for the certified oil palm area of RSPO (14.5% of global oil palm area), and for Rainforest Alliance/ SAN certified tea, with almost 11% of the global tea area. Cotton Made in Africa (CmiA) had high shares of the total seed cotton production in Africa: 22% of Africa's seed cotton area and 11.8% of Africa's seed cotton production volume.

In the sectors discussed, where single-sector VSS have been developed (coffee, cotton, forestry, oil palm, sugarcane and soy), they reach, in some cases, very high shares of the total production. It is important to note that multiple-commodity VSS might have a lower impact on a specific commodity than single-commodity VSS. This is most notable for organic agriculture, which has almost 2 million hectares for the eight commodities discussed in study, but in total it covers 43.7 million hectares, with at least 27 commodity groups reflecting more or less the full range of agricultural production.

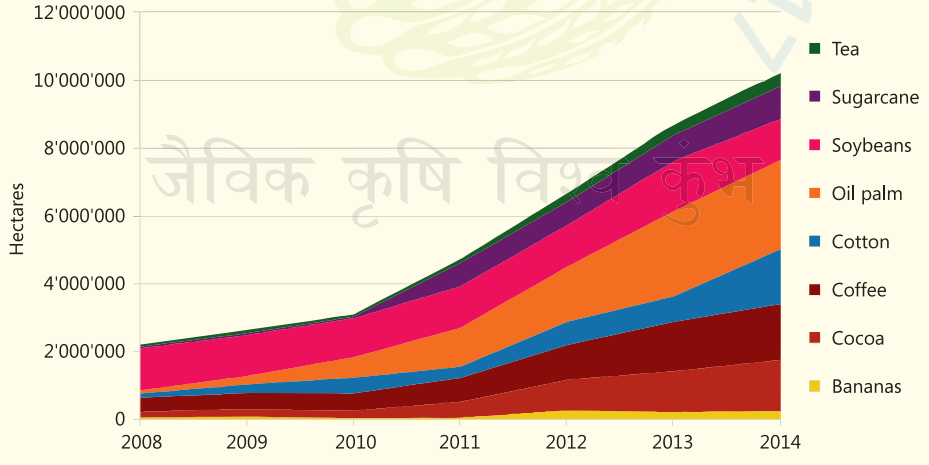


Figure 2. Development of the VSS compliant area worldwide, 2008-2014 (eight selected commodities, minimum possible)

Sources: *FiBL-IISD-ITC survey2015 based on data from Better Cotton Initiative (BCI); Bonsucro; Cotton Made in Africa (CmiA); Fairtrade International; FIBL; GLOBALG.A.P.; Global Coffee Platform (GCP); ProTerra Foundation; Rainforest Alliance/SAN; Roundtable of Sustainable Palm Oil (RSPO); Round Table for Responsible Soy (RTRS); UTZ.*

Note: *The data in this graph were not adjusted for multiple certification. For this graph, we assume that there is a maximum amount of multiple certification occurring within each commodity, therefore the minimum VSS compliant area per commodity is used. This means that the total amount of VSS compliant area is that of the VSS with the largest area for the commodity in question.*

Sector-specific highlights

As there is little information on the share of multiple-certification between the different standards, it is s very difficult to report a global figure for any commodity. Therefore we decided to report an average between the minimum and the maximum area and production. Here we show some key data of four of the selected commodities analysed in our study (cocoa, coffee, cotton, and tea).

Cocoa: Four of the VSS covered certified cocoa production. Combined, they certified a minimum of 1.7 million hectares and a maximum of 3 million hectares in 2014 (an average of 2.3 million hectares). UTZ has the largest certified cocoa area; the largest area growth (2008–2014) was noted for Rainforest Alliance/SAN.

Coffee: Five of the VSS covered certified coffee production. Combined, they certified a minimum of 2.5 million hectares and a maximum of 4.1 million hectares in 2014 (an average of 3.3 million hectares). The Global Coffee Platform had the largest certified coffee area and reported the largest area growth (2008–2014).

Cotton: Four of the VSS covered in this survey certified cotton production. Combined, they certified a minimum of 2.2 million hectares and a maximum of 2.5 million hectares in 2014 (an average of 2.4 million hectares). The Better Cotton Initiative (BCI) has the largest certified cotton area and experienced the largest growth (2008–2014).

Tea: Four of the VSS certified tea production. Combined, they certified a minimum of 306,000 hectares and a maximum of 517,000 hectares in 2014 (an average of 411,000 hectares). Rainforest Alliance/SAN has the largest VSS-certified tea area and has experienced the largest area growth (2010 to 2014).

Conclusions

Access to comprehensive, timely, and relevant market data is a key issue to understand the performance and opportunities associated with VSS. Data availability has improved over the past several years, with most VSS collecting and reporting production data by crop and country on a regular basis in their annual reports. However, there is still room for significant improvements in data access, quality and harmonization.

Is estimated that not the whole production is actually "sold as" sustainable on the market. In order to sell more products under sustainability labels, producers often seek certification with two or more schemes. Currently, there is no accurate data on the levels of multiple certifications across major standards. In the absence of complete information on multiple certifications, it is currently not possible to communicate a global figure of any of the selected commodities or of the reach of all the covered standards.

A better understanding of the market for VSS certified products could facilitate public planning for expanding the market penetration.

As to organic, the study has shown that both in terms of certified area as well as diversity of products, organic is by far the leading initiative. However, for area and production most VSS are currently growing faster than organic does. The organic sector will need to increase efforts in particular related to the marketing, but also in the area of research, in order to solve some of the key challenges of organic production.

Acknowledgements

The activities described in this paper are funded by the Swiss State Secretariat for Economic Affairs (SECO) and the International Trade Centre (ITC).

References

- Fairtrade International (2015): Monitoring the Scope and Benefits of Fairtrade - seventh edition – 2015. Fairtrade International, Bonn. Available at http://www.fairtrade.net/resources/impact-and-research.html#c8222
- Lernoud, Julia, Jason Potts, Gregory Sampson, Vivek Voora, Helga Willer and Joseph Wozniak (2015): The State of Sustainable Markets – Statistics and Emerging Trends 2015. International Trade Centre (ITC), Geneva, Switzerland.
- Potts, Jason; Lynch, Matthew; Wilkings, Ann; Huppé, Gabriel; Cunningham, Maxine and Voora, Vivek (Eds.) (2014): The State of Sustainability Initiatives Review 2014. Standards and the Green Economy.1st edition. International Institute for Sustainable Development (IISD) and International Institute for Environment and Development (IIED), Winnipeg and London.
- International Trade Centre (2014): The Standards Map website. International Trade Centre, Geneva, available at: http://www.standardsmap.org/
- Willer, Helga. and Julia Lernoud (Eds.) (2016): The World of Organic Agriculture. Statistics and Emerging Trends 2016. Research Institute of Organic Agriculture (FiBL), Frick and International Federation of Organic Agriculture Movements (IFOAM – Organic International), Bonn, Germany.

Overcoming the Duality Between Institutions and Social Movements in Organic Farming

Miguel Ángel de Porras Acuña[1]

About Author

Ph.D. scholar in agroecology at University Pablo de Olavide, have studied economics, anthropology and a master degree in agrecology. Have experience in the fields of statistics, environmental conflicts, Common Agricultural Policy audit, etc. Now working at the European parliament following different topics, one of them is the regulation of the EU in organic farming.

Key words: Organic Farming, EU Regulation, Social Movements, Institutions

Summary

Current debates on organic farming usually present a simplified dichotomy between the institutions and the social movements in the field of organic farming. But the rapid growing of the sector has changed the kind of problems that farmers and consumers have to face due to the new dimension of the market of organic farming that needs "institutional" solutions. Author analysed the complexity of the development of institutions in the context of development of the European Union regulation of organic farming. This regulation will set the rules of the sector for 28 countries of the EU. This example will show us how different institutions present different political approaches and behaviours during the negotiations and are not a monolithic building. We will try to move the definitions of the problem of the institutional development in the organic farming from the bipolar framework towards one more complex theoretical model of permeable institutions.

Introduction

The growing of the organic farming agriculture is one of the most important facts in the process of transition of agriculture towards more sustainable models of production. Despite the growing controversies as regards of its contribution towards a more sustainable agriculture it cannot be neglected. We observe every year more and more hectares dedicated to the sector and new companies, enterprises and products in new and bigger markets (and supermarkets). This rapid increment changes not only the number of problems related to the organic farming sectors in the world, but also create new kind of problems, especially as regards to the change of scale of these markets. The case of the European Union organic farming market have been one of the most representative case of this kind of scaling up process that have transformed the behaviour and the problems of organic farmers. Form the political projects that represent the first organic farming movement in the EU, the sector has transformed into a network of

[1] European Parliament/University Pablo de Olavide (Belgium/Spain). E-Mail: miguel.angel.de.porras@gmail.com

more than 200,000 farmers and many enterprises that provide support goods and services. This "scaling up" process has not been a linear process; it has been a process of political dispute and change towards the present reality. During this process we can consider many different phenomena such as the creation and evolution of the European Certification system as well as the global networks of social movements related to organic farming. But one of the most important features of this process is the formal constitution of a European market of organic farming which connects millions of potential consumer with thousands of European and non-European producers.

The market of organic farming, even if it is a mechanism based on profit, still remains as one of the most important driving force of transition in EU agriculture. Despite the organic market is often not based on the principles of sustainability, organic farmers being the biggest network of practitioner of a more sustainable agriculture, demonstrating that the viability of organic farms is essential for the transition towards a more sustainable food system. This market driven force could be even more relevant in the current context of multiple crises in the conventional agriculture.

The rules that constitute this institution result a crucial feature of any development of the organic sector. Despite this fact, most of academic literature on the field, presents a dualistic approach towards the institution of the organic market, separating between institutions and social movements. We understand some of the antagonisms created in the interaction between institutions and organic farming, but this dualistic approach falls short in the explanation of the problems related to the development of rules for the organic sector worldwide. Organic 3.0, if it's a new approach towards organic agriculture, needs a more complex approach to policy development in order to have tools to solve problems related to the scaling up of the market.

Material and methods

This paper aims to identify most important factors in the development of law and regulations in the field of organic farming. We analyse the case of organic farming regulation in the European Union (EU) in order to characterize the driving forces on legislation and regulation development in this field. EU Regulation is one of the most complex and most influential worldwide, becoming as the most referenced regulation since the entering into force of the first version in 1992. The main materials used for this paper are all the grey literature that has been produced and used during the negotiations of the new regulation, which are still ongoing. The political process analysis is the Ordinary Legislative Procedure of the EU (former Co-decision procedure) more specifically the phase of informal trilogues where the three core institutions of the EU participate. During this procedure European institutions negotiate their different approaches in order to achieve a final agreement that will determine the new regulation.

Author also analyses all these frictions, using the tools and the theoretical framework of agro-ecology, specifically those articles and documents that intervene on the current literature on the debate of "institutionalisation of organic agriculture". This is a very important debate within the context of the political analysis of agro-ecology, where many different authors, use to present a binary distinction between institutions and social movements. Author may try to use the information compiled during the negotiations to contrast if this dual approach towards institutions is adequate to address complexity of institutional and political developments in the field of organic farming.

Results

The organic farming regulation of the EU implies a holistic approach towards agriculture; this regulation includes many technical details to be defined, from the kind of inputs and welfare of animals to functioning of markets and rules on labels, as this regulation sets the framework for organic agriculture as a whole. Organic farming in Europe has to establish the principles that will distinguish their production methods from the conventional agriculture and the way to control the application of these principles. In the context of the negotiations of this regulation, we have seen many different topics of conflict that present a more complex view on institutions as regards to their relation to organic farming.

During the negotiation of this important regulation European institutions have faced many frictions. One of these has been, the topic of the mixed farming, farms with part certified as organic and non-certified parts, in the initial proposal of the European Commission they were forbidden. This approach has been strongly opposed by the European Parliament and the Council. Many of the Member States of the EU have this kind of mixed farms, despite the fact that they are more difficult to control, but they allow farmers for gradual conversions. We consider that these differences in the approach of the institutions can be explained because there are different levels of permeability of the institutions to the political ideas of social movements or other political actors.

Other of the main discussion dealt during these negotiations, and very important on other political negotiations, have been the topic of the seeds within the sector of organic farming. Here Commission and Council were trying to restrict the use of non-certified seeds, as well as limit the capacity of self-production of seeds of the farmer. This specific point has been strongly contested from the side of the European Parliament that finally has managed to include exemption in this clause. The parliament also included a reference to "heterogeneous material" referring to organic seeds, avoiding the obligation to maintain strict homogeneity for the organic seeds. This example shows how the Parliament has been standing from the side of social movements due to the political pressure put on them in respect of seeds.

The EU institutions have been strongly discussing another important topic, the international trade. The proposal of the Commission set a double system of control for organic imports, the

"equivalence" system and the "compliance" system. The equivalence is the recognition of similar control and certification bodies in third countries through a mutual recognition agreement, and the compliance is based on the application of similar EU standards for those countries without an equivalence agreement. This approach has been refused by the Parliament, which has been standing for a trade system that does not put the entire burden on poor countries to demonstrate the application of EU rules. This different approach expresses the concerns on the present trade systems of organic products that will be severely impacted by this strong change.

The most important discussion during the mentioned negotiations has been the topic of the system of controls. This is the most complex and relevant topic because the control of the effective implementation of the regalement is the only way to gain consumers trust for the organic products. The initial proposal of the Commission has been the practical abolition of certification system and the application of a "threshold system". This system applies the normal health and safety checks applied to any foodstuff in the EU, but with lower levels of certain pollutants in order to guarantee consumers clean products. This approach has been contested by the Parliament and the Council, due to the importance given to the production process and its positive environmental services, and for the relative importance of the certification sector.

Discussion

To sum up, the analysis shows many different approaches and political positions among the different institutions involved in this specific case of regulation development in the EU. Author considers that the presented facts can be enough to reject the simplification of dualistic approaches, and search for new theoretical frameworks to understand the development of organic farming institutions. The relationship between movements and institutions is permeable, one can influence the other, and they are not isolated poles of a mathematical equation. In order to better inform the future development of organic farming and the political institutions related to it, especially during the development of Organic 3.0, it is needed to overcome this false duality and use more complex visions on social movements and their capacity to influence the institutions of the sector.

Suggestions to tackle with the future challenges

In case Organic 3.0 pretends to be an improved framework for solving the present problems that the sector is facing, new analytical tools are needed to understand the relation between movements and institutions. Author cannot reject the importance of institutional development in the sector to solve the problems of the market; nor forget the fundamental role of the political demands of social movements that allow the advance of our paradigms. But both pillar can co-exists in our political contexts and we can understand them as separate facts but we should focus on their interactions.

References

- Fouilleux, E., and Loconto A (2016) Voluntary standards, certification, and accreditation in the global organic agriculture field: a tripartite model of techno-politics. Agriculture and Human Values: 1-14. doi:10.1007/s10460-016-9686-3.
- Giraldo, O. F., and Rosset P. M. (2016) Agroecology at a crossroads: between institutionality and social movements. Guaju, Matinhos, v. 2, n. 1, p. 14-37, Jan/Jun. 2016
- González de Molina, M. (2015) Agroecology and Politics: On the importance of Public Policies in Europe. Law and Agroecology. A transciplinary dialogue. Springer. Heidelberg 395-409pp.
- Luttikholt, L. W. M. (2007) Principles of organic agriculture as formulated by the International Federation of Organic Agriculture Movements. NJAS - Wageningen Journal of Life Sciences 54: 347-360
- Sevilla Guzmán, E. (2006) Los marcos teóricos del Pensamiento Social Agrario, De la Sociología Rural a la Agroecología. Icaria Editorial, Barcelona 255 pp.
- Van Der Ploeg, J.D. (2008) The New Peasantries: Struggles for Autonomy and Sustainability in an Era of Empire and Globalization. EARTHSCAN, London 356 pp.
- Wezel A., Bellon S., Doré T., Francis C., Vallod D., et al.. Agroecology as a science, a movement and a practice. A review. Agronomy for Sustainable Development, Springer Verlag/EDP Sciences/INRA, 2009, 29 (4),

Improving Inspection Procedures in Organic Farming Using Feasible Practices*

Danilo Gambelli[1], Francesco Solfanelli, Raffaele Zanoli

About Author

Authors conducted this study which was funded as part of the CERTCOST Project, agreement no. 207727 (http://www.certcost.org), with financial support from the European Community under the 7thFramework Programme.

Key words: Organic certification, risk-based controls, inspections planning

Summary

The aim of this paper is to consider feasible approaches that could improve the effectiveness of the inspection procedures of organic control bodies. This could reduce the burden of certification for operators and improve the competitiveness of the organic sector. Authors developed a risk-based model for inspections based on structural information on organic farmers, and including aspects concerning the scheduling and type of the visit, as well as those concerning inspectors. The results of the model indicate that there is scope for increasing the efficiency of inspections, which could result in a prioritisation of controls for farmers at higher risk of non-compliance, while reducing unnecessary burden for the remaining cases.

Introduction

Third party certification has been a core element of distinction for organic products and for a common definition of organic farming practices. There is scope for a revision of the certification standards, which could evolve focussing more on the provision of ecosystem and social services related to organic farming. Present standards should however be kept as a reference of minimal conditions to be met, focussing on the improvement of the efficiency of the certification system, which could result in lower costs for farmers and in a general increase in organic farming attractiveness and competitiveness. Here authors developed a model for the improvement of the present procedure of inspections for farmers, based on data and information that are already available at the Control Body (CB) and consider feasible modifications of the inspections procedures. The analysis considers a bivariate probit model aiming at measuring the likelihood of detection of non-compliance (NC) and is based on a dataset from an Italian CB, containing information on the inspections and structural characteristics of organic farmers in Italy.

Material and methods

The data are obtained from the archives of the largest CB in Italy. The dataset considers the outcomes of 37,930 inspections on 10,249 farms from 2007 to 2009. Farmers are normally

[1] Università Politecnica delle Marche, via Brecce Bianche Ancona - 60131 Italy. Email: d.gambelli@univpm.it. This paper reflects the views of the author(s) and not those of the European Community, who is not to be held liable for any use that may be made of the information contained.

inspected at least once a year, but further inspections might be planned by the CB. Authors used available data about the type of sanctions issued by the CB as a proxy for the corresponding NC. Sanctions are issued when NCs are detected during inspections, and there is a univocal relation between the severity of a sanction and the corresponding type of NC. Following Council Regulation No 834/2007, NCs are classified as irregularities and infringements. Here we refer to irregularities as "Slight NC" (i.e.NC mainly referring to formal/bureaucratic flaws), and to infringements as "Severe NC" (i.e. NC mainly involving incorrect product identification and labelling, use of non-permitted substances, and/or cultivation of 'parallel' organic and conventional crops, etc.). The aim of the analysis is twofold. First measure the likelihood of detection of the two types of NC based on a set of explanatory variables concerning a) inspections' characteristics (annual/follow-up/unannounced inspection, sampling, timing of the inspection), b) structural farm data (risk class attributed to each farmer by the CB, localization, other certification schemes) and c) inspectors experience. Refer Table 1 for the list of explanatory variables (note that "Region: Centre" and "Medium-Risk class" are omitted to avoid collinearity). Secondly to discuss how the efficiency of inspections could be improved making a more accurate use of information available to the control bodies. In particular, for the timing of inspection authors have developed a specific 'timeliness index' that, according to the kind of farm crop and livestock productions, indicates the period of the year when one can expect the highest risk of noncompliance. For each farm i, consider the number of crops CR_{it} and the number of livestock types LV_{it} that at the time of the visit t can be considered "at risk of noncompliance": they can be equal zero if respectively no crop or no livestock production is available at the farm. One can also consider the total number of crops and livestock types for each farm: CR_{toit}, LV_{toit}. The timeliness index T_{it} for each inspection is then computed as: ,where t=time of inspection; i=1...f (f=total nr of farm). T_{it} ranges between T_{it} = 0 (when at the time of the inspection no one of the crops/livestock types in the farm are considered at risk of noncompliance) and T_{it}= 1 (when at the time of the inspection all crops and/or livestock types are considered at risk of noncompliance). T_{it}=1 only for 14% of inspections, while T_{it}= 0 for 30% of inspections, and the average value of T_{it} for inspections is 0.28, (see Table 3). Hence, we have a distribution of inspections far below the theoretically optimal situation where all inspections are done with the optimal timing for each farm.

Empirical evidence shows the correlation of the two different types of NC (Gambelli et al., 2014a, 2014b; Zanoli et al., 2014a, 2014b), e.g. due to a fraud attitude of the farmer, to specific market conditions or to the specific farm structure etc. Therefore, authors specify a bivariate probit model to estimate the likelihood of detection for the two types of NC, i.e. a probit model with two equations with correlated disturbances (Greene, 2008). Authors define y_{i1}, y_{i2} as binary variables, respectively for "Slight NC" and "Severe NC", taking values 1 if at least one NC is detected in the i-th inspection, and 0 otherwise. Authors also define x'_{i1} and x'_{i2} as the row vectors of k_1 and k_2 explanatory variables respectively for "Slight NC" and "Severe NC"; i = 1,...,N where N is the total number of inspections in the 2007-2009 period (N = 36,153 inspections). In matrix form the model becomes:

1) $y_1 = X_1 \_\_ 1 + e_1$; $y_2 = X_1 \_\_ 2 + e_2$

Where e_1 and e_2 are the vectors of the error terms and are assumed to be correlated. More specifically the correlation coefficient ρ between e_1 and e_2 approximates the tetrachoric correlation between the two binary variables y_1 and y_2.

Results

Table 1 shows the results of the biprobit model. The LR test shows a significant correlation between the two equations, confirming the hypothesis of a co-dependence between "Slight NC" and "Severe NC". For what concerns the "Slight NC" equation, "Unannounced inspection" has a positive coefficient showing that this type of inspections may increase the likelihood of their detection. On the other side, "Follow-up inspections" show a negative coefficient, which might indicate that "Slight NC" could be fixed in the time period scheduled for the follow-up inspection. As expected, the "Inspection timeliness" and "High/Low Risk class" do not show relevant effects on the likelihood of detection of "Slight NC". This result is consistent with the type of NC involved: bureaucratic flaws are likely to happen independently with respect to time and it is reasonable to expect no particular relationship between "Slight NC" and the risk ranking. Concerning the regional localisation, "Slight NC" are proportionally more concentrated in the central regions of Italy. Finally, "Inspector's experience" shows a negative coefficient, while we expected that more experienced inspectors could be more effective in the detection of NC.

For what concerns the "Severe NC" equation, both "Sample" and "Inspection timeliness" have a relevant impact and results indicate that "Severe NC" are more likely to be detected when the inspection is made in the critical time periods of the livestock or crop productions and when samples are taken during the inspection. Consistently with the results for "Slight NC" equation, the "High-risk class" has now a significant and positive coefficient, while the "Low-risk class" maintains a non-significant coefficient. This result confirms that "Severe NC" are more likely to be encountered when high-risk operators are concerned. "Follow-up inspection" has a negative coefficient (thought significant at 8%), which similarly to the "Slight NC" case might indicate how the follow-up procedures can be considered as an effective tool for solving NC in a limited time period. Finally, the regional dummies indicate a lower likelihood of NC detection in the southern regions of Italy.

Table 1: Results of the biprobit model for "Slight NC" and "Severe NC"

Explanatory Variables	"Slight NC"		"Severe NC"	
	est. coeff.	prob. > |z|	est. coeff.	prob. >|z|
Inspector's experience	-.01177	0.000*	-.00620	0.209
Follow-up inspection	-.23011	0.001*	-.18080	0.079**
Unannounced inspection	.22643	0.000*	-.05094	0.468
Sample	-		.45350	0.000*
Inspection timeliness	-.01294	0.674	.12136	0.007*

Explanatory Variables	"Slight NC"		"Severe NC"	
	est. coeff.	prob. > |z|	est. coeff.	prob. >|z|
Other certification schemes	.00881	0.704	-.00145	0.967
Low-Risk class	.01204	0.660	-.03467	0.402
High-Risk class	.05989	0.179	.23108	0.000*
Region: Centre	.57395	0.000*	.00635	0.885
Region: South	-.03325	0.320	-.26954	0.000*
Constant	-1.75982	0.000*	-2.10845*	0.000*
Log likelihood	-10,383.41			
Wald (prob.>chi2)	0.0000			
Lr Test (prob.>chi2)	0.0105			

** significant at P<0,01; ** significant at P < 0,1; a"Severe NC"only*

Discussion

The results of our model show that there is scope for improving the effectiveness of inspections. Detection of "Slight NC" can be improved with "Unannounced inspections"; controversial results arise for "Inspectors experience": the likelihood of detection of "Slight NC" is higher for 'less "experienced' inspectors. Results are particularly interesting for the detection of "Severe NC". The "Inspection timeliness" and the "Samples" taken during inspections emerge as relevant factors that could increase the likelihood of uncovering "Severe NC". CBs could exploit crops and livestock specific information at the farm level such as those related to the phenological stages. Actually, the analysis of the distribution of "Inspection timeliness" indicates that only a limited share of inspections is carried out with the appropriate timing, showing therefore scope for substantial improvements of the effectiveness of inspections. Increasing the number of samples and rescheduling inspections in the appropriate periods are two feasible options that could provide a substantial increase in the rate of NC detection. However, scheduling inspections in the appropriate time periods and increasing sampling could lead to managerial difficulties for the CBs, due to potential shortage of resources in the critical periods. Sampling is a costly operation, and concentrating inspections in shorter time periods could easily lead to difficulties in the management of inspectors' workload. Presently the activity of the CBs is largely conditioned by the compulsory annual visit for each organic operator. In this study, authors have focussed on the potential of inspection procedure from a CB perspective and based on data normally available to CBs operating in countries with established organic standard procedures. From the farmers' perspective, improved compliance might be gained, thanks to proper training and extension programs. Available evidence show that more experienced farmers are less prone to "Severe NC" (Zanoli et al. 2014a). The results in the model concerning the reduced likelihood of finding NC during follow up inspections, could be considered as an indication that organic certification might

operate also as a technical support, helping to solve both bureaucratic and managerial NC. In line with the Organic 3.0 vision, third-party certification – if properly revised – may contribute to the further development of the organic sector and still represents the essential tool for assuring the maintenance of minimum standards in enlarged organic markets. However, third-party certification could evolve promoting proper risk-based inspections that might provide a twofold benefit. First, it would focus on riskier (typically larger) farms, while lowering the reporting requirements and costs for low risk-small scale family. Alternative certification procedures, such as self-claims or participatory guarantee systems, could be considered for small organic farms. Secondly, certification services could also include guidance and technical assistance to farmers. Under such conditions certification will no more represent a deterrent for small operators to stay or convert into organic, rather might contribute to lower barriers to entrance of new organic farmers. The pre-condition for an effective risk-based approach to certification requires the availability of sufficient information to be processed. This should be taken into consideration in countries presently developing organic standards, which should consider a certification system that can provide inspection records plus structural data at farm level.

Conclusions

A redistribution of inspections, inspired by a more extensive exploitation of the risk-based approach to compulsory controls can be taken into consideration for small, low-risk operators. Simplified controls e.g. based on group certifications, and a more intensive use of paper-less and automated, remote-control procedures (e.g. drones) could be a solution for the future. CB could re-allocate resources for (more expensive) inspections involving more samples and planned in critical time periods, that could be reserved for the (less numerous) high-risk operators. Increased efficiency in the certification process might benefit particularly small scale farm that might take advantage of reduced burden of a renewed certification system, which will nevertheless remain as a key condition for the assurance of the organic standards.

Acknowledgments

This study was funded as part of the CERTCOST Project, agreement no. 207727 (http://www.certcost.org), with financial support from the European Community under the 7th Framework Programme. This paper reflects the views of the author(s) and not those of the European Community, who is not to be held liable for any use that may be made of the information contained.

References

- Gambelli, D., Solfanelli, F., Zanoli, R., Zorn, A., Lippert, C., & Dabbert, S. (2014a). Non-Compliance in Organic Farming: A Cross-Country Comparison of Italy and Germany. Food Policy, 49: 449-458. DOI: 10.1016/j.foodpol.2014.05.012.

- Gambelli, D., Solfanelli, F., & Zanoli, R. (2014b). Feasibility of risk-based inspections in organic farming: results from a probabilistic model. Agricultural Economics, Vol. 45(3): 267-277.DOI: 10.1111/agec.12063.
- Greene, W. H. (2008), Econometric Analysis (6th ed). Upper Saddle River, NJ, Prentice Hall.
- Zanoli, R. Gambelli, D., & Solfanelli, F. (2014a). Assessing Risk Factors in the Organic Control System: Evidence from Inspection Data in Italy, Risk Analysis, 34(12): 2174-2187. DOI: 10.1111/risa.12244.
- Zanoli, R. Gambelli, D., Solfanelli, F., & Padel S. (2014b). Assessing the risk of non-compliance in UK organic agriculture: An econometric analysis, British Food Journal, 104 (8): 1369-1382. DOI: 10.1108/BFJ-10-2012-0262.

Reform the standards for organic livestock farming for small & marginal farmers – a critique of current standard norms for animal based organic foods in India

Sabyasachi Roy* and Ashish Gupta[1]

About Author

Sabyasachi Roy, Ph.D. Researcher, Masters in Agriculture Extension Education and alumnus of IFOAM's organic Leadership Course 2013 has around 15 years of experience in smallholder farming systems and producer cooperatives and companies and is working towards promoting an organic dairy cooperative owned by the small and marginal farmers.

Key words: organic standards, NPOP, dairy, poultry, India

Summary

The present standard for animal based organic foods in India appears to have been written with the premise that it has to be in harmony with the organic standards in the European Union and United States of America, where livestock farming systems are entirely different from that of India. This paper presents a critique of the organic standards under National Programme for Organic Production (NPOP) that requires conforming situations in India for Organic Livestock Farming. This policy analysis, discusses different issues in the standards and necessary changes are suggested based on the localized situations, cultural conditions and traditional practices.

Introduction

The general principle for organic livestock husbandry, according to IFOAM norms for Organic Production and Processing, "is based on the harmonious relationship between land, plants and livestock, respect for physiological and behavioral needs of livestock and the feeding of good quality organically grown feedstuffs". The norms further states that "stocking rates for livestock should be appropriate for the region in question taking into consideration the body size/weight of the breeds maintained, feed production capacity, stock health, nutrient balance and environmental impact." However, the present standard for animal based organic foods in India appears to have been written with the premise that it has to be in harmony with the organic standards in the European Union and United States of America, where the livestock farming systems are different from that of India.

India is land of small and marginal farmers. The size of landholding in India is a constraint, and this has been reducing over the years. As reported by the Agriculture Census 2010-11 of Government of India, around 85% of the total farmers are either small or marginal and manage 44% of the operated area. About 67% of the total farmers were marginal with an

* PhD Researcher, Institute of Agriculture, Visva-Bharati, Santiniketan, West Bengal, India, Email: sabyaroy@gmail.com

[1] Organic Way of Life, New Delhi and IFOAM-OI PGS Committee, Innovations Committee, Email: ashishg2dec@gmail.com

average holding of 0.4 hectare of farm land and 18% were small farmers with an average land holding of 1.4 hectares. And in mountainous regions the land area is much smaller per household than the national average. The milch animal holding is also small and varies from 1-3 animals as reported in Livestock Census and National Sample Survey. Historically, many landless farmers rear 1-3 milch animals for livelihood.

The conditions of the small holders are similar in most of the Global South. Here, majority of the farmers are smallholders. The livestock sub-sector in general and dairy in particular is one of the fastest growing sectors within the agricultural and allied sector and a major source of livelihood for the rural farmers. However, there is no commercially known certified organic dairy brand in these parts of the world including India.

In this paper, a critique is presented of the standard required to conform to in India for Organic Livestock Farming. Unless specific changes are made to the standard in line with the localized and cultural conditions it will be challenging to implement this standard.

Points to reform in the Indian standards of organic livestock farming

The appendix 2 "Organic Livestock, Poultry & Products" of chapter 3, i.e. Indian National Standard for Organic Production (NSOP) under the National Programme for Organic Production (NPOP) mentions some standards that does not conform to the local situation, cultural conditions and historically relevant facts much before the advent of use of synthetic chemicals in agriculture or livestock farming in India. These standards pose a major challenge in adoption of organic livestock by small and marginal farmers in India and are discussed point-wise in this section.

1. The point xviii under the section 5 "housing and management" at 6 (xi) mentions that "The outdoor stocking density of livestock kept on pasture, grassland, or other natural or semi-natural habitats, must be low enough to prevent degradation of the soil and over-grazing of vegetation."

   The above point in the document does not make it clear, if such conditions are compulsory or not. Further, in India, foraging is typically community managed in the unorganized sector such as the nomadic tribal Maldharis of Gujarat or pastoral Gurjars and their livestock in high altitude Himalayan Mountains. Such transhumance is also prevalent as part of traditional pastoral systems across the world. This point does not make it clear how such community-managed system can be met within the standards.

   Suggestion: In view of the above, the standard requirements need to be relooked in the context of smallholder situations in India (and in similar situations in South Asia and across the world). The requirements under clause "housing and management" must fulfill the four principles of organic agriculture – principles of health, ecology, fairness and care and may be the guiding standard. This is also need to be compliant with the IFOAM Norms for Organic Production and Processing, version 2014 that mentions that

"more than 50% of the feed shall come from the farm unit itself, surrounding natural grazing areas, or be produced in co-operation with other organic farms in the region."

2. The point 6 (ii) under the section 5 "housing and management" also mentions that: "The animals should not be tied, however animals can be confined for specific reasons, such as, milking, for some medical procedures, controlled grazing, during night time and for health and safety of animal". The standards also specify the minimum indoor housing and outdoor pan area requirement. However, in Indian context, cattle are tethered and fed in stalls even during the Vedas. The love and care of cattle is well described in the Vedas and tethering has been a cultural or historical practice in rural households. Farmers generally keep their animals near to their homestead where space is a constraint. Thus, as per the present standard, farmers need to invest in creating cattle shed with open space and guarded wall all around, without which there may be theft of animal or the animal may stray. Such high investment is almost impossible for the resource poor small and marginal farmers. All these requirements are deterring farmers to take up organic livestock farming. The standard should also be inclusive for the traditional pastoralists who follow nomadic traditions of natural foraging.

3. The Annex 2 in the NPOP document gives the "Permitted List of Feed Materials, Feed Additives & Processing Aids for Animal Nutrition." Herein, it may be noted that many forage and other crop based products fed historically to animals in different parts of India are not there and there is a need to create scope to include them in the permitted list. For example, groundnut needs to be included under point "1.3. Legume seeds, their products and by-products." Drum stick and jack fruit are to be included under point "1.6. including leaves of common Indian trees." Also ghee is to be included under point "2.1. Milk and milk products" of the section 2. Feed materials from animal origin." Further, in a vast country like India many different feed materials from plants origin are fed as per local situation in different regions and states. Therefore there is a need to define a process for evaluating the feed items not included in the list.

   Suggestion: There is a need to widen the scope given in the Annex 2 to add into the permitted list of names of feed materials widely used in different regions.

   - The Annex 1 (A) of Appendix 5 in the NPOP document (page 109) gives the "Food additives including carriers for use in production of processed organic food." However, the list do not mention about rennet that is required for cheese making. Similarly many of the allowed/ permitted substance have been allowed in limited process which is great deterrent for processors. Once a ingredient is allowed for particular activity it should also be allowed for similar other activity.

Discussion and conclusions

Based on the IFOAM norms, organic standards of a country or region need to be based on the localized situations, cultural conditions and traditional practices. Therefore, it is imperative that NPOP standards are reformed and suggested changes included for organic livestock

farming. Without such reform, it would be challenging for farmers to adopt and produce certified livestock or dairy products.

It is also important to understand that there is an integrated traditional cultural link between pastoralists and farmers. The standard, if modified needs to be more inclusive on this aspect that will actually provide a good service to a large community of people involved in animal husbandry and the market. It may also give much needed recognition to that segment of society, which is quite ignored or informal (Vorley, Bill 2013) by other sections of regulation. This will also give a large fillip to the otherwise unorganized and informal market thus allowing for a win-win situation for all stakeholders.

References

- IFOAM (2014): The IFOAM Norms for Organic Production and Processing Version 2014.
- BIS (2015): Draft Indian standard - organically produced food products – Part 2, animal based, FAD22(2772)C.
- Government of India (2014): National Programme for Organic Production, Department of Commerce, Ministry of Commerce & Industry, New Delhi, 40-85.
- Government of India (2014): Agriculture Census 2010-11: "All India report on number and area of operational holdings", Department of Agriculture & Co-Operation, Ministry of Agriculture, New Delhi.
- Vorley, Bill (2013), Meeting small-scale farmers in their markets: understanding and improving the institutions and governance of informal agrifood trade, IIED/HIVOS/ Mainumby, London/The Hague/La Paz.

Perception of Organic Dairy Standards Among the Main Stakeholders: An Analysis in a Southern State of India

Subrahmanyeswari B[1], Simhachalam B, Mahesh Chander

About Author

Author is Head Extension Education Department at College of Veterinary Sciences and is specializes in organic livestock. She has also been associated with the organic standards development for livestock in India.

Key words: Andhra Pradesh, Veterinarians, dairy farmers, organic standards

Summary

The organic standards are key elements in implementing organic farming projects. While organic standards for cereals & fruits are common, awareness about organic livestock standards is still at very low level. A study was conducted among 60 organic farmers and 60 veterinarians in Andhra Pradesh, a southern state of India, to find out how the stakeholders perceive the organic livestock standards in terms of the favourableness and unsuitability. By and large veterinarians as well as dairy farmers found the standards as suitable and feasible under their situation, yet some of the standards were perceived as impractical and difficult to implement.

Introduction

Currently in Andhra Pradesh one of the southern states of India famous for its biodiversified livestock and crop resources, certified organic farming is being practiced in about 5,000 hectares. Training is taking place at various places in Andhra Pradesh with the target to cover 1.5 lakh farmers in organic farming in coming years. Moreover, many progressive and innovative farmers across the state were producing and marketing organic crop products. These farmers essentially with livestock would also like to venture into organic livestock production, and inquisitively looking for guidance. Moreover, they need to understand the guidelines and standards before they follow. Veterinarians who play key role in promotion of any innovative livestock farming and in advising the livestock farmers should also have clear cut perception towards organic animal husbandry standards to suggest farmers as and when required.

In India, the organic livestock and poultry standards have been notified under National Programme for Organic Production (NPOP) by the Ministry of Commerce, Government of India for implementation since 1st June, 2015, which, however, are not yet known to the stakeholders indicating the need to fill this gap (Subrahmanyeswari & Chander 2015). Hence, keeping in view of role of both the stakeholders in promotion of organic dairy farming, a study has been taken up among the two major stakeholders to analyze the perception towards organic dairy standards.

[1] NTR College of Veterinary Science, Gannavaram- 521 102 (Sri Venkateswara Veterinary University), Andhra Pradesh, India. www.svvu.edu.in. Email: eswariext@gmail.com

Material and methods

Exploratory research design was adopted to conduct present study in the state of Andhra Pradesh (12◦41'and 22◦N latitude and 77◦ and 84◦ 40' E longitude). Multistage sampling procedure was adopted for the selection of dairy farmers with organic crop cultivation and field veterinarians representing the three regions of the state and veterinarians from scientific community were randomly selected from the academic and research institutes of the state veterinary university. Direct interaction with farmers and questionnaire for the veterinarians was followed for data gathering.

Results

More than half (60%) of the dairy farmers had medium level of perception followed by high (21.67%) and low levels (18.33%) of perception towards organic dairy standards. Majority (75%) of the veterinarians had medium level of perception followed by low (15%) and high levels (10%) of perception towards organic dairy standards. The perception analysis of two main stakeholders of organic dairy farming i.e. dairy farmers and veterinarians towards organic dairy standards resulted in some common perspectives: Sustainability of organic dairy farming in Indian situation, development of location specific Organic dairy farming standards, Landless organic animal husbandry, utility of indigenous cattle breeds in organic farming, breeding methods for reproduction, provision of natural habitation to dairy animals, organic feed, ITK, animal welfare, preventive healthcare management, usage of allopathic, hormones and record maintenance by farmers.

Discussion

It can be concluded that more than half farmers were in favour of organic dairy standards and only 18 per cent of farmers could perceive the standards in less favourable way. Three-fourth of veterinarians perceived the standards as favorable to Indian farmers and farming situation followed by 15 per cent mentioned as less favorable to organic dairy standards.

Common perspectives of two main stakeholders of organic dairy farming towards organic dairy standards:

The commonness of perception towards organic dairy standards has been discussed here, so that the policy makers and organic dairy farming promoting agencies may take note of this and accordingly organic dairy standards can be modified, wherever found feasible and can be promoted.

Sustainability of organic dairy farming to Indian farmers and organic dairy farming standards:

Both the stakeholders in majority perceived that organic dairy farming is suitable to Indian farmers, indicating thereby possibility of adoption of organic dairy farming. However, all the farmers and majority veterinarians felt that there is need for development of location specific standards for organic animal husbandry, keeping in view the varied agro-climatic situations prevailing across India.

Landless Animal Husbandry:

Both the stakeholders (98.33% farmers & 56.67% veterinarians) agreed that farmer should own land/ lease land if they like to go for organic dairy farming, in view of emphasis of recycling of nutrients between soil, crop and animals in organic production, and for diversified production.

Indigenous Cattle Breed in Organic Farming:

All the selected farmers and 90 per cent of selected veterinarians perceived that Indian local cattle are better suited to Indian farming scenario, which might be due to Indian farmers' affinity towards local cattle since age old times.

Reproduction Methods:

Over three-fourth of the selected veterinarians opined that natural reproduction methods could be ideal for a small scale farmers, provided proven bulls are available. Whereas, only half of the farmers perceived that natural breeding method is better than A.I. which reveal that farmers are not against natural breeding method subject to the availability of proven bulls. However, almost all the stakeholders held the perception that A.I. helps in improving the genetic make-up of local cattle with better yields. Farmers thus may be advised to prefer A.I. over natural breeding method, if the veterinarian suggests the chances of improving the production potential of local cattle are better through A.I.

Housing and Tethering:

Only one-fourth of the selected farmers and one-third of the selected veterinarians felt that providing loose housing system to meet the biological and behavioral needs of dairy animals is possible for an Indian farmer. Most of the Indian small and marginal farmers try to meet the appropriate housing requirements of their livestock, when rearing for livelihood purpose. Hence, meeting housing requirements as per the set organic standards may be a problem for the farmers especially those with small and marginal land holdings. Indian cattle being horned, three-fourth of the farmers and more than half of the veterinarians opined that tethering of dairy animals is necessary in Indian conditions. The organic standards may allow for the location specific adjustments, if the veterinarians and local certification bodies agree with the local requirement. As such, tethering may be justified, provided it is not affecting or compromising the welfare and behavioral needs of the animals.

Grazing and Organic feed:

Stakeholders expressed that due to decreasing grazing land, it may not be possible for an Indian farmer to let the animal for grazing throughout the year. More than half of the farmers opined that a dairy farmer cannot raise most of the organic feed inputs on his farm itself and half of the veterinarians felt that Indian farmers cannot produce on-farm 85 per cent of organic livestock feed. Indian farmers mainly concentrate on cultivating cereals and pulses, may not concentrate about the feeding of dairy animals.

Indigenous Technical knowledge (ITK):

Both the stakeholders agreed that Indian farmers are rich in ITK and if farmers' ITK are recognized under organic production management, more number of Indian farmers will follow organic farming and also the traditional dairy production practices of India will get encouraged and promoted under organic dairy production.

Animal welfare:

Cent per cent of the farmers and nearly half of the selected veterinarians felt that since age old times, Indian farmers are more concerned about the animal welfare and treated animals as family members, hence, meeting the animal welfare requirement is possible for Indian farmers.

Preventive health care management:

Cent per cent of the farmers and almost all veterinarians perceived that irrespective of farmers' management and type of livestock production system, preventive health care management is necessary for the livestock under Indian conditions.

Allopathy and Hormones:

More than half of the veterinarians opined that Indian farmer can manage his livestock with alternative veterinary medicines other than allopathy and that there should be restriction on the usage of allopathic medicines. Cent per cent of the farmers and nearly three-fourth of the veterinarians perceived that raising of dairy animals does not need any hormones.

Conclusion

The standards perceived as difficult to implement may need capacity development efforts including modification as per the local situation, needs & requirements towards making organic farming including organic rearing of livestock popular.

References

- National Programme for Organic Production, Agricultural and Processed Food Products Export Development Authority (APEDA). 2015 Chapter-3, Appendix-2, Organic livestock, Poultry and Products. pp. 40-75.
- Subrahmanyeswari B and Mahesh Chander 2015 Presented paper: Organic livestock and poultry standards-The knowledge gap. IVEF National Seminar on Teaching, Research and Extension Gaps in Livestock Development, Puducherry, August 28-29, 2015.

OpenVino: Using DIY Technology and Block Chain Crypto-currency to Create Biodigital Organic Certifications.

Mike Barrow[1]

About Author

Mike Barrow is a boutique winery owner, organic viticulturist, and IT consultant.

Key words: bitcoin, Arduino, transparency, traceability, open-source, organic viticulture

Summary

As advances in technology rapidly transform our world, the wine business, often perceived as an arcane mix of immutable tradition and arbitrary complexity, will not be exempt. The OpenVino Project opens up the intricacies of organic viticulture and the wine industry for inspection and shows us what the near-future holds. OpenVino applies cutting edge technology-driven ideas to every aspect of its Costaflores boutique winery and presenting the results for all to see. Whether your interests lie in wine, technology or business; organic viticulture, crypto-currencies or product distribution, The OpenVino Project provides a uniquely fascinating Petri dish for exploring current practices and rapidly approaching, technology-driven change.

Introduction

Organic Costaflores S.A. is a boutique wine producer in Mendoza, Argentina, owned by Mike Barrow. Mike lives on 4 hectare Finca Orgánica Costaflores, in Perdriel, Luján de Cuyo, Mendoza, where organic grapes are grown for Costaflores red wine (blend) called MTB – Mike Tango Bravo. The goal of the The OpenVino Project is to create the world's first open-source, transparent winery, and wine-backed crypto-currency by exposing Costaflores' technical and business practices to the world.

The primary objectives of this project are to answer the following four questions:

- What is the truth, importance and meaning of "organic / eco / bio" in wine and agriculture in general? How can low-cost DIY technologies (Respberri Pi, Vinduino/Arduino, Thymbra) be used to develop real-time biodigital organic certifications?
- What would happen if we were to share ALL the accounting and operational details of our business with the world?
- When the cost of a bottle of wine can vary by orders of magnitude ($1, $10, $100, $1000), how can we assess a wine's REAL VALUE? How can we leverage the block chain (Bitcoin, Ethereum, etc.) to create a wine-backed crypto-currency?
- How can we objectively evaluate the QUALITY of a wine, based on a consumer's experience, and the wine's effect on their consciousness?

[1] Organic Costaflores S.A., Argentina, openvino.costaflores.com, mtb@costaflores.com,Perdriel, Mendoza, Argentina

Secondary objectives of The OpenVino Project include:

Develop a new business model that other companies can reference and adapt; an altruistic experiment to create a new ethical and sustainable business model, rooted in organic agriculture. Build a "self-running" company using many of the concepts related to Distributed Automated Organizations.

Share knowledge – by exposing Costaflores viticulture and business practices to the world, an attempt is being made to share experiences with other viticulturists and winemakers, and create a known reference site in the world, and **learn** from others who observe its practices and offer suggestions and constructive criticism.

Spawn a new crypto-currency – and create the world's first **"wine-backed" currency** and trading platform.

Reduce costs by monetizing the promotion platform, fomenting competition amongst Costaflores providers, and utilizing Costaflores own crypto-currency to buy and sell services and products.

Redefine the way wine is valued. Wine is both a commodity and an art form. A consumable foodstuff, and the elixir of muses. The OpenVino project, redefine the way this commodity/art form is valued, by giving the valuation tools to the marketplace, to the consumer.

Incorporate the ultimate traceability tools (Vine → Wine → Dine → Mind) that allow to follow the product from vineyard to mouth, and beyond.

Integrate open-source technologies and cloud services development techniques. The project development will be documented, as a case-study for future cloud services developments.

Material and methods

The OpenVino project implements and produces open-source hardware and software technologies (based on Arduino, Raspberri Pi, Etheral Block chain, Bitcoin technologies, etc.) to construct real time organic viticulture traceability tools.

Main Issues

Transparency is a key value for building sustainable, ethical, profitable businesses, and is an important tool for small companies. Despite being under greater public scrutiny, large enterprises can often benefit by keeping secrets: proprietary trade information, opaque competitive practices, "insider" market information. For example, large wineries can negotiate advantageous purchasing deals for packaging materials and logistics, whereas smaller brands are relegated to higher prices or inferior services and products. Higher up the food chain, beverage conglomerates can manage and manipulate the marketplace by obliging merchants to purchase smaller or newer associate brands in exchange for access to "must-have" brands. So for medium and large corporations, "keeping their cards close to the chest" is advantageous and instrumental.

But small companies lack this kind of leverage, having nothing to hide, or more to the point, nothing worth hiding. However, small companies can benefit from transparency. Costaflores

is too small a company to hold leverage to negotiate any advantageous purchasing deals, but by publishing openly it's packaging materials and logistics requirements and purchases, Costaflores openly invites providers to compete for its business. By participating in these transparent transactions, these providers receive Costaflores business, albeit small, but they can benefit from (positive) publicity and branding associated with ethical, sustainable business practices built through this project.

Transparency and traceability are key components to promoting organic viticulture. Using next-generation low-cost technological tools, any small producer can promote transparency and traceability and compete against larger competitors.

Promote Ethical Business Practices

Consumers value honesty, integrity, and "fair-trade" practices in a marketplace muddied with confusing nomenclatures and certifications.

Today there is much confusion amongst wine consumers regarding the meaning of *Organic / Eco / Natural / Fair Trade / Biodynamic* labels. The OpenVino offers a touchstone or reference point to help consumers and industry reporters undo this confusion. In the words of Mary June Butters, organic farmer:

"I think we need to take back our language. I want to call my organic carrots 'carrots' and let (other farmers) call theirs *chemical carrots*. And they can list all the ingredients they used instead of me having to be certified. The burden is on us to prove something. Let them prove that they have used only 30 chemicals instead of 50 to produce an apple"

The OpenVino, define, implement, automate, and monitor ethical business practices, with hopes of positively fulfilling the following questions:

- Are Costaflores employees compensated fairly for their efforts, and do they become owners of the growing success story? How can we demonstrate this?
- Do our sales and marketing claims reflect truth and authenticity?
- Do Costaflores production and logistics processes minimize impact on the environment?
- Does OpenVino contribute ideas and intellectual property that are beneficial to society?
- Does this project promote Costaflores fulfilment of legal and fiscal obligations, both in the spirit and letter of existing laws?

Sustainability

The OpenVino, expose the underlying costs, both financial and ecological, in the production, sales, and distribution of wine, and implement self-correcting formulae for evolving a sustainable (and autonomous) company. This includes defining how profits and participations are distributed, both to Organic Costaflores S.A. employees and to shareholders, with the aim of plotting predictable growth and incentives, both for employees, and committed stakeholders.

Consumer defined pricing

The OpenVino project, challenge the wine industry and the world to demystify wine pricing. How can it be that the price of 750ml of fermented grape juice can vary so much? A bottle of wine can cost $1, $10, $100, $1000, or $10,000: five orders of magnitude. What is the "real value" of the product? How can quality be quantified? How can we create the world's first wine-backed crypto-currency? And how can a trading platform for this new currency be used to generate "consumer defined pricing"?

Direct consumer feedback

Today, wine industry experts define and dictate quality evaluations of wines. This most often takes the form of point's ratings by Robert Parker, Wine Spectator, James Suckling, and others or by medallion awards at international wine contests. These evaluations, though valuable, are flawed to the extent that they only represent the qualitative values of a few people and their tastes, and specific points in time (tastings) where specific conditions and predispositions of the quality judges may be circumspect. In other words, these experts' opinions are valuable, but they remain anecdotal. The proof in the pudding lie in what actual wine drinkers think about the wines they are drinking.

But documenting end-drinker opinions and circumstances require time and effort on behalf of the consumer. The OpenVino break ground by paying customers for their feedback. In exchange for the information they provide about the organic products, they get paid with actual shares in the company, Organic Costaflores S.A. The concept is: ***"when you drink it, you own it"***.

अंगूर की हर बूंद पर लिखा है पीने वाले का नाम

By collecting these authentic consumer experiences, project create a feedback loop, by allowing qualifying and quantifying experiences associated with wine, and justifying consumer defined pricing. And by making consumers part-owners in the enterprise, company leverage the positive "owner's bias".

Educate and Learn

As the first ***open-source winery,*** Costaflores shares with the world, through didactic and accessible tools, how organic grapes are grown, and how wine is made, distributed and sold. The OpenVino expose the business practices and technical procedures to an unprecedented degree. By teaching the "secret recipe" to the world, company invite constructive criticism from others with deeper experience and knowledge, and also invite innovative approaches.

Define new standards

The OpenVino present, as what we hope will become a touchstone, a new reference point, for building transparent, ethical, sustainable wine businesses. All software tools and components, wherever possible will be built upon existing open-source applications and downloadable. All documents, videos, and other didactic components will be made available free under Creative Commons licensing.

Part 3

ORGANIC WORLD CONGRESS 2017

जैविक कृषि विश्व कुंभ

Participatory Guarantee Systems (PGS)

Participatory Guarantee Systems (PGS): Engines of Social Development in Organic 3.0

Cornelia Kirchner[1]

About Author

Cornelia Kirchner is the PGS Coordinator at IFOAM – Organics International. She has a MA in Japanese Studies with a specialization in organic agriculture and certification in Japan. Since 2012, she is part of the IFOAM PGS Team and responsible for the coordination of the PGS activities at IFOAM including the editing of the Global PGS Newsletter, the maintenance of the online PGS Information Platform, the generation of global statistical PGS data and the IFOAM PGS recognition program. She is also involved in various projects of IFOAM – Organics International to promote and build capacity of PGS in Asia and Africa.

Key words: Participatory Guarantee System

Summary

Participatory Guarantee System (PGS) is a low-cost alternative method to guarantee the organic quality of products. PGS is particularly relevant in the context of small-scale farming and local markets and the functions of PGS and its potential go far beyond organic guarantee. PGS is promoted especially as a capacity building and farmer empowerment tool. Which elements actually characterize PGS? How does PGS build trust? What are its advantages compared to third party certification? This paper explains the basic functioning of PGS and illustrates which elements work together to make it successful.

What is Participatory Guarantee System and how did it all begin?

PGS initiatives emerged and developed autonomously in several regions of the world. In 2004 stakeholders from various countries and continents came together for the first time at a workshop on alternative certification in Torres, Brazil and realized that they are all implementing similar systems. Since then the term PGS was created, common elements and features found in all PGS initiatives were identified and many more farmers and stakeholders in the organic movement got inspired by the existing initiatives and started to implement and promote PGS themselves.

The official definition of PGS is: *"Participatory Guarantee Systems are locally focused quality assurance systems. They certify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange."* (IFOAM – Organics International, 2008)

The basic foundation of each PGS initiative is the participation of stakeholders with the farmers as the centrepiece. Other stakeholders involved may include for example consumers

[1] PGS Coordinator, IFOAM – Organics International, Email c.kirchner@ifoam.bio

& retailers, researchers and agronomists, extension personal, NGO or farmer association staff. The stakeholders together decide about the organic production rules that should be applied and develop or choose the organic standards. They sit together also to design the procedures, to decide about responsibilities, to make the division of tasks and to approve new members. All decision-making is a participatory process that involves the various stakeholders but most importantly the farmers.

The concrete procedures and activities carried out by the PGS initiatives differ, but some basic features can be found everywhere. All PGS groups organize regular reviews for each farm e.g. once a year. During these farm visits the practices of the farm are discussed and analyzed and the compliance with the organic standards is verified. Usually a checklist is used to make sure no important questions are being forgotten. The review team comprises other farmers that have the technical competence to assess the practices used and to detect irregularities. Other stakeholders participate in the farm visits and are important for the credibility of PGS by contributing a more external view. PGS initiatives organize trainings for the review teams to make sure they feel confident and competent to carry out the evaluation.

It is common in PGS that farmers sign a contract or read a pledge whereby they formally commit to follow the rules adopted by the group. Also clear consequences for non-compliance need to be defined. Only if such rules exist a fair and equal treatment of all members can be ensured. It is important to have mechanism set-up that help the farmers to become part of the group and to understand the rules, e.g. a simplified standard and technical trainings.

PGS as a knowledge sharing tool

PGS has proven to be a reliable certification method. While third party certification may be better in detecting irregularities in the paperwork, PGS is strong in detecting problems in the actual farm practices. Commonly the farm reviews end up as in-depth discussions about certain farm practices and how to solve problems, e.g. how to fight certain pests and diseases. During these discussions it becomes apparent if the farmers understands and applies organic principles or not. As a side effect, both the visited and the visiting farmers learn new things that help them to improve their practices. This practice of knowledge sharing is a main difference between PGS and third party certification. In third party it is prohibited to the inspector to give any advice to the farmer that is being inspected. PGS on the contrary functions as an advice and information-sharing platform. Many PGS farmers in fact mention the learning and knowledge sharing as the biggest benefit they gain from participating in the PGS.

PGS – elements of success

Today, PGS is a successful and increasingly popular method that involves tens of thousands of farmers worldwide and is growing on all continents. In 2016 more than 170,000 farmers in 73 countries worldwide were involved in PGS. The highest numbers are found in India (80,000), Peru (22,000), Kenya (12,000) the Philippines (11,000), Bolivia and Uganda (9,000).

Being easily adaptable to local conditions is a key strength of PGS. If the local farmers are not able to read and write, methods can be considered to make sure they understand the requirements in the standard and follow them. If farmers live hundreds of miles away from each other, different procedures may be adapted compared to a PGS where the majority of stakeholders live together in the same village. Rules may need to be modified if the majority of products are marketing through a common platform (e.g. a farmers market in the nearby city) compared to a PGS where each farmers is selling its products individually. Again the situation of a PGS that is recognized by the government and where farmers can use a national organic logo on their products will not be the same as in a PGS that operates in a restricted political environment. The flexibility to be adaptable to the different contexts is a strong point of PGS.

Not to be underestimated is also the farmer empowering factor of PGS. PGS directs back the power of decision making to the farmers and affected stakeholders. In "mainstream certification" (meaning third party certification and represented by the term *"Organic 2.0"*) policy makers take control and they decide about the rules. Farmers do not have a choice but to follow the requirements defined in the regulations. In PGS the rules are made and the decisions taken in form of a dialogue between stakeholders. They own the system and they own the decision-making process.

However not all PGS initiatives are successful, some of them also disappear after some time or never develop into a functional system. This shows that certain prerequisites have to be fulfilled to make an initiative successful. One important of them is market access. PGS initiatives which do not plan for marketing and do not facilitate market access for farmers usually do not continue for a long time. After all PGS requires a lot of work and effort from the stakeholders to establish and to keep running.

PGS - a tool that offers solutions to current challenges

Excessive bureaucracy, prohibitively expensive fees and multiple certification requirements are some of the current challenges caused by third party certification. For many organic farmers, third party certification is not a suitable option. The concept of *"Organic 3.0"* acknowledges this fact by stating that "a broader uptake of organic agriculture cannot be based on third party certification alone". Indeed, other complementary approaches are needed to accommodate the diverse nature and needs of organic farmers and markets around the globe.

PGS is one of the most promising tools for alternative certification and to overcome the challenges of third party certification. It already improves the lives of tens of thousands of people, in particular small-scale farmers in developing countries. Dozens of success initiatives worldwide prove that the system is functional. The qualities and potential of PGS are gradually gaining recognition and support from various actors and governments. Most of the leading countries in terms of PGS recognition are found in Latin America, South and Southeast Asia. In India the government launched a national PGS program – PGS India - and envisions that

200,000 PGS farmers will be certified organically through the system by the end of November 2017. Brazil recognizes PGS as equivalent to third party certification and grants the use of the national organic logo. In the Philippines local governments play a strong role in supporting the establishment of PGS and several municipalities launched their own PGS program. These are just some examples and several other countries worldwide launched PGS support measures on different levels and started to include provisions for PGS in their regulations.

Still, one of the challenges that PGS is facing is the recognition as a viable certification method. Many governments still believe that only third party certification can reliably guarantee the quality of organic products. Such restrictive regulations pose a threat to PGS initiatives in many countries and obstruct their growth. This is the case for example in Europe where only third party certified products are officially recognized and PGS certified products are not allowed to be called organic.

The organic movement should work together to change this prejudice and advocate for recognition of PGS in organic legislations worldwide. This is one of the aspirations in Organic 3.0: to enable the full potential of PGS as engines of social development to strengthen local organic markets and short-chain initiatives.

Present status and scenario of Participatory Guarantee System –India (PGS-INDIA) Organic certification system in India

Krishan Chandra[1], R.Srinivasamurthy[2] and V. Praveen Kumar[1]

About Author

Dr Krishan Chandra is the Director for National Centre of Organic Farming, a premiere institute for promotion of organic agriculture under Ministry of Agriculture, Govt. of India. Dr Chandra is a known organic farming expert with expertise ranging from microbial and organic inputs to organic management systems and certification.

Key words: PGS, Paramparagat Krishi Vikas Yojna (Traditional Agriculture Development Scheme), PGS-India, Regional Councils

Summary

PGS-India programme was launched in 2011 by the Ministry of Agriculture and Farmers Welfare with National Centre of Organic Farming as its secretariat. PGS-India have its own logo, distinct from India Organic logo of third party certification system under NPOP. PGS-India offers two different logos to its members, PGS Green, for in-conversion products and PGS Organic for fully organic products. The programme with the nationwide network operates through 309 Regional Councils located across the country. As on March 2017, 4178 farmer groups comprising of 173,887 farmers were associated with the programme. PGS-India programme is although based on the same National Standards for Organic Production (NSOP) but is distinct in its certification procedures, which are farmer group centric and in tune with the guiding principles of PGS. On-line traceability in the form of consumer verification, entire data base in public domain and financial backings of Government are some distinct features of PGS-India.

Introduction

PGS-INDIA organic certification system was launched in 2011 by Department of Agriculture and Cooperation & farmers welfare, Ministry of Agriculture & Farmers Welfare (MoA&FW), Government of India and is an alternative to third party certification. The programme is implemented through National Centre of Organic Farming (NCOF), Ghaziabad and its eight Regional Centres (Ghaziabad -Head Quarter, Bangalore, Nagpur, Jabalpur, Panchkula, Bhubaneswar, Imphal and Patna). The system was launched to promote local organic markets for organic produce. NCOF as secretariat of the PGS-INDIA programme, and Director, NCOF as the Executive Secretary play crucial role in implementation of activities of PGS-INDIA programme as per the guidelines of National Advisory Committee (NAC). Under PGS-INDIA certification system farmers are registered free of cost in cluster mode approach. It

[1] National Centre of Organic Farming (NCOF), Ghaziabad, India, http://ncof.dacnet.nic.in

[2] Regional centre of organic farming (RCOF), Bengaluru, India, http://pgsindia-ncof.nic.in

is a decentralized certification system and farmers are the owner of the system. The PGS certification system is based on principles of participation, shared vision, trust, transparency, horizontality and networking. PGS is a locally applicable quality assurance system for grower group certification, implemented together by locally known small group of farmers, traders and consumers under the supervision of Regional Councils. Two types of Logos are being used under PGS-INDIA certification programme. From the beginning of organic cultivation and upto two years farmers will be considered under conversion, and will be certified as on way to organic and granted with **PGS-INDIA GREEN** logo (Fig 1a). After successful completion of two years (three years for plantation crops) period of conversion and upon full compliance of standards the farmers are certified and granted with **PGS-INDIA ORGANIC** logo (Fig 1b), which can be used on packing material while marketing organic produce.

Regional Councils are the organizations that are authorized under PGS-INDIA certification system to play role in registration of farmers, training, online documentation, inspection, residual analysis, soil sample analysis and grant of certification as per PGS-INDIA guidelines. At the beginning in the year 2011, implementation of PGS–INDIA certification system was started with twenty (20) authorized Non-Governmental organizations (NGOs) as Regional councils, and there was no financial support from the Government of India to operate PGS certification system.

After three years of evaluation it was found that the certification system is acceptable among the farmers and consumers and is a farmer friendly system. To promote organic farming and PGS-INDIA certification in large scale, Government of India supported the programme financially through launch of Paramparagat Krishi Vikas Yojana [Traditional Agriculture Development Scheme] (PKVY) in the year 2015. At present, 309 regional councils are authorized to work under PGS- INDIA programme.

PGS-INDIA GREEN PGS-INDIA ORGANIC

Fig 1 a and b - PGS-India Logo

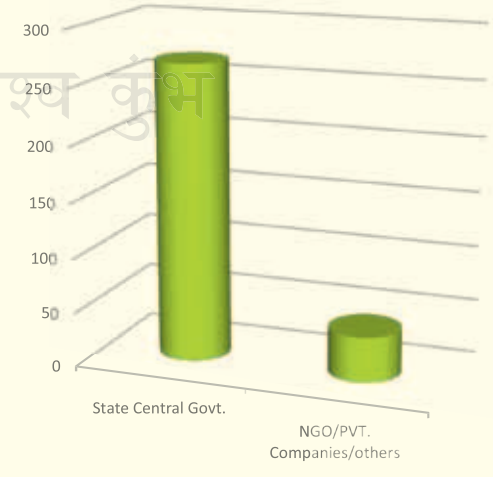


Fig.1 Types of Regional councils approved under PGS-INDIA System

Out of 309 regional councils, seven regional councils are Regional Centres of Organic Farming (RCOFs) working under NCOF (Ghaziabad -Head Quarter, Bangalore, Nagpur, Jabalpur,

Panchkula, Bhubaneswar, Imphal and Patna), 261 are State Government organization and 41 are from different NGOs/ Civil society organizations/Pvt. Companies etc., from different States {Andaman and Nicobar islands (1), Arunachal Pradesh (2), Assam (1), Chhattisgarh (23), Delhi (3), Gujarat (6), Haryana (1), Himachal Pradesh (11), Jammu and Kashmir (10), Karnataka (14), Kerala (14), Madhya Pradesh (53), Maharashtra (21), Manipur (6), Nagaland (11), Odisha (2), Punjab (1), Rajasthan (34), Sikkim (1), Tamil Nadu (50), Telangana (10), Tripura (8), Uttar Pradesh (21), Uttarakhand (4) and West Bengal (1) (Fig.2)}.The increase in participation of Regional Councils under PGS programme shows growing demand and acceptance of system among different stakeholders of organic farming –farmers, state Governments, market and consumers (Fig.3).

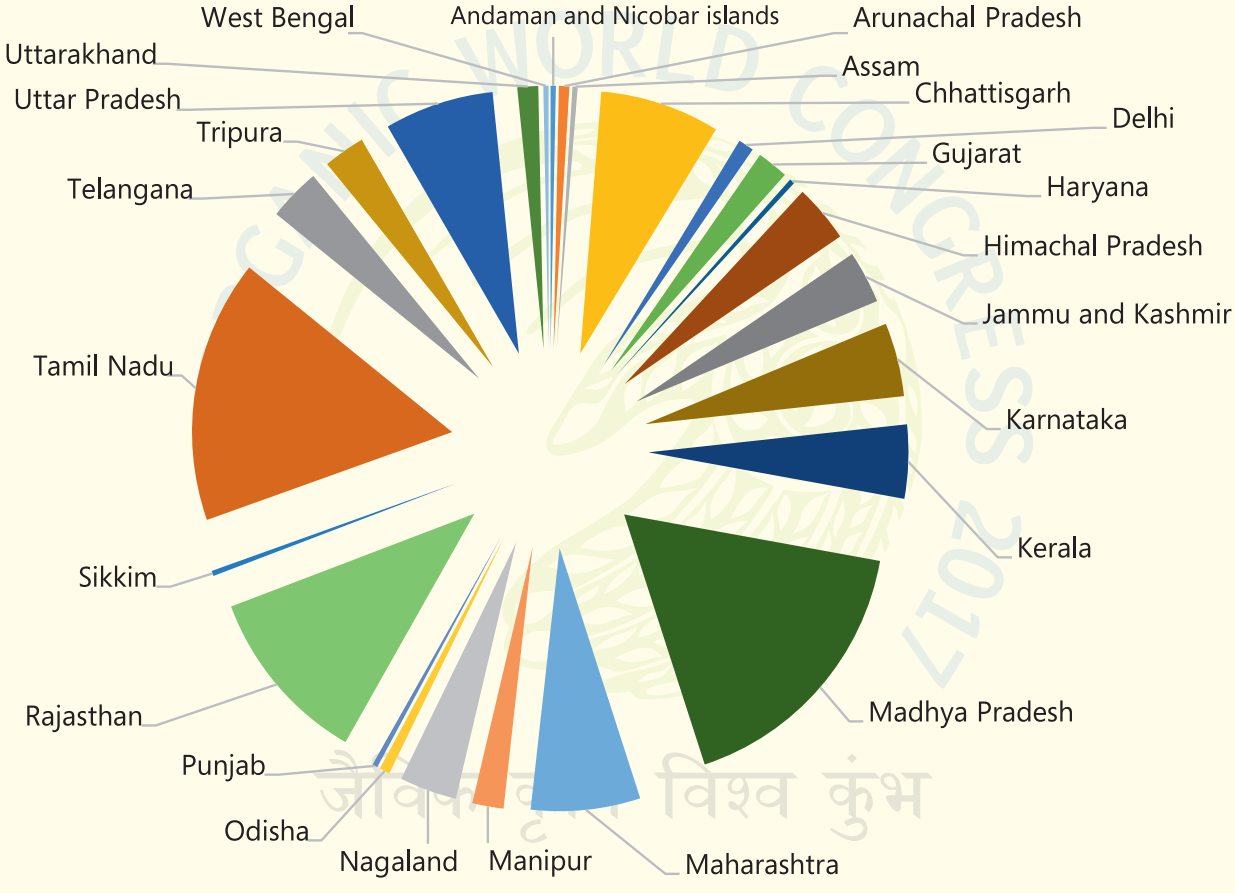


Fig 2 State wise authorized Regional Council under PGS-INDIA System

Number of Farmers groups and farmers: The number of farmer groups under PGS certification system was approximately 200 and farmers were 1000 in number in the year 2011 with 20 RCs. Even though PGS was found farmer friendly but due to no direct financial support from the Government it was not able to attract large scale participation of farmers under PGS INDIA certification till 2015. In the year 2015 financial assistance was started through PKVY scheme, since then number of farmers groups/clusters have raised to 4178 and number of farmer increased to 173887 by the March 2017 (Fig.4 & 5). By the middle of 2017, the number of groups and total farmers linked to PGS-India has increased to 5302 and 194,154 respectively.

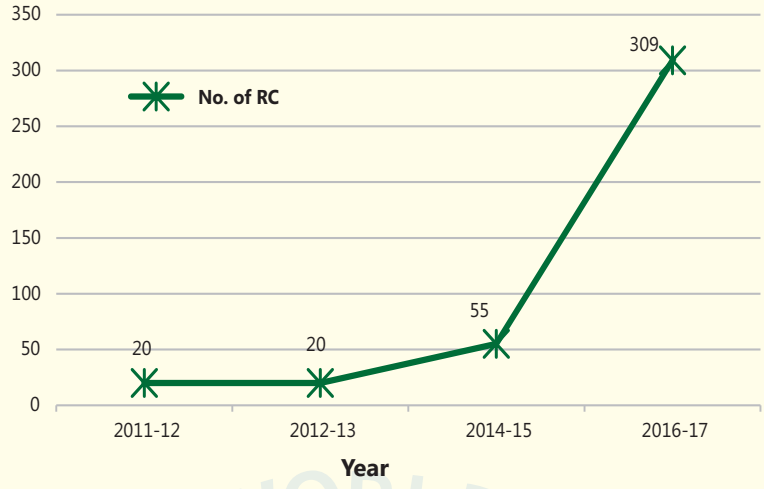


Fig.3. Year wise increase in number of regional Council with PGS-INDIA certification system

Fig.4. Year wise increase in number of farmer groups under PGS-INDIA certification system

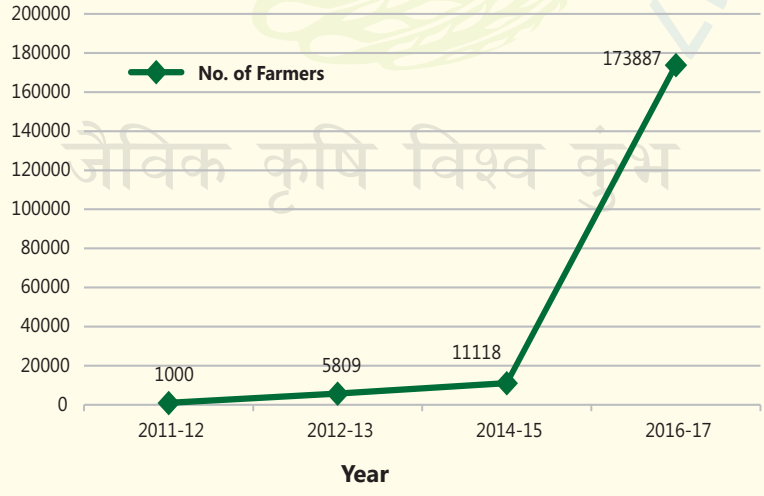


Fig.5. Year wise increase in number of farmers with PGS-INDIA certification system

The numbers of farmer's group and farmer's registration has continuously increased from 2011 to 2017. It shows the popularity and easy mode of acceptance of certification system among the farmers and also the positive results obtained on production system through organic farming and practices. There is also rise in the demand of PGS certified products

among the consumers and this surge in demand is attracting more farmers to adopt organic farming for cultivation of crops.

Area under PGS-INDIA certification: The area under PGS-INDIA certification was 6064 ha in 2012-13 which increased slowly and as on March 2017 nearly 143817 ha land is covered under PGS certification system. The PKVY scheme is aiming to cover 5 lakh ha over a period of next three years with the formation of 10000 clusters. Thus in future the rapid increase in participation of farmers under PGS-INDIA certification system may be observed which will pave way to the development of local organic market in a big way.

Online PGS-INDIA webportal (http://pgsindia-ncof.gov.in): Even though there are large numbers of farmers involved in organic farming under PGS-INDIA certification, their information is properly not documented and no information about farmers and agencies working was visible in public domain which was a limiting factor for the expansion of organic marketing. In order to establish information access to all domain of people, Government of India launched PGS-INDIA online webportal (http://pgsindia-ncof.gov.in) on 15th July , 2015. All the details of farmer's / regional councils are available in this website, and all information is accessible in public domain. The consumer product verification has also been enabled in this webportal. Any person can track the traceability of products from PGS-INDIA webportal, including from where it has obtained and also details of producer/farmers who has grown the products.

Paramparagat Krishi Vikas Yojana (PKVY) scheme was launched by Ministry of Agriculture & Farmers welfare, Government of INDIA to promote organic farming and PGS-INDIA certification system. The scheme is providing financial support for mobilization of farmers, PGS-INDIA certification, adopting organic farming practices and marketing of products through cluster approach. The cluster chosen for organic farming shall be of 50 acres and in as contiguous a form as possible. In order to facilitate this, the ceiling of subsidy per farmer is pegged at a maximum of one hectare and the total financial assistance for a 50 acre cluster shall be a maximum of Rs. 14.95 lakhs (1.495 million) for farmer members and Rs.4.95 lakh (0.495 million) for mobilization and PGS-India Certification.

Branding

The produce collected from the fields of farmers registered under PGS-India certification system is sorted as **"PGS-India Green"** produce (fields that are under conversion) and **"PGS-India Organic"**. The corresponding produce is packed accordingly using standard packets in different quantities according to the market requirement.

The packs of organic produce are legibly labeled, the labels contains name of the Local group or any other name as a brand name along with general information (like quantity, packing date etc) and further contains the logos of PGS-India Green and PGS-India Organic as the case may be, along with the "Unique ID" (Unique identification no.) generated from the PGS-India webportal which in turn works as consumer verification code and thus helps in maintaining

transparency and stands as mark to win consumer favour and satisfaction. Financial assistance is being given to its farmers by Government of India under the PKVY scheme @ Rs.2500/ acre towards packing material with PGS logo + Hologram printing. Interestingly farmers who are not availing the financial assistance/subsidy under PKVY are also showing interest in packing, labelling and branding as they are being benefitted with 10-15% premium price for PGS-India Green certified produce and a premium of 25-30% for PGS-India Organic certified produce. In order to maintain the certification integrity, Govt. of India has a mechanism of randomly collecting the PGS-India certified produce from the fields and getting them tested for pesticide residue levels (MRL) in National Accreditation Board for Laboratories (NABL) accredited laboratories. Food Safety and Standards Authority of India (FSSAI) an autonomous body established under the Ministry of Health & Family Welfare, Government of India is in the process for enacting a regulation stating that, any food offered or promoted for sale as 'organic food' shall comply with all the applicable provisions of Participatory Guarantee

System for India (PGS-India). Therefore, the PGS-India certified produce shall be labelled with both FSSAI logo and PGS-India logo.

Market Avenues

Market/marketing is the most important aspect of any commodity and the same holds true for organic produce also. In order to market the organic produce, different approaches are being followed for making available PGS-India certified products to the consumers. Regional Councils under PGS-India play vital role as they buy back the PGS-India certified produce from its local group farmers, and even creates a platform to link the farmers with the traders for successful marketing. Further, RCs also organize the Organic Fairs/Mela (with advertisement in local print and electronic media well in advance) arranging stalls of the farmers and help farmers to find the consumers and vice-versa and thus boosts the organic business. Some RCs have adopted luring methods like Mobile Organic Shops and Weekly Organic Markets, where the earlier one reaches the organic commodities to the doorstep of consumers and the later one assures the consumers with weekly supplies of fruits, vegetables and other items (cereals, pulses etc.). Few RCs and some LGs have even started their own "Organic Stores". Most of the Local Group farmers supply their PGS-India certified produce to organic stores and well established supermarkets that maintain a separate Block or Rack exclusively for Organic Products.


Mobile Organic Shop


Weekly Organic Bazar on wheels

Organic Stall in Mela

Transport of organic produce to Mela

Many of the local group farmers with the help of their RC set up a stall in National and International events like Biofach India and India International Trade Fair (IITF) etc. As part of digitalization in India, some farmers made tie up with online marketers like big-basket. Financial assistance is being given to its farmers by Government of India under the PKVY scheme @ Rs.120,000 maximum for 1 cluster towards transportation of organic produce (four wheeler, 1.5 tone load capacity) and @ Rs 36330 per cluster towards organization of Organic Fairs.

Promotion of Marketing of PGS-INDIA certified products:

Market linkages

To promote marketing of organic products on a large scale, networking of traders, farmers and other stake holders is essential under one single platform. The Ministry of Agriculture & Farmers welfare, Government of India provided a single PGS-INDIA webportal and enhanced the networking of farmers, Regional councils and marketers. The details of the farmers/RC, their production, certification and contact details are available in PGS webportal. The NCOF has also undertaken certain steps to promote participation of private companies in PGS-INDIA system and has also included few private companies as regional councils to boost confidence of marketing companies about the reliability of system. The NCOF, RCOFs and Regional councils are working under PGS-INDIA system are supporting farmers to get at least 10-25% premium price for the organic produce in the market. The RCs are acting as linkage between private market agencies and farmers.

Success Stories

Marketing of PGS-INIDIA certified organic products

In Bangalore an approved RC namely Mysore Green is marketing PGS certified produce through linking with "Big Basket" a giant market shareholder in India. Another RC namely Belgaum Rural Integrated Development Society, Belgaum, Karnataka provided their PGS certified farmers direct market linkage to Renuka Sugar cane factories. Through this linkage in the year 2015-16 farmers could sell upto 10800 tons of sugarcane produce and earned an amount of Rs. 21.76 lakh which was 20% more than conventional crop produce. Farmer groups are also coming forward to become regional council under PGS system and embarking upon direct marketing of their produce, and thus becoming Organo-preneurs (Organic Farmer entrepreneurs). Mr. Bharath Bhooshan Tyagi is one such organopreneur from District Bhulandsher, Utter Pradesh, India. He has established his own organization under the name Chetana Vikas Swarajya Trust at Behta village, B.B.Nagar, Bulandshahar District, Utter Pradesh - 203402 India, which is approved as Regional Council

under PGS-INDIA certification system . He has become successful in establishing his own PGS-INDIA organic produce market brand namely Swadesham. It indicates that the popularity of PGS certified products in local market is steadily growing. NCOF/RCOFs/ are playing key role in widening and networking of farmers, RCs and Marketing agencies across India to increase organic farming area and market under PGS-INDIA certification system.

Ministry of Agriculture and Farmers Welfare, Govt. of India is not leaving a single stone unturned for boosting organic farming in the country like launching schemes for organic farming (eg. PKVY) and has also launched the **"Organic Outlet, Organic Restaurant/canteen and Organic Cafeteria"** at Krishi Bhavan, New Delhi to create awareness among consumers and thereby developing confidence in organic farmers regarding the marketing of organic produce and its demand in the country.

Inauguration of Organic Restaurant by Hon'ble Union Agriculture Minister **Shri Radha Mohan Singh** (Dr. Krishan Chandra, Director NCOF and other dignitaries also seen) at Krishi Bhavan, New Delhi

Shri Radha Mohan Singh Hon'ble Union Agriculture Minister exploring and procuring organic commodities from the organic store at Krishi Bhavan, New Delhi (Dr. Krishan Chandra, Director NCOF and other dignitaries also seen)

Inaugural of Organic Cafeteria by **Shri Radha Mohan Singh** Hon'ble Union Agriculture Minister in F 38/39, Krishi Bhavan, New Delhi (Dr. Krishan Chandra, Director NCOF also seen)

Shri Radha Mohan Singh Hon'ble Union Agriculture Minister visiting a PGS-certified organic food stall

Future policy may focus on:

1. To increase area under Organic farming and PGS-INDIA certification which could be achieved in near future and more than 10 lakh farmers would be registered and certified by March, 2018 as more than 1000 farmers per day are getting registered on an average.

2. To develop and transfer of organic production technologies to farmers which are very much reliable and low cost (like Waste Decomposer which is being given to farmers @ 20/- only and the product is used to mass multiply at farmers level by which, farmer could manage his/her entire crop)
3. Supporting farmers to produce value added produce and direct marketing as there is a benefit of 10-15 % premium price upon PGS-India Green certified produce and a premium of 25-30% upon PGS-India Organic certified produce
4. Providing suitable processing units/ storage technologies and technical knowhow to farmers.
5. Establishing exclusive PGS-INDIA certified marketing and sale centers like departmental stores, super markets and outlets in malls. Further, in order to create market for the PGS-India certified products, Ministry of Agriculture & Farmers Welfare has proposed to start Organic Thali in Railways, Hospitals and in the Mid-day meal programme in schools across the country.
6. Linkage of public and private partnerships in packing, transportation, labeling and marketing of organic produce of farmers
7. Popularizing organic produce through advertisements/news paper/ New channels etc
8. Encouraging and supporting financially for animal husbandry and honey bee keeping
9. Providing more number of training and filed demonstration on organic farming to farmers
10. Establishing organic farming training and organic agribusiness centers in each State (Twelve farmer schools have been started in Allahabad, Uttar Pradesh)
11. Including book chapters in school curriculum about organic farming /traditional /natural farming and its benefits for human being
12. Encourage PGS-INDIA certified products for export by designing a suitable policy.

A New Step in Advocacy for PGS Recognition: Template for Regulations

Joelle Katto-Andrighetto and Cornelia Kirchner

About Author

Joelle Katto-Andrighetto is Organic Policy and Guarantee Manager at IFOAM-Organics International and has been working for IFOAM-Organics International since 2005. She has also worked for FAO in Rome. Joelle is an international expert on the organic guarantee systems, including Participatory Guarantee Systems, as well as on organic policy and regulations and has experience of working with countries in Latin America, Africa, and Asia, advising governments and national organic associations on organic standards, PGS and regulation issues.

Key words: PGS, Template, toolkit

Summary

In the Organic 3.0 paradigm, Participatory Guarantee Systems (PGS) are acknowledged as one of the alternative guarantee methods that should gain importance in order to enable the faster uptake of organic agriculture while upholding trust between producers and consumers. However, the inclusion of PGS into organic regulations remains the main bottleneck to their development, and presents significant technical challenges. IFOAM-Organics International has produced a number of tools such as a regulatory language template to ease the tasks of governments that have decided to progress on the path of PGS support and recognition.

PGS and the challenge of government recognition

Participatory Guarantee Systems (PGS) are locally focused quality assurance systems. They certify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange. PGS represent an alternative to third party certification, especially adapted to local markets and short supply chains.

PGS have undergone a strong development in the past decade, reaching more than 130,000 farmers in 73 countries worldwide. There is increasing recognition of the value of PGS for local organic market developments and sustainable livelihoods, from a variety of actors including NGOs, intergovernmental organizations, governmental development cooperation organizations, and governments.

Nevertheless, in many countries PGS development remains constrained by the fact that the organic regulatory framework does not recognize them as a valid method of organic guarantee. There are also a number of countries in which different governmental entities have different and sometimes conflicting attitudes towards PGS. This can be for example between a central government that does not recognize PGS, and local governments that do recognize and support PGS. Or it can be between two different ministries at the central government level. Usually, the bottleneck lies in the way that the domestic organic regulation is formulated, which often explicitly or implicitly prohibits PGS-verified products to be marketed as "organic".

Addressing PGS in organic regulations: the next challenge of organic policy makers

Under Organic 3.0, the vision of the organic movement for the next phase of organic agriculture development, IFOAM-Organics International recognizes that "a broader uptake of organic agriculture cannot be based on third party certification alone". PGS is acknowledged as one of the alternative guarantee methods that should gain importance in order to enable the faster uptake of organic agriculture while upholding trust between producers and consumers.

But how to adapt organic regulations, so that they may enable desired development? The challenge of regulating PGS is that PGS is by nature bottom-up and that it is highly variable. Government recognition often implies the establishment of prescriptive requirements for what PGS should be like, in order to achieve recognition. A significant number of PGS initiatives have actually been created or consolidated in reaction to the perceived disempowerment of farmers and consumers, following the imposition of a government organic regulation. Such initiatives may be averse to the idea of governments controlling them, and yet a certain level of government control is often the necessary trade-off to obtain official recognition. The dilemma and the challenge of PGS official recognition therefore lies in the delicate balance between legally codifying and controlling PGS on one hand, and on the other hand leaving them the freedom to continue being bottom-up, participatory, democratic and self-governed social processes. There are already a few examples of countries or regions that have achieved an acceptable compromise in the difficult task of achieving this balance. Brazil is the leading example.

A toolkit to facilitate government recognition and approval of PGS

In order to assist countries with the inclusion of PGS in their organic regulations IFOAM – Organics International has developed regulatory language examples that can be adopted by governments. Regulatory language examples related to PGS are part of the larger *Organic Regulation Template for Countries with an Emerging Organic Sector,* one of the tools provided under the Organic Regulation Toolkit for Governments produced by IFOAM - Organics International. The PGS component of the regulation template consists of 3 elements, two of which are separate appendixes:

1) Requirements for the Approval of Participatory Guarantee Systems.

These requirements may be used in private organic schemes, or in organic regulations. The text lays down 11 requirements of what PGS initiatives should do in order to be approved. The requirements aim to achieve the same level of guarantee and credibility as organic third party certification. This is ensured by requirements such as:

- the PGS has to be based on an organic standard (national, regional or a compliant other)
- for each participating farmer an on-site review has to be carried out at least once a year
- consequences for non-compliance are pre-defined and include suspension in case of serious non-compliance

At the same time the requirements are formulated in a way that respects the PGS Basic Elements (participation, shared vision, transparency, trust and horizontality) and Key Features. They are open enough to enable various PGS initiatives to fulfil the requirements in their own locally-adapted ways. For example, one requirement says "Decisions to endorse each producer's certification status are taken by a group (sub-committee) with the appropriate technical experience and includes at least 1 producer representative. The PGS has mechanisms to minimize conflicts of interest and to ensure consistency on the level of the certification decision". Such requirement leaves room for a variety of locally-adapted solutions with regards to the body(ies) taking the certification decision.

2) Procedure for Government Approval and Oversight of Participatory Guarantee Systems.

This appendix outlines the process and procedures to be used for the approval of PGS initiatives by the competent authority starting from the initial application. It describes how governments can establish an oversight of PGS initiative while leaving them enough freedom to adopt their own procedures. The procedure includes for example, requirements about what information and documents the PGS should provide to the competent authority in order to apply for government approval. It also describes the oversight mechanisms that the competent authority applies, e.g. on-site assessment visits with sample assessments of PGS farms. Other aspects covered by the procedure include training requirements for the persons involved in the oversight of PGS, complaints procedures, PGS registration and data management, etc.

3) In addition to these appendixes, the *Organic Regulation Template for Countries with an Emerging Organic Sector* proposes a legal language that is inclusive of PGS in the body of the organic regulation. This includes, for example, the concept of "conformity assessment bodies" (instead of the classical term of "certification bodies") defined as including both third party certification bodies and PGS. This language, as proposed in the template, suggests that third party certification and PGS should be recognized on the same and equivalent level for the purpose of the domestic market. This ensures that, for example, PGS-certified products can be used as certified organic ingredients by third-party certified processors, or that a PGS-certified producer can switch to third party certification (and the other way round) without having to undergo a conversion period.

The publication of those new tools, combined with the permanent availability of technical advice from the IFOAM-Organics International's pool of PGS experts, enables countries to progress on the path of PGS inclusion. In doing so, they will advance Feature 3 of the Organic 3.0 vision: to develop diverse ways to ensure transparency and integrity in organic systems, for the wider uptake of truly sustainable farming systems based on the organic principles.

Participatory Guarantee Systems (PGS) and Local Organic Markets in Mexico: the Role of Consumers

Sonja Kaufmann[1], Christian R. Vogl[2]

About Authors

Sonja Kaufmann, has Master's degree in Organic Farming with Master thesis on PGS in Mexico. Christian R. Vogl, is University professor for Organic Farming and also a certified organic farmer.

Key words: Participatory Guarantee Systems, Mexico, alternative certification, local markets, organic consumers

Summary

In 2015 & 2016 three local organic markets in Mexico that adopted PGS were studied (semi-structured interviews and surveys with n= 60 vendors & n= 61 consumers). This paper presents empirical evidence on the role of consumers in PGS regarding their awareness of, and participation in the PGS. Low levels of consumer awareness and consumer participation in the studied PGS were identified. Nevertheless, consumers showed trust in organic product quality. It is suggested to undertake promotion of PGS among consumers and effective inclusion of consumers as important factor to enhance consumer awareness and consumer participation.

Introduction

PGS is promoted and adopted as alternative to third-party certification for local markets. In the context of "organic 3.0", PGS is suggested as alternative certification scheme and a tool to potentially able to foster the broader uptake of organic agriculture. Participation of producers and consumers is a vital part of certification in PGS and argued to be linked to their trust in the system and important for the system's credibility (Bouagnimbeck 2014, IFOAM 2007, May 2008). Existing publications suggest consumer participation to be a challenge in PGS (Escalona 2009, Gómez 2013, Nelson et al. 2010, Nelson 2012, Sacchi et al. 2015). However, empiric scientific evidence on PGS is very poor. Drawing upon the case of three Mexican PGS initiatives, the objective of this paper is to present evidence on the role of consumers in PGS, more explicitly on their awareness of the PGS, their participation in so called farm visits and their trust in PGS certified organic products.

Material and methods

Data was collected between October 2015 and February 2016 in three Mexican PGS initiatives: the organic market Chapingo, the alternative market Tlaxcala and the alternative

[1] *Division of Organic Farming, University of Natural Resources and Life Sciences Vienna, Gregor-Mendel-Str. 33, A-1180 Vienna, Austria. https://www.researchgate.net/profile/Sonja_Kaufmann; Email: kaufmann_sonja@hotmail.com

[2] Division of Organic Farming, University of Natural Resources and Life Sciences Vienna, Gregor-Mendel-Str. 33, A-1180 Vienna, Austria. https://www.researchgate.net/profile/Christian_Reinhard_Vogl; Email: christian.vogl@boku.ac.at

market "El Pochote Xochimilco". Surveys were conducted with 60 vendors[3] and 61 consumers. Convenience sampling was applied. Questionnaires were based on the IFOAM PGS framework and studies on Mexican PGS (Escalona 2009, Gómez 2013, Nelson 2012). Qualitative interviews were conducted with key informants[4]. Qualitative data was processed using deductive coding and content analysis and survey data analysed with SPSS. Differences between the three sub-samples (A, B, C) and associations between variables were tested using Chi-square test, Mann-Whitney-U test and Kruskal-Wallis-test, applying a significance level of 5%.

Results

Consumer profile

Across markets more than 40% of consumers surveyed attended the market every week, almost two thirds at least once every two weeks (Table 1).

Table 1: Consumer profile - sex, mean age, education, time market has been attended for and frequency of market attendance of consumer survey respondents at the markets in Chapingo (A), Tlaxcala (B) and Oaxaca (C)(n per case A/B/C/total = 21/19/21/61, f=response frequency per item, 100%=f per case for respective item)

Survey item	Market			
	A	B	C	f
Sex				*21/17/21*
female	52%	42%	48%	
male	48%	58%	52%	
Age [mean]	51.05	47.53	37.95	*21/17/21*
Highest level of formal education completed				*21/17/21*
University, master or doctoral degree	72%	47%	91%	
High school	14%	42%	5%	
Secondary or primary school, other	14%	5%	5%	
Years market has been attended for [mean]	4.9	3.5	3.8	*19/18/21*
Frequency of market attendance				*21/19/21*
Every week	43%	42%	43%	
3 times a month or every 2 weeks	24%	32%	19%	
< Every 2 weeks	33%	26%	38%	

The certification process in all three markets was based on local certification committees. In Chapingo (A) and Tlaxcala (B), participation of consumers in the certification committees was aimed for but not practiced. Consumers were invited to farm visits carried out as part of the certification process and occasionally had participated. In Oaxaca (C), consumer participation was not intended.

[3] Producers, processors, intermediaries selling products at the market

[4] Market vendors in key positions of the market and PGS organization

Consumers' awareness of the PGS

Of all consumers surveyed (n=61), 24.6% (f=15) had heard about PGS, with statistically significant differences between market A and market C (Figure 1; Chi-square test $\chi 2 = 6.035$, df=1, p=0.014; phi=-0.379, p=0.014; n=42).

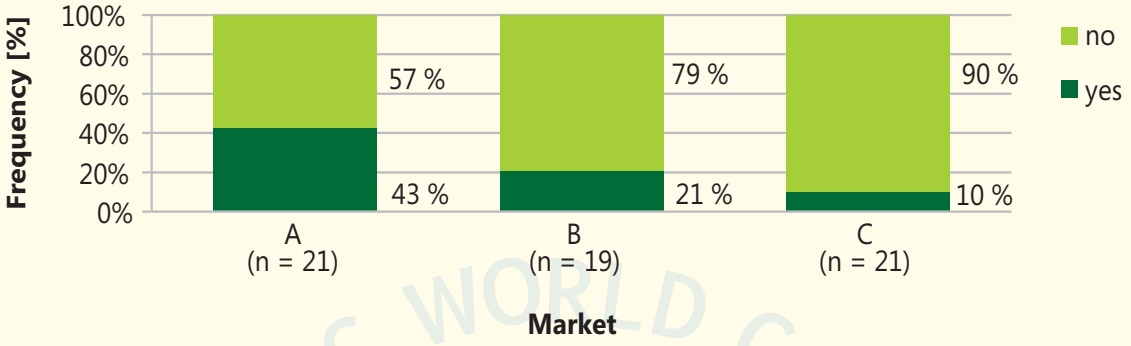


Figure 1: Consumers' PGS awareness at the markets in Chapingo (A), Tlaxcala (B) and Oaxaca (C) (n = 61,100 % = n per case; yes = respondent is aware of PGS operating at the market, no = not aware)

Consumers' participation in the PGS

Five percent (f=3) of the total sample and 20% of those consumers who had heard about PGS (f=15) had participated in so called farm visits that were organized by the PGS to verify compliance with standards. Reasons indicated for not participating in these farm visits, were that consumers did not know that they could participate (33%), a lack of transport (25%), far distances to their place of residence (17%), lack of time (8%) and a perceived lack of knowledge (8%) (n=61, question not applicable for 49 respondents, 100%=12, single response option).

In total, 82% (f=50) of respondents had never heard about PGS or had heard about PGS but did not know that they could participate in farm visits. Of those respondents who had heard about PGS (f=15), 80%(f=12) reported to be interested to participate in the future.

Vendor survey participants were asked to rank different actor groups corresponding to the importance of their participation in the certification process. Participation of consumers was considered important, with differences between markets (Table 2).

Table 2: Mean ranking of actor groups corresponding to the importance of their participation in the certification process for it to function properly, indicated by vendors surveyed at the markets in Chapingo (A), Tlaxcala (B) and Oaxaca (C) (n per case A / B / C / total = 22 / 15 / 23 / 60; rank 5=most important actor, 1=least important actor)

Market Actor group	Emic Perceived importance			Statistical Tests
	A mean rank	B mean rank	C mean rank	
Producers of the market	4.14	3	3.83	Kruskal-Wallis ($\chi 2$=9.471,p=0.009, n=58) Mann-Whitney-U A&B (U=59, p=0.001, n=35)
Consumers	3.67	4.71	4.13	Kruskal-Wallis ($\chi 2$=13.037, p=0.001, n=58) Mann-Whitney-U A&B (U=48.5, p=0.000, n=35)

Market Actor group	Emic Perceived importance			Statistical Tests
	A mean rank	B mean rank	C mean rank	
Actors from university	3.95	3.43	3.50	Kruskal-Wallis ($\chi2=2.642$, $p=0.269$, $n=56$)
Actors from NGO or similar	2.11	2.92	2.59	Kruskal-Wallis ($\chi2=5.505$, $p=0.062$, $n=53$)

Consumers' trust in organic quality of organic products sold at the market

Respondents showed high levels of trust in the organic quality of organic products sold at the market with no statistically significant differences between the three cases (Figure 2; Kruskal-Wallis test: $\chi2=1.182$, $p=0.559$, $n=61$, 1 missing value).

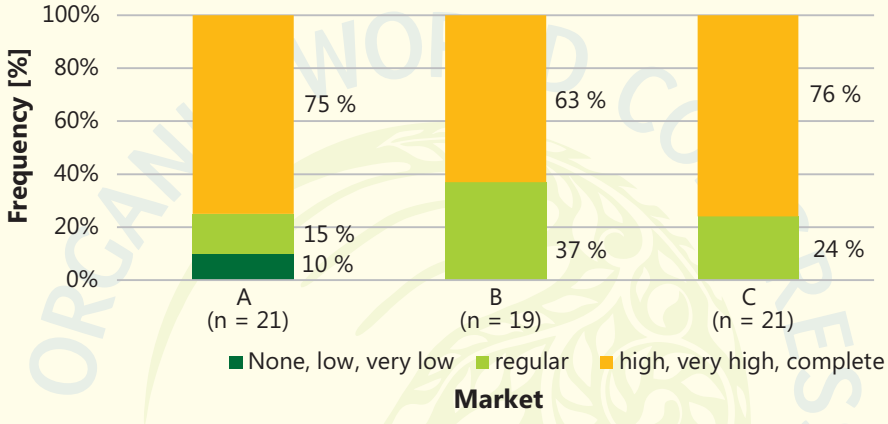


Figure 2: Consumers' trust in organic quality of organic products sold at the markets in Chapingo (A), Tlaxcala (B) and Oaxaca (C) (n = 61, 1 missing value, 100 % per case A / B / C = 20 / 19 / 21)

No statistically significant difference between those respondents who were aware of the PGS and those who were not, could be identified regarding their trust in the organic quality of organic products sold at the market (Mann-Whitney-U test: $U=324$, $p=0.815$, $n=61$, 1 missing value). The importance of certification at the marketplace to formally support their trust in producers was evaluated to be high (mean per case A / B / C = 4.57 / 4.16 / 4.14, median per case A / B / C = 5 / 4 / 4; 4=high importance on ordinal scale 0-5).

Core message and conclusion

Consumer participation is promoted as fundamental part of PGS and important to create credibility of the production quality. Consumers were considered the most important actor to participate in the certification process to function properly by vendors in two of three markets studied. Findings confirm a low level of consumer participation reported in prior studies and suggest a lack of awareness as hindering factor and further promotion of the PGS to consumers as important for fostering consumer participation. Although respondents showed trust in organic product quality and levels of trust did not differ significantly for those consumers who were aware of the PGS, raising consumer awareness may have the potential to still increase their trust. Raising consumer awareness and knowledge on PGS could influence consumers' purchasing behaviour and increase their likeliness to buy PGS products as well. The following measures to tackle the lack of consumer awareness and participation may be

suggested based on presented findings: supply of information material (leaflets, posters) & promotion of the PGS by vendors; clearly visible mechanisms to mark products or stands & active communication of these mechanisms to consumers; activities and informational events for consumers at the marketplace; visits to production units for consumers apart from farm visits organized to verify compliance with standards.

Acknowledgements The authors would like to thank vendor and consumer survey participants and acknowledge Rita Schwentesius Rindermann and her team from CIIDRI, Chapingo University, without whom research presented, would not have been possible.

References

- Bouagnimbeck H (2014): Global comparative study on interactions between social processes and participatory guarantee systems. A best practice study for learning and development with case studies from Africa, Asia, Europe and Latin America. International Federation of Organic Agriculture Movement (IFOAM), Germany.
- Escalona MA (2009): Los tianguisy mercados locales de alimentos ecológicos en México: supapel en el consumo, la producción y la conservación de la biodiversidad y cultura. Doctoral Thesis. Universidad de Córdoba.
- Gómez AM (2013): Mercados locales de productos orgânicos a partir de sistemas participativos de garantía, zona Centro estado de Veracruz. Master thesis. Colegio de Postgraduados Montecillo.
- IFOAM (2007): Participatory Guarantee Systems: Shared Vision, Shared Ideals. International Federation of Organic Agriculture Movement (IFOAM), Germany, https://www.ifoam.bio/sites/default/files/page/files/ifoam_pgs_web.pdf (02.02.2017).
- May C (2008): PGS Guidelines - How Participatory Guarantee Systems can develop and function. International Federation of Organic Agriculture Movement (IFOAM), Germany.
- Nelson E (2012): Re-imagining Food Systems in Mexico: A Case Study from the Network of Local Organic Markets. Doctoral Thesis. University of Guelph.
- Nelson E, Gómez Tovar L, Schwentesius Rindermann R& Gómez Cruz MA (2010): Participatory organic certification in Mexico: an alternative approach to maintaining the integrity of the organic label. Agriculture and Human Values 27, 227-237.
- Sacchi G, Caputo V & Nayga R (2015): Alternative Labeling Programs and Purchasing Behavior toward Organic Foods: The Case of the Participatory Guarantee Systems in Brazil. Sustainability, 7, 7397-7416.

Participatory Guarantee Systems: Comparative Analysis of 4 Country Cases and Potential for Other Quality Systems

Patricia Flores[1]

About Author

Patricia Flores is an organic advocate and IFOAM Organics International regional representative for Latin America & the Caribbean and an organic leader of the organic movement shaping and disseminating key messages for organic & sustainable agriculture as a tool to overcome poverty and hunger in rural areas and mountain ecosystems. Currently, Patricia is Country Coordinator of "Nutrition in Mountain Agro-ecosystems", an SDC – GPFS funded Project aiming capacity development and networking of Rural Service Providers of Pakistan, Kyrgyztan, Nepal, Ethiopia and Peru, and advocacy for public policies, to improve nutritional status of vulnerable population with a Nutrition Sensitive Agriculture approach based on organic and traditional agricultural systems.

Key words: PGS, organic, BPA, sustainable food systems

Summary

Although Participatory Guarantee Systems have been developed from the very beginning of the organic movement, it is only in the last 15 years that it has gained notoriety due to the implementation of regulatory systems complying ISO 17065 requisites. PGS schemes are giving practical solutions for organic smallholders to better articulate to emerging organic domestic markets in developing countries, but it is more than a marketing tool, it is a social process where knowledge building and sharing are pillars of the system. Moreover, PGS approach can be applied for other quality schemes such as BPA, reduced use of pesticides agriculture (RUPA) or collective marks. PGS can and should be regarded as a promotion tool to increase sustainability in agricultural food system. The paper brings some recommendations to encourage the application of PGS approach to other quality schemes in food production.

Introduction

The objectives of the paper are:

i. to bring elements for PGS recognition in developing countries at the decision-making level based on the pros and cons of countries with PGS regulated by the competent authority.

ii. to start the discussion of PGS in other desirable qualities in food production to increase sustainability while decreasing the use of agrochemicals, specially pesticides.

Four countries were identified to make a comparison analysis on how each of them developed a system with which PGS are recognized as a valid mechanism for organic quality compliance:

[1] Representante Regional America Latina y el Caribe, Email - p.flores@ifoam.bio

Mexico, Brazil, Peru and Chile. They are important economies in the region (Latin America), three are top countries in terms of number of organic farmers and organic land, and all of them have recognized PGS except for Peru. PGS share common values and vision, and although keeping differences among the systems, they all are complying their national organic regulation. Besides, there is the need to move towards a more sustainable food system in conventional agriculture. Reduction of pesticide use is a must in countries where farmers are increasing its use in amount and toxicity, turning to be a serious matter of public health. PGS can also be applied for collective marks or seals of farmers' associations.

Table 1 Comparison between Third Party Certification and PGS

Third Party Certification	Participatory Guarantee System
National organic regulation compliance	National organic regulation compliance
Based on ISO17065 requisites	Based on social processes
Addressed to long supply chains	Addressed to short supply chains
Mainly for international markets	Mainly for domestic markets
Advisory not allowed	Learning process
Qualified technical staff with proven competences (accredited)	Participants with experience in continuous learning process
High level of documentation	Reduced documentation
Annual inspection	Annual inspection, periodical peer review, open farm policy
Group certification does not give individual certificates	The certificate is always individual even belonging to a group
Is a single system	Similar structures with space for adaptation
Values	
Independence	Participation
Confidentiality	Transparency
Objectives	
Impartiality	
Organic integrity	

Third Party Certification and PGS

Third party guarantee systems comply ISO17065. The key concept in ISO17065 is independence and confidentiality; while the key concept in PGS is participation and transparency. Two different approaches, but eventually both share the same objective of impartiality and organic integrity.

Third Party Certification Challenges:

1. Based on a single annual inspection short visit, it focuses on documentation review, which is not enough to detect non-conformities that can happen along the year.
2. Confidentiality requisites are a barrier for consumers and other stakeholders to access information about the conformity of certified operators.
3. Unaffordable costs for most smallholders and small groups of producers supplying local markets.

PGS Challenges:

1. Applied in long supply chains, traceability could be in risk as the social process has a limited outreach.
2. Farmers organizations do not necessarily have a permanent advisory service to give advice on organic production for smallholders.
3. Several experiences have been dependent on external resources and require to strengthen their system to be self-sustained.

Conclusions

Both systems have strength but are also vulnerable for completely different reasons. Studies carried out show that PGS can be a better option for smallholders as they can express their problems to be resolved through a collective intelligence. PGS encourages continuous improvement due to social control among producers.

Benefits of an inclusive guarantee system: a) Registration of organic operators to build a robust data for technical and political decisions in favour of the sector and movement. b) The possibility to choose the system that better suits for each reality. c) Is an opportunity for organic market development positioning the country mark of native products.

Comparative analysis of 4 countries:

Latin America is the epicenter of the PGS movement. For more than 15 years in different countries, different processes started to develop. This and countries of the Pacific Alliance (Mexico, Peru and Chile) and Brazil, recognize PGS except for Peru.

Aspect	Brazil	Mexico	Chile	Peru
Organizations recognized as PGS in regulation	Participatory organism of conformity assessment (OPAC)	Recognized organism by SAGARPA to apply a participatory certification.	Self-certification system audited by SAG	Participatory Guarantee System (no official recognition)
Organic operators (certified by)	5,713 CBs 3,847 PGS 3,535 SCO	169,703 CBs 1,692 PGS	643 CBs	97,016 CBs 2,214 PGS
Certifiers	8 CBs 18 PGS 279 SCO	9 CBs 1 PGS	5 CBs 7 PGS	6 CBs 9 PGS
National seal	Yes PGS & CBs	Yes	Yes	No

Aspect	Brazil	Mexico	Chile	Peru
Smallholders inclusion	High	High	High	None
Law enforcement	Yes	Yes	Yes	No
Competent authority	COAGRE-MAPA	SENASICA	SAG	SENASA
Information access	website	No	website	No

- CB. Certification Body (third party certifier)
- SCO. Social Control Organization
- Figures information source: competent authorities reports of COAGRE, SENASICA, SAG and SENASA (web pages).

Conclusions

Peru having more organic area and a significant number of organic operators but lagging behind compared with other countries. Brazil has a much more balanced distribution of organic operators for the three different systems recognized in the Brazilian organic regulation. This is aligned with the fact that the Brazilian domestic market is as important as the international market due to a very well developed domestic market since the 70s and also because of inclusive public policies for family farmers in governmental programs. In Mexico, there is a single PGS but with presence in several regions not only for the market opportunity but also as a learning and advocacy opportunity. Peru and Mexico have a high number of organic farmers organized in cooperatives and associations, exporting a wide variety of products mainly coffee, banana, cacao and Andean grains. Recognition of PGS by competent authorities has encouraged the development and strengthening of farmers' organizations addressing local organic markets.

Other schemes in agriculture where PGS can be applied:

a. **BPA (Best Practices in Agriculture) and Organic.** There is not a single organic standard and there are also several BPA guidelines. The certification process consists in both cases in complying with a set of requisites to be checked via documentation, inspection visits, laboratory analysis, among the main ones. In general, the organic standard has its main strength in environmental aspects and forbidden inputs, while BPA is focused in management aspects of the production unit such as pesticides use, crop management, residues management, labour health, etc.

b. **Comparative table BPA and Organic**

BPA	Organic
Voluntary; international trade is increasingly demanding it including organic certified products.	Compulsory for international and national markets.
Governmental: Guidelines	Governmental: Technical Regulation
Private standard: GLOBALG.A.P. for exports	Private standards: certifiers and organic producer´s associations.
Can be specific or general.	General with some specifications for relevant commercial crops.

BPA	Organic
Emphasis in management requisites, security, food safety in all steps.	Emphasis in environmental requisites
No forbidden substances for its origin or composition as long as they are approved by the competent authority.	Forbidden application of technologies and substances that are not of organic origin.
Verification process allows recommendations.	Third party certification process does not allow recommendations.

c. **RUPA** (Reduced Use of Pesticides Agriculture) is already an identified priority with national authorities in Peru. The increasing use of highly toxic inputs in food production is a major concern in public health (agricultural workers, rural families in agricultural areas and consumers). In Peru, the national authority (DGA-MINAGRI) has identified Chillon valley (Province of Lima) to start a pilot program of RUPA based on a PGS approach. BPA is in most cases unviable to apply in smallholders supplying domestic markets and the limited action of the governmental services cannot guarantee an effective result. While the main objective is to reduce the use of pesticides, the system will also help to monitor microbiological aspects according to food safety measures. The protocol is being developed with the advisory of the Peruvian organic movement and PGS specialists. It is not expected to develop a participatory BPA but almost close to it, a participatory RUPA recognized by the national authority.

Conclusions

PGS methodology and approach is a useful tool to be applied to other protocols and schemes for quality assurance. Though developed for organic production, it is perfectly adaptable to other qualities aiming sustainability in food production (such as low external input sustainable agriculture, reduced use of pesticides agriculture, food safety, and many other voluntary sustainable seals).

References

- Bouagnimbeck, Hervé (2014): Global comparative study on interactions between social processes and participatory guarantee systems. A best practice study for learning and development with case studies of Africa, Asia, Europe and Latin America. IFOAM¬ – Organics International, Bonn.
- Willer, Helga and Julia Lernoud (Eds.) (2016): The World of Organic Agriculture. Statistics and Emerging Trends 2016. Research Institute of Organic Agriculture (FiBL), Frick, and IFOAM – Organics International, Bonn
- SENASA (2016): Estadísticas de la producción orgánica en Perú. Lima, Perú.

Consumer and Producer Participation in Participatory Guarantee Systems in Antioquia, Risaralda and Valle del Cauca (Colombia)

Benjamin J. Waltner[1], Christian R. Vogl

Authors Background

B. J. Waltner, graduate student from University of Natural Resources and Life Sciences Vienna (BOKU), Austria. C. R. Vogl, professor for organic farming at the Division of Organic Farming and deputy head of the Department of Sustainable Agricultural Systems at BOKU.

Key words: PGS, Colombia, Consumer, Trust, Producer, Satisfaction

Summary

Participatory Guarantee Systems (PGS) have evolved as an alternative to third party certification (TPC). In 2014 three PGS in the departments of Antioquia, Risaralda and Valle del Cauca (Colombia) were studied. The aim of this work was to characterize PGSs, including the role of consumers and producers. This was accomplished by a mixed methods approach. Consumers trusted in the organic quality of PGS certified products and producers were satisfied with the implementation of the PGS across the three cases. Nevertheless, for example challenges like obstacles with paperwork must be addressed in order to foster PGS as a trustable alternative to TPC. Further research is required to investigate the relation between so called consumer's "farm visits" and their possible influence in the consumer's trust.

Introduction

The organic certification system based in standards and regulations helped to establish a global organic market (Willer and Lernoud 2016). The current gold standard in organic agriculture is said to be third party certification (TPC). However, there exist criticisms about TPC such as the high cost and the separation of certification and extension services (Mutersbaugh 2005; Veldstra et al. 2014). Participatory Guarantee Systems (PGS) are claimed to be an alternative to traditional TPC of organic farming (D'Amico and Castro 2016). In the late 2000s PGS started to evolve in Colombia (Suárez Rendón 2013). PGS are confronted with criticisms such as low participation of consumers or producers and difficulties with "bureaucracy" (D'Amico and Castro 2016; Nelson et al. 2010). In this research authors characterize three PGS in Colombia, which shed light on the role of consumers and producers.

Material and methods

In 2014 in the departments of Antioquia, Risaralda and Valle del Cauca (Colombia) surveys (n = 61 consumers and n = 25 producers) and semi structured key informant interviews (n = 6) were conducted. Participant observation during farm visits, on markets, during meetings

[1] University of Natural Resources and Life Sciences, Vienna, Austria, www.boku.ac.at, b.waltner@students.boku.ac.at

and events were recorded. Qualitative interviews were recorded with an audio recorder, which was later transcribed and coded. Surveys were entered into Excel and analysed with IBM SPSS Statistics 23 (Table 1).

Likert items (in consumer and producer surveys), due to their ordinal nature, were analysed by the median (Mdn) and the interquartile range (IQR) (Subedi 2016). To explore the possible differences between the (nominal and ordinal) variables, Chi-squared test and Fisher's exact test were applied when the assumption for the chi-square test was violated. In the case of significant differences (at the 5% lvl), post hoc cell-wise tests, based in the adjusted residuals, were done to check which groups differed significantly (García Pérez and Núñez Antón 2003).

Table 1: Data sources. The numbers in the brackets indicate the number of sources (n) of that type per case. Total n = 111 (n per case Antioquia/Risaralda/Valle del Cauca: 42/29/40).

Data type	Consumers	Producers	Key informants	Farm visits	Markets	Meetings and Events
Semi-structured Interviews	5 (5/0/0)	8 (8/0/0)	6 (4/1/1)			
Surveys	61 (20/17/24)	25 (8/8/9)				
Participant Observation				5 (2/1/2)	4 (1/1/2)	5 (2/1/2)
Documents	Internal regulations & documentation of the PGS					

Consumers Awareness, Participation and Trust

Twelve consumers (19.7%) reported to have heard about the PGS, 49 (80.3%) had not heard about it. Low awareness about the term PGS was observed across the three cases. The difference in consumer awareness about the PGS between the regions was not significant (pFisher = 0.169). From the group of consumers that answered to have heard about PGS, nobody had participated as an "inspector" during farm visits or in a PGS committee.

Forty-eight percent of the consumers participated in consumers' farm visits and 52% did not. The difference in farm visits between the cases was not significant (p_{x^2} = 0.397). The quantity of farm visits was different between the cases (p_{fisher} = 0.028*). Four consumers of the Antioquia PGS reported that they visited farms more than 5 times (z = 2.857, p = 0.051); in the other two no one visited farms that often. Across the three cases consumers trusted that the products were really organic (Mdn=4, IQR=1). The region had no significant influence in the trust level reported by the consumers (pfisher = 0.190).

Sex showed to have a significant relation to the level of trust (p_{x^2} = 0.036*), women being under-represented in the low to medium trust category (z = -2.594, p = 0.058), while men being over-represented (z = 2.549, p = 0.058). Only one woman (CONC12) reported medium trust in the organic quality of the products. No woman reported low trust.

Consumer's farm visits tended to have an influence to the reported trust level (p_{x^2} = 0.095), with a tendency that consumers who had visited a farm of the producers were less likely to report low to medium trust.

Producers – Farm visits, satisfaction, and paperwork

A crucial part of all three PGSs are so called farm visits. The reported reasons why they are so important and why they are conducted in the first place are manifold. Producer's farm visits are important, "in terms of training, to see how others (producers) are working" (citing interviewee PRODA06), and then there are farm visits in terms of certification (KI6), they are "especially important when there are rumours about fraud" (PRODC05).

Forty-eight percent of the producers participated in producer's farm visits to certify the farm of other producers. There was no difference across the cases if producers visited a farm for certification or not (pfisher = 0.286). 16.7% of those that visited farms, reported that they visited 1-2 times, 41.7 % reported that they visited 3-5 times; and another 41.7 % more than 5 times.

Ninety-two percent of the producers participated in producer's farm visits, visiting other farms of other producers in terms of training. Most producers indicated strong agreement to the statement that the PGS facilitated farm visits to farms of other producers in terms of training (Mdn=5, IQR=1).

Producers were very satisfied with the implementation of the PGS (Mdn=5, IQR=3). The differences across the regions were not significant (p_{fisher} = 0.111).

One producer noted positive aspects of the PGS as "a method to create trust for the consumers, by the stamp", and as an alternative to TPC, because it was not as expensive (PROB05). Another stated that the PGS was a "great strategy to facilitate rural development, taking care of the environment and producing healthy (products)" (PROA02). Despite the overall high satisfaction, some producers were not content. Producers emphasized that they "needed help for commercialization" (PROA08) and that "consumers bought the products because they were very cheap and they still bargained for lower prizes" (PROC02). Another producer stated that the "PGS started out well but later it became very disorganized". He expressed the feeling that "the coordinators abandoned the market" and that "since six months the PGS was quiet". On the other hand, he emphasized "the greatest treasure (of the PGS) was that people connected with each other" (PROB07).

Most respondents indicated disagreement to the statement that it was very easy for them to keep the paperwork up to date to comply with the rules of the PGS (Mdn=2, IQR=1). The level of agreement with the statement did not differ significantly across the regions (p_{fisher} = 0.559). Not a single producer had the opinion that it was very easy for him/her to keep the paperwork up to date. The responses to this challenge were similarly distributed across the regions (p_{fisher} = 1.000). During farm visits in the Antioquia PGS we observed that at least

two producers struggled keeping their documentation up to date. During the questionnaire, producers reported that this would be the biggest problem they encounter in the PGS (PROC03), and that there are producers that can't read or write (PROC02). One farmer from Risaralda reported that documenting was not obligatory; it was just a recommendation (PROB08). Two farmers from Valle del Cauca reported that they still have not recorded their data (PROC07 and PROC08).

Core messages and conclusions

According to consumers and producers, PGS in Colombia is a success story. Consumers trusted in the organic quality of PGS certified products, and producers were satisfied with the implementation of the PGS across the cases. Results suggest that consumer's farm visits tend to have a relation to the reported consumer trust. Further research is required to investigate the relation between consumer's farm visits and their possible influence in the consumer's trust. Nevertheless, challenges, like obstacles with paperwork, must be addressed in order to foster PGS as a trustable alternative to TPC.

Acknowledgements

The authors would like to thank Asociación Red Colombiana de Agricultura Biológica (RECAB), Universidad Tecnológica de Pereira (UTP), and Red de Mercados Campesinos Agroecológicos del Valle del Cauca. We also want to thank the Center for International Relations of BOKU university for the financial support. We are also grateful to the producers and consumers who were supporting our research with their answers.

References

- D'Amico, S., Castro, F., 2016. Overview of Participatory Guarantee Systems in 2015, in: Willer, H. Lernoud, J. (Eds.), The World of Organic Agriculture. Statistics and Emerging Trends 2016. Research Institute of Organic Agriculture (FiBL), and International Federation of Organic Agriculture Movements (IFOAM), Frick, Switzerland & Bonn, Germany, pp. 147–151.
- García Pérez, M. & Núñez Antón, V., 2003. Cellwise Residual Analysis in Two-Way Contingency Tables. Educational and Psychological Measurement 63, 825-839.
- Mutersbaugh, T., 2005. Fighting standards with standards: Harmonization, rents, and social acountability in certified agrofood networks. Environment and Planning A 37, 2033–2051.
- Nelson, E., Tovar Gómez, L., Schwentesius Rindermann, R., Cruz Gómez, M.Á., 2010. Participatory organic certification in Mexico: An alternative approach to maintaining the integrity of the organic label. Agriculture and Human Values 27, 227–237.

- Suárez Rendón, G., 2013. Red de Mercados Agroecológicos Campesinos Valle del Cauca "Alimentos de Vida" - Colombia. Experiencia de un SPG en el desarrollo y consolidación de mercados locales, in: Sistemas Participativos de Garantía - Estudios de Caso En América Latina. International Federation of Organic Agriculture Movements (IFOAM), Bonn, Germany, pp. 9–20.
- Subedi, B.P., 2016. Using Likert Type Data in Social Science Research: Confusion, Issues and Challenges. International Journal of Contemporary Applied Sciences 3, 2308–1365.
- Veldstra, M., Alexander, E. & Marshall, M., 2014.To certify or not to certify? Separating the organic production and certification decisions. Food Policy 49, 429-436.
- Willer, H., Lernoud, J., 2016. The World of Organic Agriculture 2016: Summary, in: Willer, H., Lernoud, J. (Eds.), The World of Organic Agriculture 2016: Statistics and Emerging Trends. Research Institute of Organic Agriculture (FiBL), and International Federation of Organic Agriculture Movements (IFOAM), Frick, Switzerland & Bonn, Germany, pp. 24–32.

The PGS and Small Organic Agribusiness

Ryoichi Komiya[1] and Takiko Komiya

About Authors

Ryoichi Komiya is an Adjunct Professor to Lee Kong Chian Faculty of Engineering and Science at University Tunku Abdul Rahman and supervises Ph.D. candidates remotely by Skype from Japan. He started the organic farming from 2014 and joined Organic Shizukuishi PGS Group in 2015.

Key words: JAS, IFOAM PGS, Organic Shizukuishi, Organic product value chain GS, Colombia, Consumer, Trust, Producer, Satisfaction

Summary

The Japan, is having the IFOAM sister organic products' growing standard, JAS [Japanese Agriculture Standard for Organic Plants]. However, the population of JAS certified producers have not increased because of its application cost and demanding documentation. To improve this situation, authors have started introducing Participatory Guarantee System (PGS) in Organic Shizukuishi. Authors are also in contact with IFOAM PGS team to build and establish PGS since last year. This paper describes the authors' activities to try to develop PGS and get IFOAM PGS recognition as a first step to form an organic group in the country. Authors' value chain of organic farm is also discussed.

Introduction

Authors belong to a small Participatory Guarantee System (PGS) in Japan called the Organic Shizukuishi. The Organic Shizukuishi (OS) was formed in February, 2015 with seven consumers and seven producers. In September 2015 it became a member of IFOAM. Since then, it has developed seven important documents. They are; [1] PGS Operation Principles, [2] PGS Organic Plant Growing Principles, [3] PGS Application Form, [4] PGS Field Inspection Form, [5] PGS Grower's Pledge, [6] PGS Member Certificate and [7] Use of the IFOAM PGS Logo and the Organic Shizukuishi Logo. The details of these documents are listed in the website (see the first Reference). Now, four farmers have been recognized as organic producers after necessary field inspection by the PGS inspection team in July, 2016. In this paper, authors discuss the necessity of PGS in Japan to increase organic plant producers and to facilitate small agribusiness for organic foods and the importance of obtaining IFOAM PGS recognition.

Why the IFOAM Recognized PGS Initiative in Japan?

The Japan, has IFOAM sister organic products growing standard, JAS. Implementation of the Standard has been effective since 2000. However, only 4,000 farmers have been certified by JAS. The cultivated acreage of the JAS certified organic farms is 9,000 ha, which represents only

[1] Ihatove Farm, Iwate Prefecture, Japan, e-mail: Komiya@navy.plala.or.jp

0.2% of the total cultivated acreage [total cultivated acreage: 4,610,000ha] as shown in Tables 1 and 2. To understand the background of the low JAS certified acreage percentage, let us see the non-JAS-certified organic producers' views in Table III. From Table III, it is understood that the critical reasons for organic producers not applying for a JAS certificate are coming from the high cost of certification and laborious documentations. The Organic Shizukuishi has understood that the PGS can solve the problems.

Table 1 Organic/Conventional farm acreage in Japan (2009)

Organic farm acreage	Total cultivated acreage including the conventional farming
JAS certified: 9,000 ha (0.2%) Non-JAS certified: 7,000 ha (0.15%)	4,610,000 ha

Table 2 World Organic Farm Acreage Comparison (IFOAM 2013)

Country	Organic farm acreage ratio over the entire farm acreage	Country	Organic farm acreage ratio over the entire farm acreage
Italy	10.3 %	Korea	1.1 %
Germany	6.4 %	China	0.4 %
France	3.9 %	Japan	0.2 % (JAS certified cultivated acreage)

Table 3 Non-JAS Certified Organic Producers' Views of JAS

Views of JAS certificate		Producers' answers* to the withdrawing from or not to apply to JAS	
Withdrawn from JAS	7 %	High certification cost	93
Intending to get JAS certificate	11 %	Troublesome application documents	90
Applied now	1 %	Already have customers	47
Not to apply	74 %	No certificate is required	46
others	6 %	No points	39
No replies	1 %	Small acreage	33
		Already have customers' trust	31
		Lack of trust in JAS	28
		Too old to apply	17
		Others	98

**: Multiple answers allowed up to three (Total number of answers: 522)*

Actions taken by Organic Shizukuishi to be an IFOAM Recognized PGS Initiative

Authors first studied the IFOAM PGS model to understand the differences between PGS and JAS (third party certificate) as summarized in Table 4. From the table, JAS application and inspection fees are three times higher than those of PGS. And besides, the number of document pages of JAS is 2.3 times more than PGS. More importantly it was the mutual learning that was

the key elements and key feature of PGS at Organic Shizukuishi. Then, documentation was created which enabled the PGS to be compared internationally by exchanging knowledge with the IFOAM people in Bonn, via e-mails. Finally, at the beginning of the year of 2016, OS put together PGS specific principle documentations in [1] and [2] above. In document [1] "PGS Operation Principles", following items are covered: (a) Members, Annual fees, Organization operation, (b) Procedures to get PGS certificate and (c) Compliance.

Table 4 Comparison between the JAS and the Organic Shizukuishi PGS

Items to be compared		JAS	Organic Shizukuishi PGS
Certifying organization		Third party organization registered by the Ministry of Agriculture, Forestry and Fishery	Organic Shizukuishi Office (see the second Reference)
Producer(s) to be certified		Per individual farm	Per PGS Group [four organic producers are included]
Plant growing standard		Japanese Agriculture Standard for Organic Plants [JAS]	JAS and Organic Shizukuishi PGS plant growing principles
Expenses (yen)	Total amount to be paid/producer	220,000 (first year) From the second year, 50,000 yen less	7,500
Number of pages of document		Application form: 23 + appendix (if required) Field inspection form: 16	Application form: 11 Field inspection form: 6

In document [2] "PGS Organic Plant Growing Principle", the items described clearly are: (a) JAS, (b) Soil Management, (c) Plant Management, (d) Water Management, (e) Management of ecosystem, (f) Pest and Disease Management, (g) Pollution and contaminant control, (h) Harvesting and packaging, (i) Cleaning, disinfecting and sanitation, (j) Social equity and justice, (k) Documentation and records.

In June, 2016, five of PGS producers submitted the PGS application by filling the application form [3] to the Organic Shizukuishi Office and the producers submitted the PGS Grower's Pledge at the same time. In July, the first Organic Shizukuishi field inspection was carried out by using the PGS Field Inspection form [4]. The inspection was conducted by the inspection team of Organic Shizukuishi. When the producers fulfill the PGS Organic Plant Growing Principles and passed the Field Inspection, they were awarded with an Organic Shizukuishi PGS Membership Certificate. Consequent to the inspection, four out (4) of five (5) producers received the certificate. OS submitted the Participatory Guarantee Systems Self Evaluation Form in September, 2016 to the IFOAM PGS team.

The plant growing standards of Organic Shizukuishi PGS require growers to maintain higher levels of control and assurance of organic production than those of JAS. Therefore, even the small producers can join the PGS and safe organic plant growing can be guaranteed.

Currently there are no IFOAM recognized PGS groups in Japan yet. The IFOAM recognition is important to support the credibility and recognition of PGS. Authors may take a leading role in the promotion of PGS in Japan once they gain it. Consumers demand for organic produce is growing. In addition, the Tokyo Olympic and Paralympic Games will be held in 2020 and during the games at least 20-30% of the foods to be provided to the athletes and the officials should be organic. This admirable practice started with the London Olympic and Paralympic games in 2012. This must be continued to a great extent as was made possible during the Tokyo Olympic and Paralympic Games. This is also an important driving force to boost organic producers in this country.

Authors family efforts to follow the organic initiatives

Authors' farm has been growing organic vegetables and fruits since 2008. In2015 it started processing the vegetables and fruits into jams, pickles and others. These ingredients have been used in cakes, breads and other foodstuff. It sold these foodstuffs at their daughter's bakery shop nearby. The family has got many commendations and comments on these products directly from customers illustrated by the blue dotted line in Figure 1. These are very valuable feedback for the family because every day it encourages to further develop the produce and product processing.

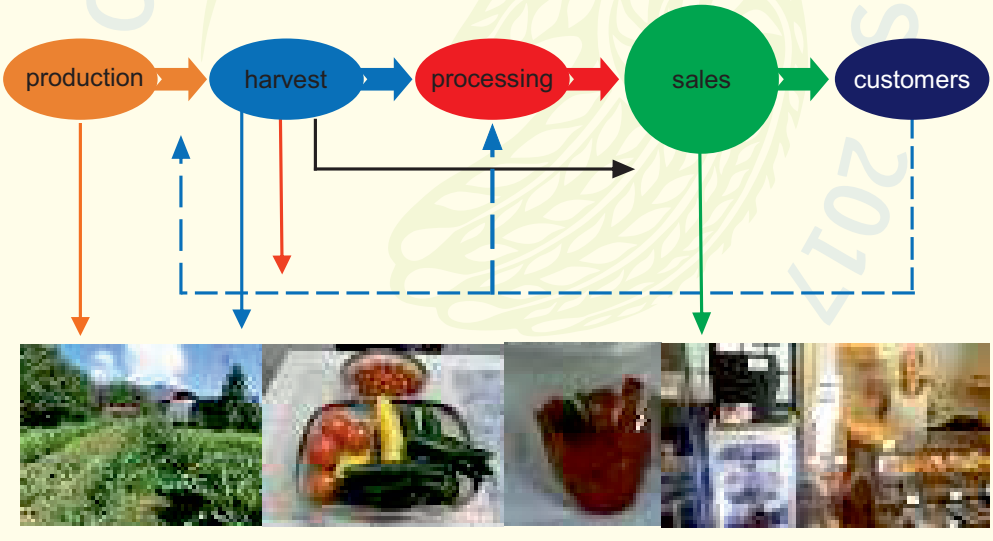


Figure 1 The value chain of organic farm

Organic Products Value Chain

The value chain from family organic farm to customers including processing plants is illustrated in Figure 1. The black lines indicate flows from the producer to customers. The family has a small processing plant on its premises. After the harvest, the products go to the processing plant or are delivered directly to the point of sale. Family has established the value chain successfully, so that all must do is to gather and analyze customers' feedback and reflect their view in its new farming plan, creation of attractive and healthy cakes, bread ingredients and other foodstuff. OS can operate its own organic agribusiness initiatives quickly to meet various requirements of local customers because they are all small and near to customers.

Discussion

The Organic Shizukuishi has started trying to get recognized as a PGS by IFOAM. After succeeding to gain the recognition, authors may make their best effort to support more organic plant producers to get involved in PGS. Authors believe that, these actions will contribute to booting organic farmers and relevant agribusiness in this country.

References

- Organic Shizukuishi website: http://organicshizukuishi.jimdo.com/
- IFOAM Membership E-Directory, 2016 (Organic Shizukuishi is listed on page 74)

Six Years of Experience with Participatory Guarantee Systems (PGS) in Biodynamic Agriculture in Brazil- Challenges and Opportunities

Pedro Jovchelevich[1]

About Authors

Agronomist, master degree (moon rithms in biodynamic horticulture); PhD on biodynamic plant breeding. General Manager of Brazilian Association of Biodynamic Agriculture; Teacher of Brazilian Biodynamic course; member of PGS ABD.

Key words: participatory guarantee systems, biodynamic agriculture, Demeter certification

Summary

In 2010 the Brazilian Association of Biodynamic Agriculture began the PGS with four groups of biodynamic small farmers. It was the first Demeter PGS in the world. After six years there was an increase for seven more groups and increase of farmers in all groups totalling approximately 100 organic producers and four processors. Since 2010 ABD has required as a rule to participate in the PGS that each group had 70% of farmers with biodynamic management, but not with Demeter certification. After this 15 Demeter farmers and 3 processors opted for it and now are in Demeter conversion. The experience accumulated so far has shown that the PGS enables greater participation and awareness of the certification process by the producer. On the other hand it requires greater dedication of the producer in the certification process and not all farmers are willing to become more involved in this process.

Introduction

The aim of this text is to present a reflection of the six years experience of PGS and Biodynamic agriculture in Brazil.

The Brazilian organic law that regulates the commercialization of organic products exists since 2003. In recent years this law gradually became regulated by the Ministry of Agriculture along with the participation of various stakeholders in the filed of organic agriculture. In Brazil there are three options through which organic quality of products is recognized for commercialization: without certification process (direct sales); certification by audit and participatory guarantee systems.

The last two are part of the Brazilian Organic Conformity Evaluation System (SISORG), and are audited and authorized by Brazilian Ministry of Agriculture to operate as a conformity evaluation organism. In direct sales the use of SISORG labels are not allowed.

[1] Brazilian Association of Biodynamic Agriculture , Brazil, site:www.biodinamica.org.br, E-mail:pedro.jov@biodinamica.org.br, address CP 1016, CEP 18600-971,Botucatu-SP

There are functional PGS in all 5 continents. Latin American is the continent with the highest level of PGS development, which includes national legislations. There are many local PGS initiatives and as well as many examples of nation-wide PGS systems. In Brazil, the institution that pioneered the PGS was the Ecovida Network of Agroecology, located in the south of Brazilin the south region of Brazil. The ECOVIDA and the Association of Natural Farming of Campinas, ANC, located in the state of São Paulo were the first PGS in Brazil which were audited and approved by government.

The Brazilian Association of Biodynamic Agriculture, ABD, was created in 1995. Its mission is to foment Biodynamic Agriculture in Brazil. The ABD does research, hold courses, manufacture biodynamic preparations, release publications, offer consulting, produce seeds and support the commercialization of biodynamic products. The ABD promote Biodynamic Agriculture in Brazil for a group of small farmers by offering consultations at no cost with the support of institutional partners.

The Biodynamic Agriculture method was created in 1924 by the philosopher Rudolf Steiner (1861-1925). The basic aspect of the biodynamic method is understanding the farm as an individuality, an organism with its different components (mineral, vegetal, animal, natural resources and human). Its main goals are the fertilization of ground in a long lasting way, the intensification of the biological activity and the modification of soil physical and chemical conditions. To this biological aspect the dynamic aspect must be added, which consists in the use of preparations made with organic and mineral substances whose effects for the earth are similar as the one of the homeopatia for the human body, this configures the base of the method. The specific and original contributions of the biodynamics, also studies the influence of the astronomical cycles on earth and plants and has an specific calendars. Biodynamic Agriculture has its merits, not only in common practices for organic farming, but also on the recognition that the health of the soil, of the world vegetable, animal and human depend on a broader relationship between the forces that stimulate the natural processes. (Koepf, 1983)

Participatory Guarantee Systems (PGS) in biodynamic agriculture in Brazil

In 2010 the ABD began the PGS with four groups of biodynamic small farmers. The first Demeter PGS in the world. These groups had already been holding organic certification by audit as well as market credibility. However these groups have opted for the PGS due to the high costs of the certification system that they had been working with, as well as because they were attracted by the richness of interaction and the experience exchanges amongst farmers which occur in the participatory systems. Producers interested in participating in the PGS must be linked to any group of PGS producers. The new applicant producer must first apply for recognition as a biodynamic / organic farmer by the group to which he belongs. At least 70% of producers in each group must be practicing biodynamic management.

The Participatory Organism of Conformity Evaluation, POCE is the legal guardian of the PGS to the Ministry of Agriculture. In the case of ABD's PGS, the POCE members are composed of

representatives of each regional group and an ABD representative. The POCE organizes all different groups, files their documentation that was generated in the fields, and makes the documentation available for the Ministry of Agriculture audits and monitoring

Each PGS group must elect three members to be part of the evaluation committee, which is responsible for organizing and implementing field visits, and forward documentation to POCE. Each group must appoint a representative of the evaluation committee to be part of the POCE.

Each property registered with POCE must be visited twice a year. The evaluation committee will define the order and frequency of visits. An expert appointed by the POCE must participate at each visit. Consumers are also encouraged to participate in the field visits.

At least quarterly, the group must meet for trainings and technical studies of Brazilian legislation and Demeter standards. After evaluation of the field report, the ABD commission will or not allow the use of the Demeter label on the products sold by biodynamic farmers.

After six years there was an increase for seven more groups and increase of farmers in all groups totalling approximately 100 organic producers and four processors. Since 2010 ABD has required as a rule to participate in the PGS that each group had 70% of farmers with biodynamic management, but not with Demeter certification. After 6 years there are only 15 Demeter farmers and 3 processors and other farmers are in Demeter conversion. There is a need to increase the Demeter certified number of farmers per group.

Challenges and Opportunities

1. Demeter standards

Some points of the Demeter standards are difficult to execute in the Brazilian reality:

- Low availability of biodynamic, organic and conventional seeds without treatments;
- Vegetable farmers dependent on external organic matter, of conventional origin;
- Low availability of feed elaborated with biodynamic or organic ingredients; Low availability of non-transgenic soybean meal;

There are challenges in adaptation of the Demeter norms under different Brazilian ecological conditions and require constant biodynamic training of farmers.

2. Government bureaucratic process

- Complexity of traceability processes in the certification of food processing units.
- Excessive bureaucracy required by the Ministry of Agriculture, requirement of many documentation evaluation meetings and less time for field evaluation;

As a result three groups are evaluating the possibility of returning to third party certification.

3. External issues

- Incipient Demeter market not stimulating the final conversion of biodynamic producers;
- Low participation of consumers in the participatory certification process;
- Low interest of farmers from other PGS (ECOVIDA, ANC) in Demeter certification.

Botucatu Group –make 500 preparation

COOPLANTA group

São Paulo Group

Meeting between ABD e Ecovida

Conclusions

There are challenges of adaptation of Demeter norms under different Brazilian ecological conditions. There is need for constant biodynamic training of farmers and need to increase the Demeter certified number of farmers per group.

The experience accumulated so far has shown that the PGS enables greater participation and awareness of the certification process by the producer. On the other hand requires a greater dedication of the producer in the certification process and not all farmers are willing to become more involved in this process.

References

- *Brazilian organic law-ww.prefiraorganicos.com.br/agrorganica/legislacaonacional. aspx*
- *Demeter Standards – http://www.demeter.net/certification/standards/production*
- *KOEPF, H., PETTERSSON,B.D., SCHUMANN,W. Agricultura Biodinâmica, São Paulo: Nobel, 1983. 316p.*
- *Sistemas Participativos de Garantia. Estudios de caso en América Latina: Brasil, Colombia, México e Peru. IFOAM, 2013.*

The PGS (R)evolution in the Philippines

Maria Rowena A. Buena[1] and Lucille L. Ortiz

About Authors

Authors belong to an organization known as MASIPAG (Farmer-Scientist Partnership for Development). MASIPAG is a farmer led network of people's organization, NGOs and scientists working towards the sustainable use and management of biodiversity through farmers control of genetic and biological resources, agricultural production and associated knowledge.

Key words: MASIPAG, Local government units

Summary

Participatory guarantee system (PGS) provides credible yet affordable certification to small scale farmers. Denying PGS to them is tantamount to denying their basic rights to market access and to provide safe and sufficient food to consumers. This has been the advocacy of MASIPAG and PGS Pilipinas since the enactment of the Republic Act 10068 or the Organic Agriculture Act of 2010 which aims to strengthen organic agriculture in the country but limits the use of the term "organic" to Third Party certified products. MASIPAG and PGS Pilipinas have set the path of PGS development in the country by initiating the campaign and lobbying for PGS recognition and its subsequent growth not only for the local market but for rural development.

Background

PGS is a type of certification that aims to ensure the integrity of organic produce at a low cost. In 2004, MASIPAG launched its PGS (called the MASIPAG Farmers Guarantee System or MFGS) through its Local Marketing and Processing Support Program. MFGS' objective of empowering small scale farmers and strengthening control over the selling of their produce, while improving productivity and achieving sustainable food self-sufficiency at the local levels, are reflected in the core principles and strategies which serve as a guide to farmers and their organizations in the implementation and management of their marketing.

In 2010, Republic Act 10068, also known as the Organic Agriculture Act of 2010, was enacted to support the growing organic movement in the country; however, the law limits the use of the term "organic" to third party certified produces only. Farmers, who have been practising organic agriculture, albeit non-certified, felt that their contribution in providing safe food and food production, in general, has been ignored.

In 2011, MASIPAG, with other like-minded NGOs, consumers, local government units and academia, initiated the development of a network of PGS' and advocates called PGS Pilipinas to consolidate PGS practitioner and call on the government to recognize PGS. In order to mainstream PGS and to be more visible and have a louder voice, PGS Pilipinas conducted

[1] Email – rbuena@masipag.org

orientations, trainings, and installations of PGS among NGOs, farmers' groups, and local government units (LGUs) using MFGS as platform. Since then, PGS expanded in the Philippines and with the leadership of MASIPAG as secretariat for PGS Pilipinas, the government has started to recognize PGS and its benefits to the majority of the farmers in the country – the small-scale farmers.

Impacts

From the piloting stage of nine (9) organizations in 2004, the MFGS has expanded to seventy nine (79) people's organization with 1,683 farmers, covering 482.7 hectares of land. The program has meant better entrepreneurial and managerial skills and active marketing operations with sound financial systems, policies and procedures. The products are also more diverse and the processes more innovative which reflects the farmers' creativeness. The MFGS has helped farmers increase income by adding value to products that are otherwise very cheap and, through the program, farmers are able to appreciate the value of marketing (they are no longer just producers) and overcome the apprehension of learning and doing business while upholding the values and principles of MASIPAG.

MFGS, being the platform for PGS development in the Philippines, became the instrument not only for the farmers to have affordable certification but for other NGOs as well as the local government units to look into organic agriculture not as technology or to have better market access but an effective tool for rural development and climate change mitigation strategy. In PGS, farmers have taken more role in shaping the organic agriculture framework of their localities by providing the technical expertise, experiences and learning while the local government units, church, academe, NGOs and other support groups provided farmers with facilities and equipment (including marketing and production support) to sustain their activities and encourage more farmers to go organic. This partnership helped facilitate the development of farmers as leaders and strengthened the local market to support the increasing local demand for organic products.

LGUs are also crucial in realizing rural development through organic agriculture by creating Organic Agriculture Technical Working Committee and inclusion of organic agriculture as one of the priority programs and budget allocation to support the farmers initiatives and activities. Several LGUs also provided market both for PGS verified and in conversion/transition products to encourage farmers and have semi-permanent place where consumers can find verified, yet affordable, organic products near their communities, workplaces or directly sold to them by the producers. In some cases, the local church also provides spaces at the church grounds so that farmers may bring their organic products near the parishioners. Table 1 shows the organizations and local government units with PGS in various stages of development in the Philippines while Table 2 shows the diverse products being provided by PGS verified farmers.

Table 1. Municipalities, provinces and NGOs with PGS in various stages of development.

Municipalities/Provinces/ Organizations	Scope of operation	Year Started / PGS Activities conducted
MASIPAG*	Nationwide	2004
Quezon Province*	Province-wide	2010
Nueva Vizcaya *	4 municipalities	2013
Nueva Ecija*	Province-wide	2014
Negros Occidental	Province-wide	2014
Lanao del Norte*	Province-wide	2014
Davao City*	City-wide	2014
Dumingag, Zamboanga del Sur*	14 villages	2012
Philippine Rural Reconstruction Movement (PRRM)	Nationwide	2013
Bohol Province		Orientation
Camarines Sur	4 municipalities	Orientation
Surigao del Norte	4 municipalities	Orientation
Igbaras, Iloilo		Orientation
Agusan del Sur	1 farmer federation	Orientation
Zamboanga del Sur	Province-wide	Orientation
Palawan Center for Appropriate Rural Technologies (PCART)	Palawan province	Orientation, training
Sibol ng Agham at Teknolohiya (SIBAT)*	Nationwide	2013
Food Bowl Market	Quezon City	Orientation, training
Isabela Province	Province-wide	Orientation, training
Tarlac Province	Province-wide	Orientation, training

**operational PGS*

MASIPAG and PGS Pilipinas has also been successful in influencing the Department of Agriculture through the National Organic Agriculture Board (NOAB) – the policy making body for organic agriculture program implementation – in recognizing PGS. Since 2011, conferences have been conducted to discuss the progress and plans for further development of PGS. Position papers from PGS Pilipinas were also submitted to the NOAB while IFOAM sent a letter of support to the participants of the conference in 2013 and was handed to the NOAB by IFOAM President, Mr. Andre Leu. During the last quarter of 2016, the Bureau of Agriculture and Fisheries Standards (BAFS) called for the formation of the Technical Working Group (TWG) to draft the guidelines for PGS which may eventually serve as the basis for PGS accreditation or registration. NOAB is also now reviewing the Organic Agriculture Act of 2010 to recognize PGS as a form of certification. Although still in review, the NOAB is already considering PGS in its plans and targets for 2017-2021.

Table 2. PGS verified farms and products sold at the local market

PGS	Number of PGS verified farmers	Products
Masipag Farmers Guarantee System (MFGS)	1,683 farmers	Rice (polished and unpolished black, violet, red and white), vegetables (pakbet and chopsuey), rootcrops (raw and processed), herbs (fresh and processed), snacks, candies, native poultry and pork
Quezon PGS	• Farmers: 40 • Communal Farms: 3 • Processor: 4	black, violet, red and white rice, vegetables, rootcrops (raw and processed), herbs (fresh and processed), snacks, candies, poultry and pork (including processed meat)
Vizcaya Fresh	64 farmers	Rice (red rice, black rice), Vegetables, Root Crops (potato, sweet potato, taro, yam), Salad vegetables, Peanuts, Seasonal Fruits, honey (cultured), Mushroom (shitake, oyster), Processed products (vegetables salad, Fermented Rattan, Powdered chili
Davao PGS	17 farmers	Vegetables, poultry, pork and mutton, banana, herbs, coconut, cacao, seasonal fruits, organic fertilizers,
Iligan-Lanao del Norte PGS	7 farmers	Rice, corn and fruits

With these developments, PGS Pilipinas is also being strengthened as an organization and is now a duly-recognized organization by the Securities and Exchange Commission. Quarterly meetings are conducted to assess, monitor and develop or revise plans for the network. A training of trainers was also conducted to support the increasing demand for PGS orientation and trainings. The training was also aimed at harmonizing the basic process and system for PGS development in the country.

Core messages and conclusions

MASIPAG and PGS Pilipinas believe that recognition of all types of certification systems is crucial in order to include and provide incentive to all organic producers, and that the domestic market should be given equal importance. Restricting the use of the term "organic" puts long-time organic farmers at a disadvantage, especially the small-scale organic farmers. Organic should enhance local food security, empower farmers and their organizations, reduce food mileage and that local consumers should have equal access and equal rights to eat safe food.

The call for PGS recognition is not only for market or access of subsidy from the government. It is a call for farmers rights recognition – the rights to accordingly price their products, the rights to be called organic farmers without fear of being imprisoned or persecuted and provide safe and sufficient food to the consumers. Denying them PGS is tantamount to denying them these rights and with these, MASIPAG and PGS Pilipinas is set to bring organic agriculture back into the hands of the farmers.

Changes in Organic Participatory Guarantee Systems (PGS) in Northern Vietnam

Nhung Tu Tuyet[1], Cory William Whitney[2]

About Authors

Cory Whitney is a human ecologist, ethno-botanist, and organic agronomist with more than ten years experience in nonprofit, environmental educational organizations, and research institutions. He is interested in supporting and strengthening sustainable practices through education, development, and participatory research; and seeking solutions to the interconnected issues of loss of biodiversity, loss of traditional culture, and food insecurity.

Key words: farm analysis, farm management, land-use planning

Summary

Organic Participatory Guarantee Systems (PGS) may be an important contribution to Organic 3.0. The way that PGS systems are managed can be a major determinant of their success. In Northern Vietnam differing management of PGS systems can determine their level of social and ecological success, as well as the impressions of farmers and retailers. Nevertheless, more farmers' groups are turning to individual management and this may have negative consequences for the future of PGS in the region.

Introduction and Background

Rising demand for Organic around the Hanoi province of Vietnam poses a challenge for small-scale rural farmers who struggle to meet the cost and technical ability necessary for third party Organic certification. Organic PGS is a way for such farmers to access certification based on peer-review and social control. This system supports appropriate farming practices through social mechanisms (Fonseca et. al, 2008; Zanasi and Venturi 2008) and supports traditional livelihood systems based on high agro-biodiversity farming (Darlong 2008). PGS certification is context specific, allowing systems to adapt to local conditions and communities to collaborate on collective efforts for marketing. Potential for expansion to more Hanoi Organic markets and room for improvement in the management systems exists (Fresh Studio 2010). The level to which PGS farmers manage collective work and decision-making in land-use planning when sharing collective land varies and may be a determinant for the productivity and success of the PGS (Whitney et al. 2014ab). The current study seeks to describe the implications of shifting management practices on the future of PGS in the region.

[1] HữuCơ Organic PGS Vietnam, http://vietnamorganic.vn, eMail: nhungadda@gmail.com

[2] Rhine-Waal University of Applied Sciences, Germany, www.hochschule-rhein-waal.de, eMail: cory.whitney@hsrw.eu

Material and methods

Since 2008farmers in northern Vietnam have been operating within a PGS framework outlined by the Agriculture Development Denmark Asia (ADDA) and Vietnam Farmers Union (VNFU) Organic Project (ADDA-VNFU 2009). These farmer groups are operating under 'National Basic Standards for Organic Products in Vietnam' prepared by the Vietnamese Ministry of Agriculture and Rural Development (MARD 2006) and further clarified in the PGS Organic Standards published by the ADDA and VNFU Organic Project (ADDA-VNFU 2011). Under the framework, Organic farmers are organized into PGS groups to manage production and supply local markets on shared parcels of Organic certified land. Most farmers are responsible for a small plot of land within the certified area while other farmer groups cooperate on the management of the entire land area (Whitney et al. 2014ab).

What follows is a report on the development of PGS since it was introduced to Vietnamese farmers in 2008. Differences between PGS systems in Thanh Xuan commune in the Red River Delta of the Hanoi province versus those of the Luong Son commune in the rugged mountainous areas in HoaBinh province are considered with a focus on Organic vegetables data collected from PGS committee coordination annual reports and key informant interviews from 2008-2015.

Results

Data shows that PGS farmer members and production areas have expanded rapidly (from 68 members in 2012 to 101 members in 2015 and from 4.86 hectares in 2012 to 11.39 hectares in 2015 respectively). Consistent instruction and direction from the PGS Coordination Committee (PGSCC) is driving the shift.

Other drivers are the potential for greater income generation and increasing market demand. PGS Organic vegetable production is economically advantageous over rice production in the Hanoi province (the main production area in the region) and this also drives demand for PGS among farmers. A full-time farmer can earn 3 to 4 million Vietnamese dong (VND) (139 to 185 USD) per month, 30 million VND (1,389 USD) annually per sào (equivalent to 0.036 hectare) after costs. In contrast, a rice farmer gets about 20 million VND (926 USD) from one sào per year. Sales of PGS Organic vegetables in 2015 were three times higher than the sales in 2011 dues to growth of consumer demand for PGS Organic and the capacity of PGS farmers to meet demand.

With the less favourable geographical conditions, more fragmented land areas and relatively lower education of farmers, average production outputs and yield of PGS Luong Son was much lower than Thanh Xuan. From 2011-2015 average yield of Thanh Xuan and Luong Son was 28.49 tons per hectare and 8.78 tons per hectare, respectively. In 2015, average incomes for PGS Thanh Xua increased three times compared to their 2011 earnings (362 million VND in 2015, up from 200 million VND in 2011). PGS Luong Son was not as successful in improving yields and income as PGS Thanh Xuan (80.5 to 114.5 million VND in 2011 and

2015 respectively). This discrepancy is likely due to: (i) Income sources other than PGS Organic vegetables, (ii) production quality that did not meet market requirements, (iii) unfavourable natural and social conditions.

Discussion and Conclusions

Results show that the ADDA-VNFU Organic PGS development and training on Organic production, integrated pest management (IPM) through extension and project staff and farmers have been largely successful (c.f. Fresh Studio 2010). PGS ensures high agro-biodiversity and traditional livelihoods by recognizing the merits of traditional practices and customs (Darlong 2008). Additionally positive trends in income also support Organic PGS production. Future research into PGS Organic vegetable production in the north of Vietnam should address the regional difference in production and work to support the expansion and quality of local Organic PGS.

Thanks to Danida for 8 years of financing the ADDA-VNFU Organic project.

References

- ADDA-VNFU (Agriculture Development Denmark Asia and Vietnam Farmers Union) Organic Project (2009) PGS Participatory Guarantee System of Organic Products. Operational Manual For Producers 2009. Version 1.03
- ADDA-VNFU (Agriculture Development Denmark Asia and Vietnam Farmers Union) Organic Project (2011) PGS Organic Standards. Version 1.3
- Darlong, Vincent (2008) Harmonizing Jhum (Shifting Cultivation) with PGS Organic Standards in Northeast India: Key Features And Characteristics of Jhum for Process Harmonization. Cultivating the Future Based on Science: 2nd Conference of ISOFAR (International Society of Organic Agriculture Research), Modena, Italy
- Fonseca, M F; Wilkinson, J; Egelyng, H; and Mascarenhas, G (2008) The institutionalization of Participatory Guarantee Systems (PGS) in Brazil: Organic And Fair Trade Initiatives. 2nd Conference of ISOFAR (International Society of Organic Agriculture Research), Modena, Italy
- Fresh Studio Innovations Asia (2010) Market Access For Organic Vegetables – A Value Chain Approach. Agriculture Development Denmark Asia and Vietnam Farmers Union Organic Project (ADDA-VNFU), Hanoi, Vietnam
- IFOAM (International Federation of Organic Agriculture Movements) (2012) The Principles of Organic Agriculture
- MARD (Vietnam Ministry of Agriculture and Rural Development) (2006) 10TCN 602-2006; National Standard For Organic Production And Product Processing

- Whitney CW, Den Braber K, Tu Tuyet N, Thorndal Jørgensen S (2014a) Measurable Impacts of the "Principles of Organic Agriculture" Survey of A Vietnamese Organic PGS, Rahmann G & Aksoy U (Eds.) Proceedings of the 4th ISOFAR Scientific Conference. 'Building Organic Bridges', at the Organic World Congress 2014, 13-15 Oct., Istanbul, Turkey
- Whitney, C. W., den Braber, K., Từ Tuyết, N., and Thorndal Jørgensen, S., (2014b) Farm Management Schemes within Organic PGS; Survey and Analysis in Sóc Sơn, Hanoi, Vietnam, Building Organic Bridges. Proceedings of the 4th ISOFAR Scientific Conference at the Organic World Congress 2014 in Istanbul, Turkey, Thuenen Report 20, 1187-1190.
- Zanasi, C; and Venturi, P (2008) Impact of the Adoption of Participatory Guarantee Systems (PGS) For Organic Certification for Small Farmers in Developing Countries: The Case of Rede Ecovida in Brazil. Cultivating the Future Based On Science: 2nd Conference of ISOFAR (International Society of Organic Agriculture Research), Modena, Italy

The Road to Organic and Beyond: Improving Transparency in Local Food Networks through PGS Mechanisms and Web Tools

Hannes Van den Eeckhout[1], Julie Rouan

About Authors

Hannes Van den Eeckhout and Julie Rouan work at The *Food Assembly (La Ruche qui ditOui! in French, Boeren & Buren* in Dutch) a local food network that brings together technology and people to buy fresh food directly from local farmers and food makers.

Key words: participatory guarantee, trust, transparency, organic, food network, e-marketplace

Summary

Participatory Guarantee Systems (PGS) aim to improve market differentiation by working towards an organic guarantee that is based on social capital and peer-to-peer capacity building and validation mechanisms. PGS bring about a series of positive desired effects: reinforcement of social cohesion, knowledge exchange and seed conservation networks, new marketplaces, information sharing and improved transparency. The Food Assembly builds a system to foster transparency and, thus, quality within its network of locally managed food networks for direct marketing. This transparency focuses on the road to and beyond organic, inviting smallholder producers to become part of this path of transition to a gradually more sustainable agriculture; evolving towards organic (certified or not), or even agro-ecological, permaculture and biodynamic farming models.

What if, in addition to being the founding principle and key element of PGS, transparency becomes the purpose of the process itself? Instead of a binary outcome (organic or not) authors introduce a new concept: the "Participatory Transparency System" that mainly guarantee the validity of the information conveyed within the wide range of positions on the "sustainability ladder". Instead of (dis)qualifying a producer's progress it will assure the accuracy of the provided information by using PGS mechanisms of peer-to-peer validation, assortative matching and repeated interaction; leaving the final choice of consumption to the progressively more informed, aware and involved buyer. Main challenges and potential solutions are discussed: why The Food Assembly wants to adopt PGS mechanisms, why transparency and what for, incentives to progress on the sustainability ladder, and commercial value of this process.

Context

While conventional marketing invented labels and third-party certification to bridge the information gap between producers and consumers, local food networks focus on personal contact or proximity, commitment, collective intelligence and social capital to shorten this

[1] The Food Assembly (La Ruche qui ditOui! France, Email - hannes@boerenenburen.be

distance. Essentially, it is all about trust. Short Food Supply Chains (SFSC) rise as a reaction to a globalised, anonymous food market where void marketing slogans overpower (by repetition and reach) rightful value claims like local, organic and farm-to-table.

High-commitment, very local initiatives rose first. Kaizen in Japan, CSA in the USA, Self-harvesting gardens all throughout Europe, Associations for the Preservation of Smallholder Agriculture (AMAP) in France; GAC, GASAP or Voedsel teams in Belgium; VOKO in The Netherlands, etc. share common traits: payment is upfront, on an annual basis mostly, risk sharing, you-eat-what-you-get baskets, and members (have the opportunity to) know the farmer. However, direct sales in fresh food at EU level are still limited to 2% of the market (EPRS 2016). Generally, the required personal investment, a limited product range and their dependency of subsidies or lack of resources, limit the capacity of these networks to grow and reach important fractions of the population.

To respond to this, new models are invented continuously: box schemes, share-a-cow systems, recipe-based home delivery services, short-chain two-step logistical initiatives, etc. The Food Assembly (TFA) is one of them, originally a French network that is driven by the power of web technology and focuses on (re)creating food communities, both on- and offline. One "Host" brings together producers and consumers in "Food Assemblies": communities that meet weekly during two-hours collection moments where the latter receive their online pre-ordered products from the farmers and artisan food makers. Behind the scenes a tech and communications team together with small, decentralized field teams is active to continuously build and improve the state-of-the-art web platform and support the network in its development. After 5 years, the network has grown to become the largest direct food marketing initiative in Europe, with 800 Assemblies and 150,000 regular customers supporting more than 5000 producers. The focus is on fostering direct sales of local products.

Simultaneously, in a growing organic market, Participatory Guarantee Systems (PGS) are developed, generally in close relation with an existing farmers' market and to put forward the organic quality of products sold by groups of producers that do not want or cannot afford third-party organic certification. Based on peer-to-peer evaluation between farmers and with the validation of community stakeholders (customers, renowned cooks, municipal and agriculture officers, NGOs, etc), the social collective conducts field visits, verifies production methods and gives out a PGS certificate that creates trust in the local market. This dynamics is reinforced by repeated interaction and assortative matching (mechanisms often cited in Microfinance literature; assortative matching describes the phenomenon of people with similar characteristics, e.g. trustworthy or not, to group together driven by the incentives the system provides risk exclusion) (Morduch 1999). Moreover, PGS systems have been found to enhance information sharing, collective seed saving, knowledge exchange, development of farmer markets and organizational strengthening (IFOAM, 2014). Key principles of PGS are trust, social networks and knowledge exchange. In 72 countries, more than 100,000 producers

and processors are involved in PGS, with almost half of them being PGS-certified (IFOAM, 2016).

In 2015, TFA clearly identifies the need to improve transparency in order to i) reinforce the dynamics of online information sharing to ease producer selection and purchase decisions, ii) limit potential harm to the network's reputation by free-riders, and iii) leverage the social capital in the network to work towards gradually more sustainable production systems.

All points discussed in the next sections are based on internal, unpublished sources from The Food Assembly network in France: interviews with stakeholders, workshops, strategic documents and progress reports on the subject.

Innovative approach

Proposing an online platform to facilitate direct sales, The Food Assembly needs an innovative approach to trust building for five reasons: i) products are ordered online, mostly before even visiting the Assembly and meeting the producers; ii) consumers generally do not take time to inquire and challenge the information that producers provide; iii) to optimise transportation costs and deliver more Assemblies, producers share logistics and deliver each other's products in turns, reducing the potential time of exchange; iv) more and better information on the origin of transformed products and their ingredients is demanded, and v) while the Hosts who select the producers to deliver their Assembly, are key persons of trust, they are not trained to conduct farm visits with the scrutiny of a third-party certifier. Both Hosts and TFA staff neither have time, resources nor the ambition to do so. Trust based on repeated human interaction is at the center of the TFA model.

Quality is an important topic for the network. With the PGS aiming to improve communication and information on the quality of products, the project size and importance of this project is both motivating and frightening (for the project team, TFA staff and the network). While promising first pilot user feedback shows a strong willingness to engage in this process, the access to (who sees what?), precision and customization of requested information, and the focus on fostering dialogue over evaluation, are key issues. A heavy workload for producers, collision of interests, the fact that already a wide range of producer types are forming part of the network and lack of tangibility of the project, also have been identified as important challenges to the project. While the need to share and co-construct this project was clearly present, the initial lack of a specific visual support kept discussions on a theoretical level of principles.

The process was divided between low-tech improvements that can be tested with the network (e.g. a guide for farm visits) and more demanding tech changes on the platform. This gradual approach focuses on simple iterations, "bricks" that can be built and tested with limited samples of the population, to then be progressively applied to larger parts of the network before starting with a next brick or replicating the iteration with the next

product category. The process was organized in three levels, all including multiple layers of those bricks. First, a module to foster information sharing about producers (on farm visits, punctuality and preciseness in deliveries, offer quality, etc.) between hosts is implemented. On the second level, the information on public producer profiles will be structured more clearly, in particular to highlight production practices and commitments towards a more sustainable production model. A third level focuses on the development of a real feedback system, initially only between Food Assembly hosts and producers. Step-by-step improvements can be implemented alternately on these levels. The ambition is to build a real P2P validation system, focusing on transparency and positive endorsement, based on PGS mechanisms and farm visits but also inspired by feedback mechanisms employed by other web platforms that bring together service providers and users (Couchsurfing, AirBnB, TripAdvisor, for instance).

What is interesting about this approach is that it combines an UX-driven approach (User-Experience) to develop what is called a "minimum viable product" first, online tools that are applicable to all types of producers, with a process of social co-construction. This allows starting with actionable improvements soon and, even if far from perfect initially, advancing progressively in function of real-time user feedback.

Finally, an important issue that is continuously considered and was very important in all quality discussions in the network and throughout this process in particular, was the sustainability of the products that are being offered for sale. The value proposition of TFA is about locally produced and directly sold (no middlemen) products. Combined, in the agricultural reality of Europe, these two criteria are already quite stringent and have to be offset with the need to provide a product range that is sufficiently attractive, diverse and affordable in order to build thousands of successful local marketplaces through the web platform. Additionally, a wide range of production models and visions can be found among the five thousand farmers and artisan food makers that are at the core of the network currently. Facing this reality in combination with a willingness to really engage in a continuous dialogue on this issue (between hosts and producers, between members and producers), the following demand-driven approach to sustainability is envisioned: i) provide tools to improve transparency and information exchange, ii) install mechanisms, both on- and offline, including visits among peers and with consumers to validate all provided information and value claims by farmers, and iii) by increased access to information and awareness the producer is invited in this direct relationship or "pulled" by consumers to progress on the sustainability ladder. As in PGS, the focus for farm visits is on building trust and sharing knowledge, rather than inspection.

In this sense, and in accordance with literature, organic agriculture is considered the way to go in terms of sustainable farming. However, the TFA model focuses on the road to organic, rather than a binary interpretation of reality (organic certified, or not) and also looks beyond; to models as agro-ecology, permaculture and biodynamic farming. While, of course, this gradual process will need time, specially step three can take five, ten or twenty years, the strength of this approach is that the incentive to produce more sustainably is really demand-driven.

Discussion

The hypothesis is that by using web tools to enhance transparency on producers' practices, the quality of the products offered in the network can be improved (a service to customers) and, subsequently, order volumes and fidelity will grow (a service to producers). The linkage between transparency on the products, their origin, ingredients, farming techniques, etc. can be reinforced by the potential of awareness rising through the online platform and communication channels. Moreover, the platform enables access to detailed tracking information, to not only foster these effects but also measure how -- in function of good practices, completeness of the profile, transparency level, validation visits, etc. -- the producers' sales levels and position in the network evolve. This will allow for the verification of the hypothesis within the two years to come.

At the micro-level every producer has to take into account the reality of its production system and previous financial investments to act on small or larger improvements towards sustainable farming models. Basically, all non-industrial, human-size producers are welcome in the TFA network as long as they respect the two key principles of local and direct sales. In fact, to turn away from the conventional wholesale marketing system and enter direct marketing channels, to accept farm visits and to open up to a direct dialogue with consumers, are considered important first steps on the sustainability ladder. On the other hand, limits are not clear, multiple dimensions need to be analyzed to distinguish a (more or less) sustainable producer. A wide range of positions on this sustainability ladder is possible. Thus, every step counts, will be highlighted on the web platform and acknowledged by the customer base. Accepting this blurry line between each of the steps, the idea is to give more insight in these dimensions of the production system to allow for all stakeholders to better understand, share and discuss why certain choices are made. The "Participatory Transparency System" focuses on transparency about the agricultural practices, more than on judging the practices themselves; the "certification" exercise consists of the trust that is being built between the users of the network to validate the accuracy of the provided information, and make choices accordingly.

The system will be designed in such a way that the information that is conveyed, invites customers to start pulling their suppliers up the ladder in a gradual, demand-driven way. This is happening in small but significant steps already: for instance, a producer in the network changing packaging to biodegradable material made from corn, diversifying his product range and adding more value (making juices) in function of demand and feedback; another one growing organically and now deciding to get the certification (while first this need was not identified) or abandoning the wholesale market to focus on SFSC exclusively. Producers will become organic (certified or not) or move beyond, when that is what a critical mass of consumers in the network starts to demand. Locally selling only self-produced products, while investing time in transport and in meeting the consumers on a weekly basis, is already a big step. The risk of green washing is countered by clear information on commitments and visibility on steps (that are taken or not) over time, in combination with the sustained and

personal relations that are built in the network and serve as social guarantee. Reaching the highest point of the ladder is not the most important goal now; it is not about the extremes, nor about YES/NO, it is about moving forward towards a production and consumption system that is local-centered, based on direct sales and ecologically and socially sound.

Conclusions

With the development of what could be called a "Participatory Transparency System", The Food Assembly is joining the best of two worlds. By combining the principles and mechanisms of PGS developed by the organic movement with P2P validation schemes employed on game-changing web platforms, an innovative process to enhance transparency as a foundation for trust building in SFSC, is being built. Essentially, PGS are about trust building for real-life relations. With web technology they can be out-scaled, replicated over and over again to grow and accelerate the impact of local food networks.

Challenges remain high and are twofold. On one hand, tech improvements on the web platform (the tool) need to be followed by proper adoption and use by the network and in accordance with the interests of all stakeholders. Technology can enhance, but cannot replace human interaction at the source of trust. On the other hand, the concept of progression on the sustainability ladder must be closely safeguarded to really build a tool that enables a demand-driven transition to an ecological and socio-economically sound food system.

Acknowledgements

The authors are very thankful to Roberto Ugas (UNALM, IFOAM) and Patricia Flores (GALCI-IFOAM) for their valuable feedback.

References

- European Parliamentary Research Service (2016): Short food supply chains and local food systems in EU. Briefing September 2016, Brussels.
- International Federation of Organic Agriculture Movements (2014): Global comparative study on interactions between traditional social processes and Participatory Guarantee Systems (PGS). Hervé Bouagnimbeck, Bonn.
- IFOAM (2016): International Federation of Organic Agriculture Movements [website] [cited 2016 Sept 15]. Available from URL: http://www.ifoam.bio/en/pgs-map
- Morduch J (1999): The Microfinance Promise. In: Journal of Economic Literature, 1999, 37 (4), 1569-1614.

Participatory Guarantee Systems: Organic Certification to Empower Farmers and Strengthen Communities

Robert Home[1], Hervé Bouagnimbeck[2], Roberto Ugas[2], Markus Arbenz[2] and Matthias Stolze[1]

About Authors

Robert Home is a social scientist working with the Research Institute of Organic Agriculture (FiBL) in Switzerland in Socioeconomic Department. He is having special interest in the factors that enable or hinder innovations in agriculture and in decision process, why do people make decisions that they do?

Key words: participatory guarantee systems, organic, organic certification, social processes, community development

Summary

Third party certification can act as a barrier to market entry for smallholder producers because of high costs, paperwork and bureaucracy. Participatory guarantee systems (PGS) can assure consumers while avoiding the entry barriers of third party certification. This study aims to investigate farmers' motivations for, and outcomes from, participation in PGS. Interviews were conducted with 84 farmers from seven countries who were asked about their experiences in a PGS, with a particular focus on motivations for participation. The results suggest that PGS benefits include empowering farmers and building trust, which extend beyond the primary aim of PGS. Successful PGS base their activities on long lasting social processes and being well connected to consumers, markets, regulation bodies, governments, and their communities. Combining tradition collaboration within local level social structures contributes to ensuring the future of PGS as an alternative system to third party certification.

Introduction

In the early days of the organic movement, certification was unnecessary because the organic industry was small and the integrity of produce was 'guaranteed' by trust: based on a direct relationship between the usually small-scale independent farmers and the consumer who met at the point of sale, such as at farmers' markets (Meirelles 2011). However, the worldwide demand for organic food is increasing, with a recorded growth rate of more than 10 percent in the most advanced markets for organic products, and has reached a worldwide total market value of US$ 72 billion (Willer and Lernoud 2015). As the scale of the organic food industry has expanded, consumers are increasingly able to purchase organic food through mainstream channels, such as supermarkets (Van Loo et al. 2012). The consumer now relies on cues that signal assurance of integrity (Martinez and Epelbaum 2011); foremost of which are externally issued certificates of organic compliance. Individual producers communicate compliance with standards.

[1] Research Institute of Organic Agriculture. Ackerstrasse, Frick, 5070 Switzerland, E mail - robert.home@fibl.org

[2] IFOAM-Organics International, Charles-de-Gaulle Strasse 5, 53113 Bonn, Germany

Although third party certification systems play an important role in organic production and trade, they are not always suitable for small-scale operators and local market channels. Rather, third party certification can act as a barrier to entry for smallholder producers looking to access organic markets because of the high costs (Lundberg and Moberg 2009), and required paperwork and bureaucracy (IFAD 2003; Nelson et al. 2015). A further criticism of third-party certification is that it has a political dimension in which it is perceived to have been imposed on the developing world by the global North (Nelson et al. 2015). For the third-party certification of smallholder groups in the South, and typically for tropical products such as coffee and bananas, import markets started to allow a derogation of the rule that each individual farm had to be inspected annually by the certification body (CB). A range of stakeholders, including farmers, regulators, development organizations and consumer groups have therefore sought alternative certification systems that are better adapted to specific contexts.

Participatory guarantee systems are locally focused assurance systems that verify producers' compliance to certain organic standards. PGS are based on active participation of stakeholders, and are built on a foundation of trust, social networks, knowledge building and exchange (IFOAM 2008). A typical PGS initiative involves producers, consumers and, often, other stakeholders such as staff from NGOs, universities and extension services, government representatives, and consultants (Nelson et al. 2010). The aim of this contribution is to investigate farmers' motivations for, and outcomes from, participation in PGS. In pursuing this aim, authors will examine whether nutrition, farm performance, income, and marketing opportunities are perceived to have arisen through participation. Furthermore, authors examine the factors that contribute to the foundation and survival of existing PGS and whether PGS can contribute to farmer empowerment.

It is beyond the scope of this exploratory and qualitative study to draw quantitative conclusions, such as whether there are intercultural or international differences, or to quantify any economic advantage or disadvantage to participation in a PGS. It remains the challenge of future research to address these questions in a quantitative and/or econometric study using appropriate instruments. The results of this study provide a starting point for such future research.

Material and methods

Case study PGS were selected for this study if they had been successfully operating for at least three years, were linked to markets, and were at least partially self-funded and had taken steps to move towards self-funding. Eight PGS initiatives in seven countries met these selection criteria and at least six farmers, who had participated in the PGS for at least three years, were interviewed (N=84) using a semi-structured questionnaire. Questions were formulated to ask why the participant joined the PGS; what changes with regard to nutrition, farm performance, income, and marketing opportunities had arisen through participation; and their opinion of their PGS including problems and solutions. The questionnaire was translated into the local language and administered in a face-to-face interview by a local researcher on the respondent's farm. To minimize interviewer bias in the interviews that were, by necessity, conducted in several languages, two local researchers per case were chosen, coached and

trained by IFOAM. The recorded responses were translated into English and transcribed before being analyzed centrally according to their content.

Results

PGS commonly start as a small group and seek to recruit farmers by convincing them of the benefits of participation. Prominent among the challenges for initiating a new PGS is the reluctance of farmers to join before it has a critical mass. Organizers must convince potential member farmers of future benefits, which may not yet be tangible, and the principal motivation for joining is to profit from some or all of the offered benefits. A range of beneficial social processes were identified, which are frequently observed in combination with PGS. Prominent among these is the organization of collective use of resources, sometimes known as self-help groups, which are important to the success of many PGS. Self-help groups are an example of the recursive and reflexive mechanisms suggested by Bodorkos and Pataki (2009) and have become an entry point into many PGS communities at a grassroots level. They provide a platform for various intervention activities, such as:

- Collective buying, which reduces costs;
- Joint marketing, which is essential to the expansion of market opportunities;
- Establishing seed banks, which gives farmers access to varieties suited to local conditions;
- Supporting collective logistics in transportation for farmers who are often geographically isolated; and
- Enabling farming households to access affordable credit for agricultural and other purposes.

Participation in the collective actions of self-help groups, with their own social processes, reinforces the social inclusion, farmer empowerment and mutual support between producers and consumers that are inherent in PGS. Given that PGS are commonly composed of people living in close proximity and sharing the same ideals, support needs can be delivered in a way that is tailored to the individuals. For example, monitoring of credit usage and repayment is easier and the need for coercion is also reduced. Efficiently managed and well-funded self-help groups are therefore a recurring feature of successful PGS communities.

Like any collaborative grassroots venture, PGS encounter challenges. A major criticism of some PGS initiatives is that they are often started not because there is a market but because politically motivated donors believe PGS are more democratic and wish to challenge the "imposition" from the North and local competent authorities. That PGS are (may be) technically as effective as third-party often comes as a second consideration. Political issues are also essential for many of the donors that have funded PGS initiatives in the developing world. Costs of the system were not often a concern since there is an external donor and there is sometimes little evidence of a need for the initiative to become self-sufficient. In times of diminishing resources for projects, we are seeing that some PGS initiatives are dwindling or have disappeared. A further challenge that is fundamental to the sustainability of PGS is

its formal recognition as a legitimate quality assurance system, which may require ongoing negotiation with local, regional and national governments as well as with organic regulation bodies. A number of countries – including Mexico and Brazil – have included PGS within their national organic regulatory frameworks, and countries interested in facilitating the use of PGS could look to these examples with respect to how PGS can be effectively included within legislation governing the organic sector. Recommendations and various scenarios for the role that governments can take in the support of PGS can be found in the IFOAM PGS Policy Brief: How governments can support Participatory Guarantee Systems (IFOAM 2015).

There is a growing demand for certified organic produce, with increasing numbers of producers involved: not all of who are able to access third party certification. Meanwhile, a wide range of organizations increasingly support PGS as an alternative system to third party certification for producers who market their produce locally (Nelson et al. 2010). The vision of combining tradition and participatory action is well placed to overcome the existing challenges to ensure the future of PGS. One participant states it clearly: "We do not intend to stop and hope that our children will continue. It is important for us". In addition to contributing to the stability and success of the PGS, the associated social processes also provide direct and indirect benefits to participating farmers.

Discussion

Participatory guarantee systems are more than just a means of organic certification with lower entry costs that Lundberg and Moberg (2009) suggest are necessary. They enable: collective buying, which reduces costs; joint marketing, which is essential to the expansion of market opportunities; the establishment of seed banks, which give farmers access to varieties suited to local conditions; collective logistics in transportation for farmers who are often geographically isolated; and farming households to access affordable credit for agricultural and other purposes. PGS are typically driven by the energy of an individual, or a small group of people, who take the initiative to establish a system at the local level. From the results of this study, we recommend providing support to these people, who adopt the role of the change agent, which may encourage the spread of PGS and, in turn, will increase trust in the system and give more farmers access to the beneficial social processes.

Acknowledgments

This extended abstract is derived in part from an article with the same title: published in Agroecology and Sustainable Food Systems on January 17, 2017. Available online http://dx.doi.org/10.1080/21683565.2017.1279702. The study on which this paper is based was commissioned by Universidad Nacional Agraria La Molina, Peru to IFOAM, under the AGROECO project (Ecological and socioeconomic intensification of smallholder agriculture in the Andes), funded by the Canadian International Food Security Research Fund. CIFSRF is a program of Canada's International Development Research Centre (IDRC) undertaken with the financial support of the Government of Canada provided through Foreign Affairs, Trade and Development Canada (DFATD).

References

- Bodorkós B, Pataki G (2009) Local communities empowered to plan?: Applying PAR to establish democratic communicative spaces for sustainable rural development. Act Res 7(3):313-334.
- IFAD (International Fund for Agricultural Development) (2003) The Adoption of Organic Agriculture Among Small Farmers in Latin America and the Caribbean. Thematic Evaluation. http://www.ifad.org/evaluation/public_html/eksyst/doc/agreement/pl/organic.htm#1. Accessed September 1 2016
- IFOAM (International Federation of Organic Agriculture Movements) (2015) Policy Brief: How Governments Can support participatory guarantee systems (PGS), IFOAM, Bonn
- IFOAM (International Federation of Organic Agriculture Movements) (2008) Participatory guarantee systems: Case studies from Brazil, India, New Zealand, USA, France. IFOAM, Bonn
- Lundberg J, Moberg F (2009) Organic Farming in Brazil: Participatory certification and local markets for sustainable agricultural development. http://www.ifoam.org/sites/default/files/page/files/organic-farming-in-brazil_ssnc_2009.pdf. Accessed September 1 2016
- Martinez M, Epelbaum F (2011) The role of traceability in restoring consumer trust in food chains. In: Hoofar J, Jordan K, Butler F, Prugger R (eds) Food Chain Integrity: A Holistic Approach to Food Traceability, Safety, Quality and Authenticity. pp 294-302. doi: 10.1016/B978-0-85709-068-3.50017-2
- Meirelles L (2011) Certification of Organic Products. http://www.centroecologico.org.br/artigo_detalhe.php?id_artigo=26, Central Ecologico. Retrieved 1 September 2016
- Nelson E,Gomez Tovar L, Schwentesius Rindermann R, Gómez Cruz M (2010) Participatory organic certification in Mexico: an alternative approach to maintaining the integrity of the organic label. Agr Hum Values 27(2): 227-237
- Nelson E, Gomez Tovar L, Gueguen E, Humphries S, Landman K, Schwentesius Rindermann R (2015) Participatory guarantee systems and the reimagining of Mexico's organic sector. Agr Hum Values.doi 10.1007/s10460-015-9615-x
- Van Loo E, Caputo V, Nayga R, Canavari M, Ricke S (2012) Organic Meat Marketing In Ricke S, Van Loo E, Johnson M, O'Brian C (eds) Organic Meat Production and Processing, Wiley Blackwell, Oxford, pp. 67-87
- Willer H, Lernoud J (2015) The World of Organic Agriculture: Statistics and Emerging Trends, IFOAM (Bonn) and FiBL (Frick). ISBN 978-3-03736-306-5; 978-3-03736-307-2

Part 4

ORGANIC WORLD CONGRESS 2017

जैविक कृषि विश्व कुंभ

Alliances of Organic and Fair Trade

Organic Farming and Fair Trade Approach: The AIAB Experience in Italy

Sergio Pedini[1], Michela Ascani[2], Vincenzo Vizioli[3]

About Author

Sérgio Pedini is professor of agroecology and rural development in Brazil and worked as an organic agriculture inspector for nine years. He was a member of the team that organized the 9th IFOAM International Conference in Brazil in 1992. He is currently the vice-president of the AAO (Brazil) and is studying postdoctoral at the University of Perugia, Italy.

Key words: organic market, fair trade movement, short-chain.

Summary

The organic movement in Europe has tried to include social criteria in regulations and fair trade movement has done the same with environmental criteria. There are however local market experiences in which the approach towards these criteria goes towards the integration of organic and fair trade principles. GODO (Organized Groups of Demand and Offer) can be considered as an experience that frames the two movements, considering this short-chain marketing process. According to study results, it is possible to have a new approach linking the two movements. This kind of experience can give a contribution to the integration of the two systems, ensuring an environment friendly and socially fair production.

Introduction

Statistics numbers have shown a strong growth of organic and fair trade movements and in both cases the rules have incorporated new components following the society's expectation. The organic movement has been trying to include social criteria within the organic EU regulations. The fair trade movement - FTM has done the same with environmental criteria. There have been, however, direct market local experiences in which the movements approach towards criteria and their determination tend to have a balanced relation. This article presents the experience of a purchasing organic food group (short-chain marketing) founded by AIAB (Associazione Italiana per L'Agricoltura Biologica), GODO, and also analyses its operating characteristics and how a new possible approach can be considered between the two movements, FTM and organic.

The Organic and Fair Trade Movement

EU regulation on organic farming was created in the context of a niche market characterized by a limited number of consumers and farmers. These actors were often inspired by a particular

[1] CREA - Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria, Centro di Politiche e Bioeconomia, Postazione Umbria, Italy, www.crea.gov.it, e-mail: michela.ascani@crea.gov.it

[2] AIAB Umbria, Italy, www.aiabumbria.com, e-mail: v.vizioli@aiab.it

kind of ecological morality and were linked to social movements and specific values, mostly in Northern Europe (Fouilleux, Loconto 2016). EU rules and standards have been evolving until the current Council Regulation (EC) 834/2007 with a stronger focus on environmental and consumer protection concerns, in coherence with the overall EU agricultural policy. No explicit reference has been made by European Commission to social concerns and impacts of the organic sector within legislative proposals adopted on March 2014 (European Commission, 2014). Currently in Europe social aspects are not directly embedded into legislation and institutional strategy, and the role of actors representing the organic sector becomes crucial in promoting social issues, widening the perspective towards fairer supply chains.

According to Raynolds and Wilkinson (2008) FTM has emerged as one of the real possibilities of change promoted by international organizations that strive to modify the international global market paradigms, especially in the food sector. The most referenced concept of FTM is the one developed by FINE (an informal organization established in 1998 bringing together FLO, IFAT, now WFTO, Network of European Worldshops - NEWS! and European Fair Trade Association – EFTA) which defines fair trade as a trading partnership based on dialogue, transparency and respect seeking greater equity in international trade. It contributes to sustainable development by offering better trading conditions and securing the rights of marginalized farmers and workers – especially in the South. WFTO (World Fair Trade Organization) prescribes ten principles that organizations must follow in FTM (WFTO, 2017). Considering these ten principles, fair trade procedures are characterized by:

- Transparency;
- Long term contracts;
- Fair price;
- Pre-financing.

How can a local experience of direct organic products marketing move towards a real proposal of fusion between organic and fair when considering the similarities between the two movements (especially in social criteria)? The aim of this paper is to analyze AIAB local experience concerning its social aspects, showing a new convergence between the organic and FTM.

GODO: an AIAB local experience

Created in 1988, AIAB Umbria is an association of social promotion federated to Italian Association of Organic Agriculture - AIAB that organizes and promotes organic farming in the Umbria region (AIAB 2016). AIAB is an organic movement network and represents primarily the interests of organic farmers through the promotion of organic agriculture as a sustainable development model based on the principles of resources conservation, environment protection, animal welfare and consumers' health. AIAB Umbria promotes organic products purchasing groups under the framework of a national campaign called GODO (Organized

Groups of Demand and Offer). GODO was originated from a solidarity purchasing group experience (SPG) that is now a established reality created by citizens' groups that follow the desire to combine environmental commitment and healthy food. This movement started to look for organic and fair farmers in order to buy products directly, and then distribute them among its members. The definition of buying criteria and the subsequent products exchange is therefore an opportunity to meet and exchange social and political opinions at a stage where the "conventional" debate is particularly lacking quality and values. Within this conscious consumption model, AIAB has proposed the following scheme: the initiative would no longer be just a consumers' issue, but rather a common choice between consumers and farmers interested in a "short supply chain" through AIAB intermediation.

Farmer delivery

Products checking and separation

Consumer order conferring

GODO website

GODO campaign was inspired by the awareness that organic farmers and responsible consumers/citizens share common objectives, including the promotion of direct sales and local development. Thus, putting in contact (due to AIAB) organic consumers and farmers reduces intermediation and allows fair prices to be practiced. This happens through information transparency and private meetings in farms among farmers and consumers.

For these reasons the cardinal principle for GODO is organic farming, enhancing the values of territoriality, seasonality and visibility of those who produce, as well as solidarity between farmers and consumers. In these terms, local consumption becomes a cultural and ethical choice and organic farming turns into the engine of rural development. Different regional experiences were made through AIAB's advice. In fact the Association provides the staff and location, complete costumers services related to price and products list (update of price list, collection and distribution of orders) and logistics management.

GODO operational system

The purchasing group is configured as an exchange between farmers and consumers (AIAB members). GODO staff prepares a list based on farmers production. The list is published online on the GODO website from Thursday to Monday and consumers can make the order being able to choose product and farmer. Orders are then forwarded to farmers who have to deliver products by Wednesday morning. The same day, from noon to 7 pm, every member who has made an order can collect his/her products at AIAB. Those who had not ordered online or want to check the products quality before ordering are able to find surplus products brought by farmers or by small companies that do not have a sufficient amount of products to offer in the list (the consumer group currently counts more than 250 families).

In addition to the already mentioned ethical and environmental values, the solidarity economy of GODO is expressed in other ways as those listed below:

- The price established by farmers. AIAB only intervenes when price is excessive compared to other similar products;
- The rate to cover the GODO living costs is 30% for fruits and vegetables and 20% for the dried foods and it is communicated transparently to members (farmers and consumers);
- The farmer withdraws his/her money 7 days after, to the next delivery. For his/her convenience farmer can ask for the money transfer at the end of the month;
- There are meetings at least twice a year where the products amount sold in the previous year is analysed; this allows farmers to plan sowing and transplantation and distributing the productions according to their capacity and climate conditions;
- There is an evaluation committee (whose members are consumers) that periodically analyses any critical issues. After that a feedback is given to farmers.

Fair Aspects on the GODO experience

1. **Transparency -** The transparency of the GODO system is guaranteed by the open contractual relationship between farmers and consumers intermediated by AIAB. According to the GODO, in order to become purchasing group suppliers, farmers must be AIAB members, attend scheduled meetings with consumers and allow their farms to be visited, in order to create a direct knowledge about their production mode, goals and the farming itself. The GODO regulation also says that "to ensure transparency about the

origin and traceability for each product, the purchase price, the manufacturing company provenance and the territory of reference are indicated on the label." The evaluation committee and the meetings also contribute to transparency because they guarantee a continuous contact between consumers and farmers. Transparency is guaranteed by the system regulation, but it gains greater credibility through the permanent contact between farmers and consumers.

2. **Long term contracts -** According to AIAB more than 90% of the associated farmers from the two first years of GODO constitution is still active in the system. The permanent contact between consumers and farmers creates a solid and permanent link. This requirement does not exist in the organic movement and it has on the other hand, fundamental importance in FTM as it ensures greater stability of the farmer in the market and, consequently, his/her economical sustainability. Long term contracts are fundamental, both in the organic movement and in the FTM, as they guarantee not only access, but mainly the permanence in the market. The conventional mass market based on scale economy (as in supermarkets) does not normally value this type of contractual relationship. Within these markets the constant reduction in sales prices and consequently the competition and short term contracts are most important.

3. **Fair price -** The AIAB associated farmers and GODO participants have complete freedom to set the price within the system. However, the consumers also have the freedom to manifest themselves if they consider the price too high. AIAB makes constant market research to compare prices. As a result of this process, a shorter negotiation chain and 250 associated consumers and farmers have a real chance to receive a fairer price for their products. The evaluation committee and the meetings also guarantee a continuous fair price negotiation. In this case the regulation guarantees a fair price, but the constant contact between farmers and consumers ensures a fairer price in the long term.

4. **Pre-financing -** There is no formal process of pre-financing or advance payment of amounts to be received, but there is an institutional payment guarantee or a direct transfer if the farmer wishes so. Since one of the FTM principles is to guarantee the access and permanence of the farmer in the market, the pre-financing is important as it ensures greater equity in trade relations. This is not an obligatory criteria in the organic movement, but it would be very important if this occurred on a regulatory basis.

Conclusion

The short-chain marketing experience of AIAB (GODO) is a real example according to its characteristics of the fact that it is absolutely possible and feasible to have a new and better approach between the two movements, organic and FTM. Therefore there is an urgent need for more experiences and best practices to be analysed. The final purpose of the process is to give a contribution to the integration of the two schemes, ensuring farmers and consumers an environmental friendly and socially fair production.

References

- Barabanova Y. et al. (2015), "Transforming Food & Farming – an organic vision for Europe in 2030", IFOAM EU Group, Brussels, June 2015.
- Council of the European Union, Regulation (EC) No 834/2007.
- European Commission (2014), Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "Action Plan for the Future of Organic Production in the European Union", COM(2014) 179 final, Brussels, 24.3.2014.
- European Commission, available on: http://ec.europa.eu. Access: 16 sep. 2016.
- Fouilleux E., Loconto A. (2016), "Voluntary standards, certification and accreditation in the global organic agriculture field: a tripartite model of techno-politics", Agric Hum Values. Doi:10.1007/s10460-016-9686-3.
- IFOAM (2016) "Principles of Organic Agriculture".
- Raynolds L. T.; Wilkinson J. (2008), Fair trade in the agriculture and food sector. In: Raynolds, L. T.; Murray, D.; Wilkinson, J. (Ed.). Fair trade: the challenges of transforming globalization. London: Routledge, 2008. p. 33-47.
- World Fair Trade Organization, "10 principles of fair trade". Disponible on: http://www.wfto.com/fair-trade/10-principles-fair-trade. Access: 09 jan. 2017.

The Food System of the Future is Organic and Fair Trade
The role of associations in organic & fair trade alliances

Naturland Association for Organic Agriculture[1]

About Organization

Naturland is an agricultural association that combines organic and fair trade under one global logo which is applied to products from both north and the south. Naturland farmers and processors have been ground breaking global pioneers for over 30 years. The world's first ever conversion to organic tea gardens in Sri Lanka and India in the 1980s was the prelude to their successful work. Currently 43,000 farms in 46 countries manage an area of about 330,000 ha according to Naturland standards.

Key words: Truism, Organic-fair trade Alliance, oxymoron, fair partnerships, whilom vision

Summary

In 2005, Naturland became the first German organic association to introduce binding social standards and in the following year this was followed by a project called "Fair Partnerships". In 2006 the first German processors, procuring locally raw goods, submitted to examination according to Naturland Criteria on Fair Partnerships and were distinguished for their sustainable business management and corporate strategy. Since then Naturland continued to co-operate with the fair trade organizations to further the development of whilom vision

Introduction

The idea of organic agriculture, which the founders of Naturland developed over 30 years ago, was visionary in two respects. First of all it dealt with the question of how it could effect a complete reversal in our eating habits and how we produce our foodstuffs. Even at that early stage the idea encompassed organic, social and economic issues as well as cultural aspects. This is not self-explanatory, because today production of organic produce is often thought as a means of mainly satisfying expanding organic markets, particularly those of the global North and the adherence to the minimum requirements of standards becomes a tedious task for cost-benefit equation. The conceptual approach of Naturland as a farmers association has always been to increase farmer's self-determination, their market agility and to provide opportunities rather than to only satisfying market demands regardless of how well-thought-out the circumstances of production were.

Secondly, the founders of Naturland developed their vision even then with the clear conviction that the future of our food supplies is to be considered and planned in global terms. What at that time would have bordered on the revolutionary, appeared in black and white in the global report of the IASSTD, "Agriculture at a Crossroads" (2008), some 25 years later: a vision

[1] Nora Taleb, Email - n.taleb@naturland.de

of a rural form of organic agriculture embedded in local circumstances and of global fair trade. Since then, it has become almost a truism: the food system of the future is organic and fair trade. Even though political practice unfortunately is still lagging far behind when it comes to recognizing this fact.

In this panel, Naturland would like to contribute by sharing the Naturland approach towards organic-fair trade alliances for sustainable market development. An insight to the role of an international farmers association is demonstrated, that besides being a certifier and offering a private standard, by self-definition needs to help shape the international organic fair trade movement and be a linkage between producers and processors, politics and markets. Further, several examples of successful organic fair trade partnerships are presented here.

Interlocking Organic production and Fair Trade

In organic agriculture, producing export crops, supplying to local markets and providing food supplies for the family household are no oxymoron. Typical fair trade crops such as coffee, cocoa and tea are so called "cash crops". That means they almost solemnly serve for generating economic income, in many cases they are export-crops. But economic income is just one side to sustainability. Ideally, agro-ecological systems, that apply methods such as intercropping, can generate various useful assets, such as timber, family food stuff, shade, provide for a healthy working-and living environment to farmers and workers, provide rural jobs and ultimately also produce cash crops. Hence, the goal in organic agriculture must always be to create multi-functional systems, with the most benefits, not only accounting economic benefits through sales prices.

But if agriculture is polluting through chemical-inputs or unsustainable management in general, then either the current or future generations will suffer from negative effects, and we cannot call these agricultural systems fair or just, as much as "fair prices" will be achieved on international markets.

To evade any misunderstands: Agriculture must not be certified "organic" in order for it to "be organic". In fact, the majority of well-functioning organic production systems worldwide are not certified. Further, it is not the goal of an association to certify all organic projects out there. Next to offering private standard certification, Naturland as an international association also sees itself responsible for creating and supporting a systemic change in the way we produce and consume our foodstuff. Certification then of course becomes crucial again when we talk about international trade and market access.

That organic production and fair trade are inseparable was evident to Naturland some thirty years ago when in co-operation with GEPA – The Fair Trade Company the world's first tea gardens in Sri Lanka and India and coffee co-operatives in Mexico and Peru were converted to organic. Then in 2005, Naturland became the first German organic association to introduce binding social standards and in the following year this was followed by a project called "Fair

Partnerships". In 2006 the first German processors, procuring locally raw goods, submitted to examination according to "Naturland Criteria on Fair Partnerships" and were distinguished for their sustainable business management and corporate strategy. Naturland continued to co-operate with the fair trade organizations to further the development of whilom vision.

The introduction of Naturland Fair in 2010 was the next logical step in this development. This supplementary certification was developed in co-operation with the fair-trade partners dwpeG, GEPA and Banafair and it combines organic agriculture, social responsibility and fair trade at every single stage of the value chain. Especially noteworthy is the fact that farmers in both the global north and south are feeling the benefit. This is why at the IFOAM Organic World Congress in 2011 in South Korea, Naturland Fair was recognized as being the first "organic double fair" certification worldwide.

Counteracting North-South dichotomies in Fair Trade

There is a controversial debate whether or not farmers of the global north are eligible to participate in the fair trade system. Naturland, working on fair trade with producers in the global north and south simultaneously, means bridging inequalities without denying them. It is not about negating the tremendous difficulties that rural populations in the global south have to face, and that in many cases their livelihoods are at risk. Long after colonialism was officially abandoned, there are hegemonic power structures that continuously serve to provide for the so-called "needs" of the global north through cheap labour, resources extraction and the externalisation of costs of production and consumption. Of course, we generally have to assume diverging starting points for farmers in the north and for those of the south.

However, there are common grounds for farmers around the globe. In many cases, their struggles are shared. The number of organic farms will only increase if the farmers can live off their proceeds. This applies just as much to agriculture in the global north because rural structural reforms (e.g. specialized agriculture, increased international market competition, processes of urbanisation and devaluation of farming to name just a few) have also caused a farm-decline in the northern hemisphere with severe effects. Hence, the goal is to create synergies in fair trade and to offer holistic, not exclusive concepts. Naturland argues that even the way we encompass fair trade, the way we think of it, put it into practice and communicating front politicians, consumers and markets must be all-including. An international farmers association must offer concepts accessible to all members, must unite the farming community, rather than exacerbate differences and must create synergies among market participants – the producers and processors, here and there.

This is why Naturland also includes the north in its fair trade certification scheme Naturland Fair. Moreover farmers in the Global South also benefit from the Naturland Fair concept being propagated in the Global North. Products containing ingredients from both the north and the south create new sales markets for their produce. Berchtesgadener Land, a big dairy in Germany for example, also uses ingredients like sugar, cocoa and bananas in Naturland Fair

quality in their local dairy products like yoghurt. And GEPA was able to introduce its first entirely fair-trade milk chocolate to the market, thanks to Naturland Fair; it is made of fair trade organic cocoa from the Dominican Republic, fair-trade organic sugar from Paraguay and fair-trade organic milk from the Berchtesgadener Land dairy. Ultimately it is also fair trade consumers who wish to buy products where possibly all ingredients meet fair trade principles, not just a minimum amount, again to meet standard requirements. Further, several studies have shown, that consumers rank "social responsibility and fair trade" their second most important expectation towards organic products. To many consumers it is irritating that organic certification (e.g. EU regulation) in most cases does not include aspects of social responsibility and fair trade.

Organic fair trade visions

The aspiration of Naturland – and ultimately also what the consumer expects – is that all ingredients of any product bearing the Naturland logo are produced organically, under principles of social responsibility and fair trade, and of course that they are supplied by Naturland farmers whenever possible. Naturland is able to live up to this endeavour, because Naturland farmers the world over place a wealth of top-quality raw materials on the market. And if in a bar of chocolate organic fair-trade cocoa from Peru, organic fair-trade cane sugar from Paraguay and organic fair-trade milk from Germany are processed, then it is a win-win situation – for farmers, processers, the trade and the consumer – because they are all links in the chain of one common conscientious commercial policy. In order for this to succeed step by step, processors and the trade – and politicians too – need to get involved. The first step to achieving this goal is for our society as a whole no longer to regard the vision of fair trade and sustainable agriculture as a risky venture, but to see it as principle of survival.

Carbon, Climate and Coffee – Building Alliances between Fair Trade, Small-Scale Farmers and Regenerative Organic Agriculture

Monika Firl[1], Fredy Zelaya[2] and Santiago Paz[3]

About Author

Monika Firl is the Director of Sustainability in the CoopCoffee's Montreal office and a member of the specialty Coffee Association of America (SCAA) and Sustainability Council. Monika had also been actively involved in both Fair Trade certification systems and dedicated fair trade membership associations. She is currently the member of the Canada Fair Trade Network Advisory Board.

Key words: Regeneration, Organic, Fair Trade, Climate Change

Summary

Leveraging our connections in both Fair Trade and Organic networks, allows us a unique opportunity to support environmental, social and economic regeneration from the grassroots up. In this example, authors discuss how CoopCoffees roasters have invested in learning and exchange opportunities with their producer partners to support viable solutions to the devastating impact of coffee leaf rust, La Roya, and other climate-related diseases. Simultaneously, authors also show how this has strengthened the alliances, reduced supply-chain risk and revitalized consumer-facing outreach in roaster markets. What began as an internal "emergency support fund" has grown and developed into an increasingly collaborative initiative to create simple, but effective, mechanisms to: transfer financial resources and technology to farmer coops; strengthen relationships and supply chain between dedicated Fair Trade companies and coffee farmer partners; and communicate to consumers the alternative approach to trade.

Introduction

When author discovered in 2013 that some of their longest-standing and trusted partners were suddenly losing their harvest to *La Roya,* they knew that they are facing a crisis of enormous proportion. Developing the "Carbon, Climate and Coffee" program has become an important part of collective identity, providing ecological responsibility, economic incentives, and an example of genuine engagement for environmental justice and support for local communities. In the context as a Fair Trade importer with a commitment to long-term and direct relationships with producer partners, author discovered that the strength lies in creating spaces for learning and exchange at the farmer level and in building networks with complementary initiatives. Working with each other in this collaborative way, partners were

[1] Director of Sustainability for CoopCoffees Canada;
[2] Leading Agronomist for COMSA, Honduras; and
[3] Commercial Manager for NORANDINO, Peru (tbc)

able to leverage the funds and knowledge. And together, were better equipped to confront the devastating impacts of climate change, while delivering a fresh and compelling message AND great coffee to consumers!

Tackling Crisis

What began in 2013 as a CoopCoffees internal ***"5-cents for Roya"*** emergency fund, to support coffee producers dealing with the leaf rust crisis, or *"La Roya"* as it's known in Spanish, has grown and continues to develop into an increasingly collaborative initiative. From 2014 – 2017 CoopCoffees has partnered with the Root Capital/Progreso Network **Climate Resiliency Match Fund.** This has resulted in some US$650,000 in leveraged funding transferred to 11 producer partners across Latin America to strengthen internal technical support and to invest in projects such as centralized and improved compost production, field renovation, and training in regenerative, organic practices. During the same period, CoopCoffees hosted four regional events to support farmer-to-farmer learning and exchange to the benefit of 20 farmer cooperatives across Latin America, representing more than 12,500 coffee farmer families.

Pictured here: The most recent "graduating class" of Pata de Chuchos – comprised of coffee producers and roasters following a one-week intensive "Diplomado Organico, sponsored by CoopCoffees and hosted / directed by COMSA, Marcala, Honduras.

Along the way, the authors discovered the incredible capacity for innovation when they tried to bring together dedicated Fair Traders, Regenerative Organic Practices and Empowered Small-Scale Producers organized in Cooperatives. In Northern Peru field renovation practices resulted in extraordinary resilience and vitality in the coffee fields. In Honduras, the COMSA team developed a field curriculum focusing on the 5Ms (Organic **M**atter, **M**icro-organisms, **M**inerals, Living **M**olecules and Grey **M**atter) and trained farmers and support teams through *Diplomado Organico (pictured above)* for diffusion and replication, spreading across Latin

America. And together, it was like discovering a world of possibilities in learning, exchange and productive transformation in coffee regions.

Coffee in Current Climate Context

Given the global trajectory of CO_2 emissions and the resulting impact on increasingly erratic weather patterns, the Classification of Agro-Ecological Zones for Arabica Coffee: An Improved Understanding of the Impacts of Climate Change published by Bunn, Läderach, Perez, Montagnon and Shilling concluded that 50 percent of current coffee regions would no longer be suitable for production by the year 2050. Or to express that in examples, the research suggests that with expected rising temperatures, coffee yields in Veracruz, Mexico would fall below economic viability by 2020 causing massive abandon; and that Brazil, currently producing a third of the global crop of Arabica coffee, would lose up to 95% of their suitable coffee production area due to increasing temperatures by 2100. And these types of economic and/or ecological scenarios will repeat in varying intensity across all current coffee growing regions. The key concept to retain is that without a dramatic shift in behaviour, some 50% of productive coffee lands will be GONE by 2050 for either economic or agronomic reasons!

"Arabica coffee requires a climate with mean temperatures of about 20°C and 1200mm annual rainfall to be economically viable," the research cites. "Temperatures over 30°C for extended periods reduce yields; while frost for only a few days damages, or can even kill, the plant."

ICO statistics value the annual coffee exports at more than US$ 15 billion, with 94 million bags shipped worldwide. Coffee production employs some 26 million people in 52 countries.

Given the sheer magnitude of the coffee industry, the impact of changing landscape can no longer be calculated strictly in dollar amounts. In the case of CoopCoffees roasters, partners acknowledge their collective obligation and the immediate need to contribute towards promoting more sustainable solutions within the network of roaster and producer partners. These solutions require a combination of excellent scientific understanding, the appropriate political and economical environment, viable proposals that inform and mobilize both roasters and producers, and a widespread communications / marketing campaign targeting consumers, technical and industry allies, and development funders.

Under the umbrella of the **Carbon, Climate and Coffee** initiative, CoopCoffees roasters pay a voluntary "carbon tax" based on volumes of roasted coffees, as an "environmental-service investment" with the supply chain. For their part, the producer groups have prioritized actions that encourage soil regeneration and other carbon-capture enhancing practices. The results already demonstrate multiple win-win scenarios. This has enhanced the collective understanding of climate challenges; discovered comparative energy efficiencies amongst roasters; improved productivity and economic well-being amongst coffee farmer partners and their cooperatives and achieve stable supply and enhanced quality, thereby reducing market risk for both producers and roasters.

Improved Market Position

While the Specialty Coffee industry is acutely aware of the threat that on-going climate change poses to its supply chain in terms of both product quantity and quality, it's the Dedicated Fair Traders who are best positioned to respond. The long-term relationships and the trust constructed over the years, gives a distinct advantage in being able to quickly and efficiently support project work with producer partners in country. And this offers an additional marketing opportunity to clearly distinguish Dedicated Fair Trade from within a marketplace awash with diverse interpretations of Fair Trade coffee, not to mention in contrast to commercial coffee traders.

Authors present the immediate impact as well as the positive "snowball effect" of producer experimentation, exchange and learning about regenerative agricultural practices, such as the application of effective micro-organism (EM) foliar sprays, enhanced "Bokashi" composting techniques, the use of biochar and specific mulching practices – which have resulted in doubling and even tripling organic coffee yields. Producer representatives will discuss the positive impact on their farmer organizations, resulting from improved soil fertility, crop productivity, economic prosperity and the personal relationships between producer groups and roasters, built and strengthened with trust and direct engagement.

Conclusion

Efforts demonstrate the incredible and immediate value of working together across a highly collaborative supply chain, including traders, roasters, producers and allied organizations, as one move from knowledge to action in shared common challenge to create a new and compelling message in support of Regenerative Organic Agriculture and Dedicated Fair Trade.

Attempts have been made to highlight the importance of strengthening small-scale coffee farmer knowledge and innovation, as well as their respective roles in supporting the broad-spread application of simple and currently available regenerative, organic practices capable of recovering and enhancing the soil's capacity to serve as a "carbon sink," while improving productivity.

And finally, results illustrate how Fair Trade coffee roasters have been able to communicate the impact of this work to distinguish their relationships in trade, and to demonstrate to the end consumer how with each cup of coffee, he or she is supporting small-scale farmer organizations, regenerative, organic practices and a more engaged model of Fair Trade!

WFTO Fair Trade Guarantee System (WFTO-FTGS): Not Just Product, But Also People

Vitoon R. Panyakul[1]

About Author

For the last 24 years, Vitoon has been involved in Thai organic and fair trade movements where he helps to establish and develop many organizations such as the Organic Agriculture Certification Thailand (ACT), the Thai Organic Trader Association (TOTA), Thai Fair Trade Network, and the Thai PGS Organic Plus network.

Key words: fair trade certification

Summary

It is common for fair trade certification to base on product and or management system while ignoring people behind it. WFTO has break away from this conventional approach to create a new certification system based on the organization (people) as a whole for its fair trade scheme. This non-conventional approach open new possibilities and opportunities for even more innovative conformity assessment/quality assurance activities, such as peer visit, risk-based external audit and organization-base certification.

Context

One of key weaknesses of conventional fair trade certification is the focus on the product, rather than the organization and the people. Key reason why most fair trade certification choose to have product certification because of it is the conventional approach adopted by mainstream conformity world, where almost all focus is either on product or management system certifications. However, fair trade is a human-to-human relationship, starting from labour relationship within the producer family, to member relationship within producer group, and trade relationship between producer group and buyer as well as importer, distributor, and retailer. To reduce fair trade to just product has led to a situation where a large corporate (national, international, and multinational alike) can have fair trade certification for an insignificant of its business relationship while maintaining a large part of its business relation un-fair, and in some case exploitative.

Innovation involves doing it differently. Instead of restricting itself to convention conformity assessment requirements (e.g. ISO17065), WFTO decided to break away from the mainstream and innovated its guarantee system based on human-relationship and organization. This approach allows WFTO to adopt innovative mechanisms for its guarantee system.

[1] Green Net, Thailand, www.greennet.or.th

Main Features of the WFTO Fair Trade Guarantee System (FTGS)

Aims: all organization joining WFTO membership must adhere to WFTO's Fair Trade Standards which in turn based on internationally-recognized Fair Trade Principles.

Main components:

a) Self Assessment (SA) every 2 years

b) Peer Visits (PV) every 2-6 years depending on risk category

c) Monitoring Audit (MA) every 2-6 years depending on risk category

d) supplement by WFTO Fair Trade Accountability Watch Tool

The frequency of the SA, PV, and MA depends on "risk level" which is determined by 4 factors (i) Complexity of the business, (ii) Scale, (iii) Control on operation, and (iv) Use of WFTO Product label. Risk categories can be changed over time based on the performance of the organization. Table below shows the frequency based SA, PV, and MA.

	Low Risk	Medium Risk	High Risk
Self Assessment	Every 2 years, after 2 good audits/ visits reduced to every 3 years	Every 2 years	Every 2 years
Peer Visit	Every 4 years; after 2 good audits/ visits reduced to every 6 years	Every 4 years (alternating with Audit)	Every 2 years (alternating with Audit)
Monitoring Audit	Every 4years; after 2 good audits/ visits reduced to every 6 years	Every 4 years (alternating with Peer visit)	Every 2 years (alternating with Peer visit)

Self Assessment: similar to quality management system of internal audit and management review, SA is an exercise of the fair trade organization (FTO) to review its operations against WFTO Fair Trade Standards, identifying their own strengths and weaknesses as well as setting own corrective-preventive actions to rectify its deficiencies and non-compliance. The SA report is to be sent to WFTO Guarantee System Manager (GSM) for evaluation and approval.

Peer Visit: the peers (to be recommend by the FTO but subjected to approval by the WFTO-GSM). Peers are external and can be FT buyers, other FT organization in the region/country, consumers, researcher. The peers do not come to inspect but rather to help the peered FTO to improve their compliance with the WFTO-FTGS. They can highlight the good practices in an FTO and raise issues of concern. It can be a mutual learning experience. The Peer visits normally alternate with SA and MA. The time of the peers would not be paid for but the FTO will be responsible for all arrangements and costs for travel and accommodation. The PV report is also checked by WFTO-GSM. PV has many aspects in common with PGS

Monitoring audit: this is done by external auditors, trained and approved by the WFTO. Every FTO member is obliged to have a MA, with 2 possible exceptions, i.e. non trading members and FTO members already having equivalent fair trade certification system recognised by

WFTO (or allowing a reduced audit). The FTO will be given a list of WFTO approved local auditors with their costs. It is FTO's own responsibility to organise its MA within the time frame set by WFTO.

WFTO Fair Trade Accountability Watch: an online web-based system that all members as well as concerned stakeholders or the public can raise issues or concerns about a WFTO member's fair trade practices. Registered complaints may also be raised directly with FTO and all will be dealt with through the Complaints procedure.

Core messages and conclusions

The following table illustrates some of the WFTO's innovations.

innovation	Benefits
Peer visit by other fair trade practitioners or local stakeholders (e.g. NGOs, academic, consumer representative)	• having inspection by 2nd party or independent person but have good knowledge about fair trade practices than professional inspector who do the audit by what prescribes in the standards • foster collaboration and learning among fair trade practitioners within the country • lower costs
Maximum 4 year cycle of external audit with low-risk situation (high risk still have annual external audit)	• having real risk-based audit system • lower costs
Not product-base certification but organization-base, so all products (and possible services) produced by the organization can come under the fair trade scheme	• enable product with multiple raw materials and those not from agriculture (i.e. handicraft products) to have fair trade guarantee • possible to include service-base fair trade organization • the organization must be really fair trade as a whole, not fair trade as superficial

The system has been presented during the World Fair Trade week in Rio de Janeiro in May 2013. In the meantime there are already more than 110 Fair Trade Organisation which are guaranteed according to this new Fair Trade GS. Although it is still early to evaluate how effective and efficient the system functions, at least the boldness of WFTO to innovate is something already to be congratulated.

The WFTO Fair Trade Guarantee System paves a new road of quality assurance approach and market communications. Social-dimension of fair human relationship throughout the supply (production) and trading chains can be verified of their compliances to the WFTO's Fair Trade Standards with risk-base, stakeholder involvement (peer visit), inclusive (fair trade handicrafts can now join the system), and cost-effectiveness.

Price Differential Mechanisms In OCA Sourcing Pilot Projects in India to Establish a Business Case for the Supply Chain especially the Farming Communities

Bart Vollaard & Jaskiran Warrik,
Organic Cotton Accelerator (OCA)

About Organization

The OCA (Organic Cotton Accelerator) is a group of frontrunner organizations who have joined forces to tackle the challenges facing the organic cotton sector. Through coordinated investment and actions, OCA aims to solve the integrity issues in the sector, and improve the business case for organic cotton—from farmer to brand.

Key words: sustainable sourcing, organic cotton, fair pricing, OCA

Summary

One of the most powerful instruments OCA can harness to build a more prosperous organic cotton supply chain is the sourcing practices of OCA partner brands. Therefore, OCA partner brands committed to piloting and learning about how they could use their sourcing practices to improve the business case of organic cotton farmers and other value chain players. For 2017– the first pilot year–participating brands agreed to observe a set of common principles when sourcing from Indian suppliers managing organic cotton farmer programs. These principles are formalized in contractual agreements between brands and supply partners and include – amongst others– purchase guarantees early in the season, fair prices to farmers, access to seed, and aligned data reporting.

Methodology

The OCA Secretariat is responsible for coordinating the joint efforts of all partners involved, and ensuring a transparent and credible tracking of activities and impacts of the pilot projects. Based on the learning from these pilots, the objective is to scale and gradually mainstream successful practices in (organic) cotton.

The approach and mindset in this pilot stage is one of transparency and learning-by-doing, where all value chain players engage as partners to understand how each could do better. Altogether, the pilots provide the opportunity for brands, suppliers, and farmers to work together on improving the business reality of organic cotton, and the integrity of produce at the source of the chain.

OCA Responsibility

OCA brands and their supply chain partners agree upon specifics of the project and share the same with OCA. Brands provide purchase guarantees based on their consumption pattern

and supply chain partners agree upon a price differential and managing the farm activities, certification etc.

OCA is responsible for facilitating discussions between the parties of the contract and also ensuring an open line of communication.

OCA further has put in place the guidelines and system for the measurement and sharing of key (impact) data, such as the prices paid to farmers, yields, and changes in household income. These data are key in learning both works and creating the necessary transparency to foster trust among supply chain players and brands.

OCA is also responsible for establishing GMO testing guidelines to ensure that the projects are working to create credible organic cotton. To ensure integrity, OCA also has in place an external technical consultant to ensure proper sampling, risk assessment and treatment of test results. In addition, OCA provides for an external agency to validate the data collected by the supply chain partners.

Way Forward

There are underlying issues of good quality seed and other inputs as well as logistical and payment related concerns in the projects which OCA is addressing through other projects like Seeding the Green Future with FiBL. OCA is also requesting funding for a broader research study to establish the business case and CBA for organic cotton across the supply chain. In this, as with other challenges in the organic sector, OCA has issued a call for collective action and welcomes partners with a vested interest in securing the future of organic cotton, globally.

Fair Pricing and Profit Sharing Along the Supply Chain from Retailer to Producer

Amish Gosai[1] Textile Exchange

About Textile Exchange

Textile Exchange (TE) is a global non-profit organization that provides the knowledge and tools the industry needs to make significant improvements in three core areas: Fiber and Materials, Integrity and Standards, and Supply Network. TE has developed several important industry standards, including the Organic Content Standard, the Responsible Down Standard, the Responsible Wool Standard, the Recycled Claim Standard, and the Global Recycled Standard.

Summary

TE is a global NGO, working with a mission to inspire and equip people to accelerate sustainable practices in textile value chain. It provide open conversations about the price and trade of organic cotton to make organic cotton processing from farming to retail supply chain more sustainable and ensure recommendations for progressing responsible pricing and trade.

Main Issue

Anonymous trade creates disconnect between buyers and sellers and allows participants to pursue their economic rationality without any concern for the personal or moral consequences, for example:

- When commodity prices are driven down, the market is rewarding and incentivizing practices that keep people in poverty and compromise the environment.
- There is a lack of transparency as to what the farmer gets paid and creates opacity to the cost of production.
- Conventional pricing and trading models that still dominate the organic market are increasingly seen as not fit for purpose.
- With organic cotton, the expectation is that the market would be willing to pay a differential for the added value of organic agriculture. Unfortunately, because of the way commodity markets operate, this is not working, and organic cotton is failing in its responsibility of fairness to all
- Organic agriculture is a force for good - the "gold standard" mode of production - with regenerative capabilities to address soil health, stabilize climate and significantly contribute to the United Nations' Sustainable Development Goals (SDGs).
- Brands, manufacturers and farmers all have very clear requirements from the market and from each other. For organic cotton to deliver on its promise, it is apparent that price and trade need a rethink.

[1] Amish Gosai - amish@textileexchange.org

- Brands must be sure that they are creating a market-driven solution when they choose organic cotton. Trading responsibly and paying a fair price must be part of that solution; otherwise, all efforts to improve the situation will be undone by the poverty of the people at its heart.
- There is much to learn from traditional luxury supply chains. In these networks, brands are confident in the craftspeople whose skills define the quality of their products, and artisans themselves are linked through craft guilds that work to certify and improve their skills.

Part 5

ORGANIC WORLD CONGRESS 2017

जैविक कृषि विश्व कुंभ

Marketing for Sustainability

Bringing Organic Lamb to the Table; Opportunities and Challenges faced by Indian Shepherds

Nitya Sambamurti Ghotge[1], Balu Athani[2] Chaitresh Ganguly[3]

About Authors

Dr Nitya S. Ghotge and Dr Balu Athani are veterinarian associated with NGOs, called ANTHRA and FUTURE GREENS respectively. Mr Ganguly is associated with Timbaktu Collective. Authors are working for marginalized groups of livestock holders and helping them to realize fair prices for their products. Authors are also working togather to promote organic livestock rearing practrices.

Key words: Organic meat, Pastoralism, sheep rearing

Summary

*India has the 2nd largest sheep population in the world. Almost all the sheep in the country are reared by migratory pastoral communities, small farmers and landless labour. These animals graze on uncultivated fields, commons, grasslands and scrub forest under open management systems and provide a **livelihood** to several small farming and landless households. Most of India's sheep breeds are meat breeds and the main market for this meat is within the country itself. A huge demand exists in big metropolises like New Delhi, Mumbai, Hyderabad and Bangalore as well as in the smaller rural towns for its meat known as "mutton". Recently there has been a demand for organic meat too where consumers, especially wealthy urban consumers, are prepared to pay a premium price for meat which can be certified as organic. However, it is not always easy to ensure that sheep reared by these small producers can be certified organic. This paper discusses experiences and practices from three different regions in India where sheep rearing is practiced and discusses the challenges and the opportunities faced by small producers to produce organic meat.*

Introduction

India has the 2nd largest sheep population in the world (FAO). Almost all the sheep in the country are reared by migratory pastoral communities, small farmers and landless labour. Although sheep are reared almost all over the country, but sheep rearing is more prominent in the dry and drought prone areas of the country where agriculture and crop farming are uncertain. Sheep are reared under open systems and graze on fields which are left fallow and help clear them of stubble. In the process, the fields are fertilized with the droppings of urine and manure. Once the field is cleared of stubble the herd moves on to a new area. Depending on the grazing available, herds may travel small distances within a village or at times very large distances across districts and even state boundaries.

[1] Anthra , India, www.anthra.org , nitya.ghotge@gmail.com*.
[2] Future Greens , India, athanibr@gmail.com
[3] The Timbaktu Collective,www.timbaktu.org, timbaktu.collective@gmail.com

India's sheep breeds numbering over 42 (NBAGR) are mainly meat breeding varieties and there is a huge domestic demand for this meat. The large cities of Delhi , Hyderabad and Mumbai are the largest consumers of this meat. India is also one of the the largest exporters of sheep & goat meat in the world. In 2015-2016, the exports of sheep and goat meat from India were about 21,950.71 MT worth Rs. 837.76 crores (APEDA). Mobile systems of sheep rearing has advantages and disadvantages. Mobility increases fodder availability and opportunities for accessing fodder but often the quality of fodder available in a new place is not known. For instance, in a new place, a shepherd may not know if a field available for grazing is free from chemical residues or not. As yet, there are no mechanisms in place to declare lands free from chemical residue. Mobility helps marketing as shepherds can reach different markets and sheep in India travel long distances to far away markets. For example shepherds from Rajasthan in certain years may migrate all the way south to Maharashtra or even Orissa and sheep from Rajasthan and UP in North India travel all the way South to Hyderabad for slaughtering. On the other hand, formal government services find it difficult to deliver services to mobile communities. However, shepherds use this very mobility to visit medical shops on their own and medicate their animals themselves. Many a time, the medicines used are strong antibiotics and chemicals including anti parasiticals. Shepherds are not aware of correct dosages, withdrawal periods, etc. Many shepherds are not literate and cannot follow the instructions given on the medicine package. They seldom keep records.

About 30 years back the situation was different. Very few farmers or shepherds used chemicals and antibiotics as they were expensive and not easily accessible. Now this has changed and every village today has easy access to chemicals. Although, there are cooperatives and Federations promoted by the state governments, they are only now becoming aware of the importance of small ruminants to the Indian economy and the importance of organic livestock farming .

Material and methods

A comparison was done between three sheep rearing areas in Southern India where migratory pastoralism is prevalent. In these states, three NGO's have been encouraging organic practices amongst shepherds. The opportunities and challenges in producing organic meat have been enumerated and ways to solve them are discussed.

Animal management practices in three areas

Most of the sheep bred by the shepherds in the study are of local breeds such as the Deccani of the Deccan plateau and the Yelaga. In some areas though they have been mixed with other Indian breeds such as the Red Nellore and the Madgyal. In all three areas sheep are raised under open grazing systems by nomadic, semi nomadic and sedentary communities. Feed supplements are offered when fodder is scarce to breeding rams, pregnant and lactating ewes and sometimes to lambs which are to be fattened for the market . Animals most often are housed in open enclosures. Sale of animals happens in the local market or to agents who

visit these shepherds and buy their sheep. As veterinary facilities are limited in all three areas, shepherds often mediciate their animals themselves. Over the years the practice of using plant based herbals is going down and there has been an increase in the use of antibiotics. Common ailments are pneumonia of uncertain origin, non specific diarrhea, contagious ecthyma and sometimes abortions of uncertain origin.

NGO support to shepherds

As livelihood enhancing activities, NGO's in the three states have supported these shepherds in different ways.

1. In Maharashtra, "Anthra" has been working intensively with shepherds since 2005. Some of the efforts towards organic sheep farming carried out by Anthra have been:
   i. encouraging shepherds to rear the local breed of sheep, the Deccani
   ii. growing of organic fodder by shepherds
   iii. encouraging the use of ethno veterinary medicines and thereby reducing the use of chemicals and antibiotics
   iv. providing an SMS service to facilitate the exchange of ideas and knowledge between shepherds
2. In Karnataka, "Future Greens" has made efforts to:
   i. Organize shepherds into producer cooperatives which receive support in terms of veterinary care, nutrition, breeding, maintaining production records and marketing
   ii. Help shepherds produce high quality lambs for the market through training on breeding, feeding, health care and marketing which are then purchased at a price higher than market
   iii. Run a unit for hygienically slaughtering, dressing and processing lambs purchased from the area for sale as organically raised lambs under the brand name "Yelaga special".
   iv. Establish a certified breeding unit for promoting the local Yelaga breed of sheep
   v. Develop a simple tracking system for meat. Each carcass is labeled with a batch number which has a code indicating the producer. In case anybody is interested, the source of the meat can be easily identified.
3. In Andhra Pradesh, "The Timbaktu Collective" has encouraged 809 agricultural labourers to take up small ruminants to rear. Timbaktu Collective supports them through the
   i. Promotion of a cooperative called Gramasiri where these labourers are registered as members
   ii. Capacity building of the members of Gramasiri
   iii. Building a thrift and credit system among the members

iv. Supporting members to buy small ruminants

v. Developing a resource team among the members

vi. Supporting the Cooperative to give services such as fodder and veterinary care.

Eventually, the Collective wants to come up with a sustainable business model which will give the shepherds a good income as well as bring organic lamb to the tables of cities like Bangalore and towns like Anantapuram

Figure 1. Map showing the three regions

Challenges to promoting organic systems for migratory shepherding communities that were noticed are

i. It is difficult to constantly touch base with the shepherds as they are constantly on the move.

ii. Organizing collectives or cooperatives of shepherds difficult as they are constantly on the move

iii. Record keeping and monitoring of inputs into the production system and health incidences at the level of individual animal difficult as shepherds are not literate and flocks are small and widely dispersed.

iv. Fodder quality is highly variable. Often farmers change crops and use pesticides and do not inform the shepherds that they have sprayed their fields

v. Origin of the inputs into the production systems are not known, for example the feed supplements used, such as maize and ground nut cake cannot always be certified as organic

vi. Shepherds medicate their animals themselves and tend to use antibiotics in wrong dosages

vii. As yet no effective certification system for small holder individual shepherds or even shepherding groups exists in India

viii. While certain certification agencies have expressed an interest to certify these animals they are unable to issue certificates as no standards are yet in place for meat production in India. In the absence of domestic standards, certifying agencies cannot issue certificates.

Table 1: Problems faced in certifying meat as organic

Parameters	Maharashtra	Karnataka	Andhra Pradesh
Grazing land and fields not organic	✓	✓	✓
Source of feed supplements not organic	✓	✓	✓
Antibiotic use by veterinarians	✓✓✓	✓	✓
Antibiotic use by shepherds themselves	✓✓✓	✓✓	✓✓
Organic certification expensive individual shepherds cannot afford it	✓✓✓	✓✓✓	✓✓✓
PGS systems for small animal holders not present	✓	Working on a system	✓

Conclusion

Guidelines for organic livestock production systems for meat animals applicable to Indian systems need to be developed. This needs to be done with the help and support of farmers and livestock owners, NGO's working in the field, National certification Agencies and others working in the field of organic production.

These guidelines need to be widely shared across state Animal husbandry departments, universities, research institutes, farmers, other practitioners. Methods of declaring lands organic need to be worked out. This will have to be done in conjunction with the revenue departments, agricultural departments and farmers. Training of livestock producers especially small producers and shepherds as well as farmers on whose lands these animals graze on the value of organic production systems as well as the problems associated with excessive antibiotic and chemical use need to be increased and intensified.

References

- Food and Agricultural Organisation of the United Nations www.FAO.org (Jan 2017)
- National Bureau of Animal Genetic resources www.nbagr.res.in (Jan 2017) http//www.ontariosheep.org/ (Jan 2017)
- APEDA Agriculture and Processed food products Export Development Authority (www.apeda.gov.in)
- Provenza F., Meuret M. & Gregorini P (August 2015) Our Landscapes, Our Livestock, Ourselves: Restoring Broken Linkages among Plants, Herbivores, and Humans with Diets that Nourish and Satiate , APPETITE · Impact Factor: 2.69 · DOI: 10.1016/j.appet.2015.08.004
- Provenza F., Meuret M. (2014): The Art and Science of Shepherding"; Tapping the Wisdom of French Herders (eds) Acres USA

Six Star Value-Added Agriculture in Indigenous Communities of Taiwan

***Pao-Hua Liu*[1]**

About Authors

Pao Hua Liu is a specialist at Tse-Xin Organic Agriculture Foundation and is supervising the implementation of Six Star Value Added Agriculture initiative to promote organic agriculture and innovations by small holders towards environmental, social and economic sustainability.

Key words: organic, agriculture, farmers, indigenous, communities, market, value

Introduction

One of the common challenges facing indigenous peoples in Taiwan is that although they have sufficient land, farming is not enough to support a family. To increase their income and improve their living conditions, indigenous farmers are abandoning farming for off-farm employment opportunities. Elderly people and children are left behind in the countryside. The out-migration of men to towns has forced many elderly people to undertake the rearing of children alone, weakening family stability. Most family members disperse and live far away from each other, reducing the chances of providing support for each other as characteristic of the traditional family structure. The extent to which families rely on remittances from members working in urban areas adversely affected the integrity, unity, values, and traditions of indigenous families. To enhance the capacities of farmers to generate income and improve the livelihoods of indigenous communities, Tse-Xin Organic Agriculture Foundation launched the Six Star Value-Added Agriculture initiative to tap the potential of organic agriculture fully so that communities would benefit from targeted support for strengthening the value chain from planning and producing to processing and marketing."Six Star" refers to the integration in the primary level of production with the secondary level of processing and the tertiary level of service to form six levels of coordination in the value chain.

The Six Star Value-Added Agriculture is a three-year initiative commissioned by the National Development Council in 2015 for approximately forty farmers from four tribal communities, notably Cilamitay, Kaadaadaan, Kiwit, and Taromak. The initiative is based on the entire value chain from producing, processing, distributing, and marketing to retailing in enhancing the economic advantage of the farm family by helping make organic agriculture more sustainable for farmers. The aim is to promote smallholders in organic farming and their innovations, provide alternative employment opportunities in communities, stimulate local development, and protect the natural environment.

[1] angela-chen1@hotmail.com

Methodology

For the initiative, we carried out qualitative interviews with farmers, focus group discussions, and field visits to farms. Staff held community meetings with farm households about the initiative. Other data sources included review of documents and training reports. In addition, staff offered training workshops, technical assistance, networking resources, and ongoing consultations to help transitioning farmers learn the skills necessary to sustain small-scale agricultural operations that are organic or environmentally friendly. Based on findings, we analyzed and compared the number of farm households in the four settlements practicing environmentally friendly farming in the initiative.

Research Context

This paper explores an innovative mix of value-adding initiatives to re-establish organic agriculture in rapidly depopulating and economically marginalized areas of Taiwan. The network of activities can provide opportunities for local development, enhance the role of family farming, create new jobs for young people, improve the social and economic infrastructure in the communities, and promote biodiversity conservation. For example, indigenous farmers increase farm production sustainably and diversify their livelihoods by engaging in non-farm activities such as marketing of local products.

To achieve the objectives, a team of staff reviewed the geographical and demographic profile of the areas, the socio-economic conditions, the existing livelihood patterns, prevalent difficulties faced by the communities, and the constraints to development initiatives. The staff evaluated the conditions of the indigenous settlements, their preferences with regards to livelihood options, cultural and social aspects of their lives, their aspirations and suggestions on what they believe to be their urgent requirements and needs, and planned their development. Based on the discussion and feedback received from the communities, staff prepared an action plan for an integrated development of each community. The initiative was put before the National Development Council and given the details of the intervention, the government in turn extended full support for the implementation. Then, staff visited the settlements, called community meetings, and carried out group discussions, primarily with the aim of involving the community members in the development process through a bottom-up approach. An objective of the initiative is to transfer technological know-how to promote sustainable means of harvest and processing along with development of social organization towards bringing a collective integrated approach to livelihood in the regions. In the initial year, staff carried out demonstration activities in organic agriculture.

Green Conservation Program

The Six Star Value-Added Agriculture initiative is committed to organic farming as a way of life and a means to maintain particular landscapes and ecosystems. The goal is therefore to preserve both a natural environment and smallholders that is linked to it and intrinsically valuable. To aid farmers, Tse-Xin Organic Agriculture Foundation established the Green

Conservation program, a certification system to promote environmentally friendly agriculture, which emphasizes ecological conservation to restore natural habitats and to preserve priority species. Strategically focusing efforts on these species also help conserve the many other species which share their habitats and or are vulnerable to the same threats in the indigenous settlements. The primary focus of the program is to protect threatened species and their habitats through technical training and assistance to local farmers who are transitioning from conventional to organic farming. As an incentive for conventional growers to switch to organic agriculture, farms that meet the Green Conservation standards receive the certified seal of approval which can be used to market products. Since the Six-Star Value-Added Agriculture initiative in 2015, the total number of farm households practicing environmentally friendly agriculture and organic agriculture has grown steadily (Figure 1). To date, nearly forty farmers from the initiative have joined the Green Conservation program.

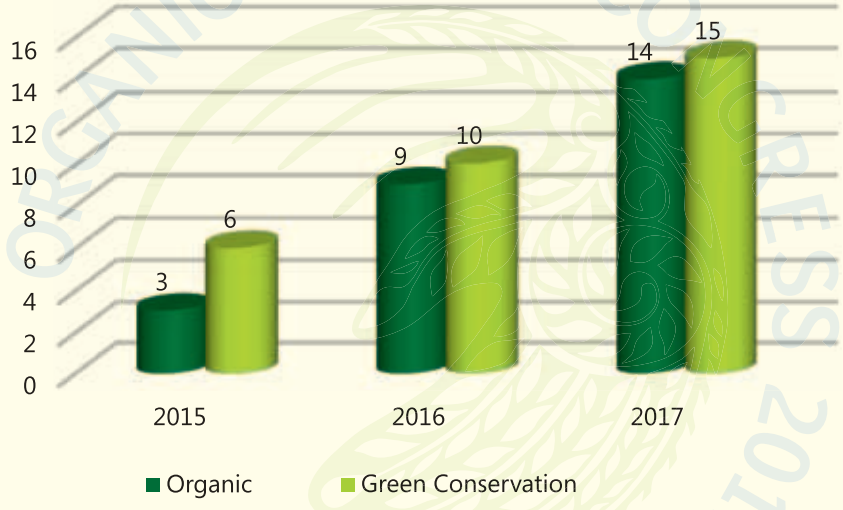


Figure 1. Number of farm households in the Six Star Value-Added Agriculture initiative since 2015.

Specialist Food Products

To establish a trading platform to collect their produce and sell it collectively to consumers, organic farmers receive assistance on product development and marketing with consumers paying fair prices to help preserve small-scale structures in producing and processing. The initiative creates employment for indigenous members in processing organic products as well as packaging and labelling them with a brand. The farmers sell the value-added products under the brand name to people who travel through the area, and in the local and regional markets. The combined efforts of the Foundation and communities, with the support of experts and consultants, have assisted farmers in improving the quality and quantity of their produce by organizing training and demonstration workshops on organic production, grading, processing, and packaging. These interventions have also increased the confidence and capabilities of small farmers, with tangible results. Presently, most of the corn produced in Kiwit is conventional corn, which has only marginal market value. While

conventional corn sold during 2015 at NT$ 9/kg, the average selling price of organic corn is NT$ 15/kg and processed organic corn can go up to NT$ 220 per kg, such as organic corn biscuits. A large part of the settlement population grows conventional corn but due to the lack of processing and value-added activities, this corn gets sold at a very low price. Other farmers sold Chinese dumplings filled with traditional wild vegetables whose overall turnover increased significantly. The dumplings are packed in twenties and sold at NT$ 140 per pack. Between 2015 and 2016, the sales volume of frozen dumplings increased from 1,117 to 3,286 packs, which yielded a total earning of NT$ 303,660. As a result of new marketing strategies, farmers' income from dumplings increased threefold. Based on these successful experiences, indigenous communities have already diversified its production to include ten other local products. Through the interventions of the initiative, the four indigenous settlements earned approximately NT$ 1,912,680 from September 2016 to January 2017 (Table 1).

Table 1. Total amount earned by the indigenous communities in tribal enterprises over four months.

Indigenous Settlements	Cilamitay	Taromak	Kaadaadaan	Kiwit
Sales	$40,000	$226,000	$618,000	$1,028,680

Direct Marketing

Marketing directly to consumers can be done in a variety of ways. Options include sales directly to restaurants and local institutions, as well as mail order and Internet sales. Distributing products through direct marketing channels provide small farms with the flexibility and stability they need to stay in business. Using high technology, farms promote online through social media and e-commerce such as Facebook and online market places. Engaging with consumers through social media can bring economic benefits to the farm, as well as build customer or brand loyalty. Many communities tap the market by developing and implementing outlets to sell their products such as setting up a business website. Some farms also have a business Facebook page which allows more people to access information about the farm. Online stores can increase customer base and lead to greater economic viability. The Internet provides access to more markets and better revenue to the producers. For example, several tribal communities conduct e-commerce through the largest online marketplaces in Asia like Books (www.books.com.tw) and Eslite (www.eslite.com) that drives income closer to the actual providers of products by deconstructing the value chain. It also strengthens communities, locally owned businesses, and indigenous populations, which include extra demand from consumers and the opportunities for increased connectivity with buyers or industry members.

Taiwan's indigenous farmers traditionally have small plots and grow mixed crops. Visitors provide a market for specialty products sold through local restaurants and shops. Growers with a diversity of crops can supply local restaurants that want to feature specialty cuisine or dishes using fresh organic produce. Selling to restaurants improve economic viability for

farmers by capturing a greater percentage of the food dollar and shorter shipping distances. One tribal community in the initiative has collaborated with five restaurants and nine farmers. Orders from local restaurants increase visibility and sales for farm products. Restaurants provide a steady market throughout the production season and help create brand recognition for farmers by mentioning the name of farm suppliers on their menus. Other benefits include the opportunities for personal connections with consumers by providing healthier food and support of local economic development.

Discussion

The establishment of the initiative enabled the communities to sell their produce for a secured price and also resulted in the aggregation of produce, and the critical volumes thus generated could be processed and packed to meet market demand. Production diversification also helped the community to realize the economic value of such products that were usually not considered to have commercial value. The demand for the products was gauged in advance and appropriate channels were set up for its sale.

Before the transfer of technology, appropriate training and technical inputs were calibrated in simple form as tacit knowledge for the community which in turn enhanced the acceptance of the technology and also helped in retaining the quality of the products as Green Conservation or organic. The transfer of technology was smooth and was preceded by initiatives on awareness generation.

The intervention of establishing value-added activities together with scientific inputs on the process has positively impacted the four indigenous settlements of Cilamitay, Kaadaadaan, Kiwit, and Taromak. This initiative resulted in better price realization of local crops. The settlements have been doing well in production, processing, packaging, branding, and selling of the various agricultural products made in the area as financial sustainability is being established. The ownership of the community is in the sale of the produce and the accountability of the community towards the environment remains high by virtue of the mechanism of the profits generated from the sale of the agricultural products which is collected and sold to the market by the settlements.

Conclusion

In many ways, this paper illustrates a success in finding innovative ways to integrate organic agriculture for smallholders and environmental protection by reaching out to markets well beyond production. Local farms have developed an interrelated group of activities of farming, food processing, retailing through shops and restaurants, and direct sales, which reinforce each other to maximize the value added to produce without threatening environmental or social sustainability. Farmers joined the initiative because of respect for the environment and a desire to support organic farming. Members enjoyed the sense of belonging to a unique form

of food production that operates on a small scale and protects both the physical environment and animals. Supported by the Six Star Value-Added Agriculture initiative, these efforts to promote organic agriculture have become a way to help revitalize rural regions by aiding the survival of organic farming in marginal areas, increasing farm income, creating new jobs in rural communities, adding value to regional agricultural products, and conserving biodiversity in underserved communities of Taiwan.

Farm to Table: A System to Promote Organic Agriculture and Protect the Environment

***Tsai-Ling Yeh*[1]**

About Authors

Tsai-Ling Yeh is a specialist at Tse-Xin Organic Agriculture Foundation (TOAF) in Taiwan with a Master of Arts degree in Food Studies from New York University. She has been active in the area of consumer communication for over 5 years and was a speaker at the 2016 APEC Expert Consultation on Food Loss and Waste at Retail and Consumer Levels.

Key words: Organic, agriculture, farmers, market, local, system

Summary

Civil society organization through mentorship, legal support, and technical services to growers who are already in the local food system or are considering joining, can change their life by changing their simple processes to integrated processing from farm to table. Ecologically disadvantaged areas and poor rural communities have been benefited from access to advances in scientific and technological skills provided through these agencies. TOAF devised the necessary support and incentives for small-scale farmers to engage in ecologically sound production methods.

Introduction

Tse-Xin Organic Agriculture Foundation (TOAF) has been promoting organic agriculture in Taiwan for two decades. Established at a time when organic development was still in its infancy, the Foundation facilitated a community food system in which food production, processing, distribution, and consumption are integrated to support environmental, economic, and social sustainability. Local foods strategies help establish the basis for a dynamic organic food industry. The Foundation brought together various stakeholders of the food chain to shape and support the local food system. Shared vision and collaborative partnerships help establish and grow the industry. In addition, consumer support is vital to organic agriculture development in Taiwan. Raising public awareness through educational outreach, changes the perspectives of consumers in viewing organic food as a positive and essential part of the community, generates demand that can stimulate increases in supply and also has the potential to give consumers a quality assurance in organic foods. This paper examines a variety of strategies and initiatives to develop local food systems and sustainable communities as an approach to promote organic agriculture and protect the environment.

Methodology

The data presented here are mainly from archival records, interviews, and statistical reports. To study the impact of strategies and initiatives of local food systems and sustainable communities, author reviewed internal documents from Tse-Xin Organic Agriculture Foundation, Leezen

[1] angela-chen1@hotmail.comcom

Company Limited, and Fuyah International Company. Author also conducted interviews on project managers of TOAF, Leezen, and Fuyah for data. To evaluate the research, data were also collected and analyzed from project reports and sales figures.

Production

By providing mentorship, legal support, and technical services to growers who are already in the local food system or are considering joining, TOAF works closely with local farmers to grow organic crops. Ecologically disadvantaged areas and poor rural communities benefited from advances in scientific and technological skills. For certain underserved communities of Taiwan where government grants are no longer available, TOAF devised the necessary support and incentives for small-scale farmers to engage in ecologically sound production methods.

In response to food safety scares in Taiwan and rising consumer concerns about the environment, the Foundation created an organic certifying agency to regulate food quality and safety. By establishing Tse-Xin Organic Certification Corporation (TOCC) in 2011, it strengthens supply chain control using organic standards as a tool for supply chain coordination. Third-party certification provides transparency on the performance and credibility of organic produce. The mission is to ensure confidence in the supply and the promotion of organic food to consumers worldwide. In efforts to grow local brands, farmers are aided by Leezen Company Limited, a national grocery chain of organic and natural foods, and Fuyah International Company, a local and regional distribution food hub that jointly market organic agricultural products with the Foundation.

Processing/Preparing

Adding value can range from post-harvest handling (e.g., cleaning, processing, and packaging) to developing a convenience or finished product (e.g., flour, yogurt or pickled goods). Producers who want to market their vegetables often have better luck if they sell them pre-cut and packaged, which requires processing methods and equipment. To encourage rice farmers to go organic, Leezen worked with food manufacturers and developed over 66 organic rice products, such as rice snacks, rice noodles, and rice bread, etc. In 2015, Leezen processed around 300 tons of organic rice supplied by smallholder farmers. The retailer adopted the same strategy for the over production of organic fruits and vegetables and it now carries more than 83 processed fruit and vegetable products, such as sauces and snacks.

Distributing

Retailing local food opens new marketing opportunities for small and medium sized food producers and processors that only have the capacity to supply products to a selected number of individual store outlets. Leezen is committed to source local food directly from growers rather than wholesalers and keep produce prices down to provide affordable, fresh, and healthful selections to consumers. The chain also fosters a strong relationship with local farmers and carry products that travelled a short distance in all departments. The key in building and sustaining a stable basis of small-scale suppliers is a long term and trust relationship with small-scale growers with which stores place orders and from which it can

anticipate risks of shortage. Leezen supports small-scale producers to attain the required product quality standards in collaboration with TOCC. With 123 locations in Taiwan, Leezen possesses a high retail market share in communities and sell products from over 336 farms.

Food hub

Furthermore, the Foundation collaborated with Leezen to establish a system that provides farm products directly to retail. A solution to the logistical, transportation, and marketing challenges faced by small family farmers is the creation of Fuyah in 2008. The food hub acts as a wholesaler for local foods and provides farmers with support and consistency by dealing with invoices, marketing, and sales. Farmers drop off their produce at the distribution warehouse, which is mainly delivered directly to Leezen stores. In 2015, Fuyah distributed 4,045 tons of organic produce across Taiwan. The distribution warehouse takes much of the burden of marketing and transportation from local farmers by finding viable consumers, and provides other business-related services, such as logistical coordination. The hub also expands the market reach of small farmers and organic retailers.

Retailing

Farmers markets and retail stores

Selling produce or processed goods to consumers, either through traditional retail stores or farmers markets support a healthy retail market where local food is readily available to citizens. Established in 2014, Footprints in the Field Farmers Market provides farmers with a direct market outlet for their products and link local farmers with community members. Every week, between 15 and 20 farmers sell their produce at the market. It offers higher profits to the farmers and vendors through direct sales, local job creation, and increased sales revenue. In addition, the market reduces the distance that local food travels to reach its consumers and food packaging. In its first year, the market attracted more than 50,000 visitors.

To provide market outlets for local producers beyond farmers markets, Leezen was founded in 1998 with the help of the Foundation. As the largest organic retailer in Taiwan, Leezen has buyer power and retailer power. The chain now dominates the supply of food products to 800 million consumers and Leezen stores sold more than 2,875 tons of fresh produce in 2015. Thus, suppliers have access to more alternative large buyers and therefore considerably more bargaining power. Local procurement for Leezen from small farmers serves to involve the broader community and triggers benefits in terms of freshness of produce and low transportation costs.

Consumption

Marketing and public awareness

Education is fundamental to the achievement of sustainable development, connecting the well-being of the individual and of the community to the sustainability of the planet. As a main strategy to orient the perspectives of members of the food chain to protect biodiversity as well as enhance the development of sustainable diets, TOAF developed local capacity by educational outreach. Many farmers gain technical support through ongoing workshops,

consultations, and field training. Each year, the Foundation also implements education campaigns that reach more than 20,000 people, including students, teachers, managers, and executives to help consumers make responsible, educated choices that are both healthy and environmentally sustainable. Along with public forums for institutions and businesses, and promotional activities in community fairs or farmers markets in Taiwan, these events reached over 100,000 people in 2016. TOAF also releases publications and videos as well as the use of social media channels (e.g., websites, Facebook) to inform and encourage organic development. The demand for organic food has been driven by consumers who wish to support local farms and other businesses, to purchase healthful food that is fresh and tends to be sustainably produced, to interact with farmers, and to learn more about the food they grow and that consumers eat.

Benefits of the system

Local food systems provide positive impacts for organic agriculture development. An advantage of local food development is the extent to which infrastructure exists to connect local producers and buyers for organic farm products. Local food systems are an important market outlet for organic food. Farmers enter into growing contracts with Fuyah, which ensure that growers have a guaranteed source of finance for better budgeting and improve the quality of their production. The number of contract growers and their quantity of produce for Fuyah increased each year (Figure 1 and Table 1). The farm becomes independent from the dominant marketing structures and from fluctuating prices. Fuyah even shares the risk of crop failure, for example, due to bad weather conditions. The food hub helps secure the food system by improving small farm viability and increasing community access to local food. When farmers sell products directly to Leezen, the retailer offers suppliers volume of sales and sustainable buying prices that also result in low retail prices that are passed on to consumers. When the prices retailers' pay is sustainable, then over time supplies increase, so that buying prices and therefore retail prices decrease. The range and quality of products improve too. Another direct marketing channel is farmers' markets that enable consumers to support local farmers, obtain food that may be fresher than store-bought, and learn more information from farmers about how the food is grown.

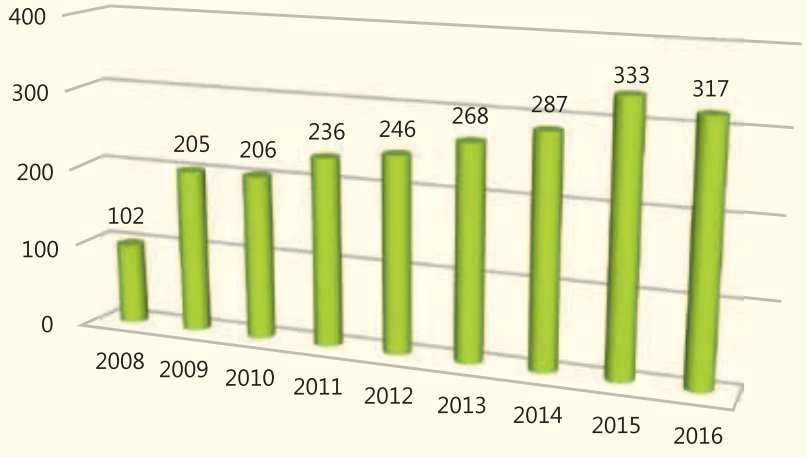


Figure 1. Growth in contract farmers collaborating with Fuyah from 2008-2016.

Table 1.Growth in volume (in kilograms) of selected fresh produce procurement from contract producers 2011-2016.

Fresh Produce	Cabbage	Leafy Greens	Root Vegetables	Melons	Fruits	Total
2011	566,003	546,256	683,550	868,454	698,885	**3,363,148**
2012	572,424	592,655	645,150	790,605	749,132	**3,349,966**
2013	671,846	730,019	737,268	996,616	814,609	**3,950,358**
2014	731,456	938,405	855,783	1,287,330	746,198	**4,559,171**
2015	750,071	1,064,735	987,901	1,248,351	874,249	**4,925,306**
2016	786,446	1,103,333	969,420	1,340,313	821,477	**5,020,989**

Second, local food markets expand organic operations and increase the value of organic food when small farms grow multiple products and engage in entrepreneurial activities. Producers can earn extra income by selling value-added goods such as processed products. From jams to juices, customers are willing to pay more for finished products that they are not accustomed to making themselves. The Foundation helps agricultural producers expand value-added activities related to the processing and/or marketing of their products with the goal of generating new products, creating and expanding marketing opportunities, and increasing producer income. Once established, food processing can add profit for a farmer and provide convenience for consumers. When high-quality crops have been harvested and sold, the farmers' fields often contain a large amount of crops that could not be sold due to their unconventional size or shape. TOAF supports gleaning initiatives by connecting farms and Leezen to save and even process the crops. The practice of collecting and donating excess foods prevents unnecessary wasting of quality food. The strategy not only adds value to organic produce but rescues surplus farm crops from going to waste.

Third, local food systems contribute to environmental sustainability of rural areas in Taiwan with fragile environments where organic farming remains relatively underdeveloped. Many organic farmers cannot bear the costs and paper work requirements of third party certification, which inhibit the conversion of more smallholders to organic practices. As an alternative labelling system to overcome exclusionary practices, the Foundation established the Green Conservation program. By also promoting goods that carry the Green Conservation seal of approval, it meets the growth in consumer demand for responsibly sourced products. The primary focus of the program is to protect threatened species and their habitats by supporting local farmers in the transition from conventional to organic agriculture. To provide incentives for conventional growers to switch to organic farming, TOAF issued the Green Conservation certified seal of approval to farms that meet its standards which can be used to market products. For example, a study on jacana population in Taiwan's Guantian District of Tainan City found the abundance of jacanas increased on Green Conservation fields from just 399 in 2010 to approximately 1,272 by 2016, with especially large increases between 2015 and

2016 as a result of the program (Table 2). The number and area of certified farms have also increased between 2011 and 2016 (Figure 2). As of 2010, there are over 186 Green Conservation certified farms with over 37 wildlife species at stake protected within the program.

Table 2. Abundance of jacanas on Green Conservation farms in Guantian District from 2010-2016.

Year	2010	2011	2012	2013	2014	2015	2016
Total number of fields	0	3	9	15	17	**20**	**40**
Total number of jacanas	399	458	549	617	663	**711**	**1272**

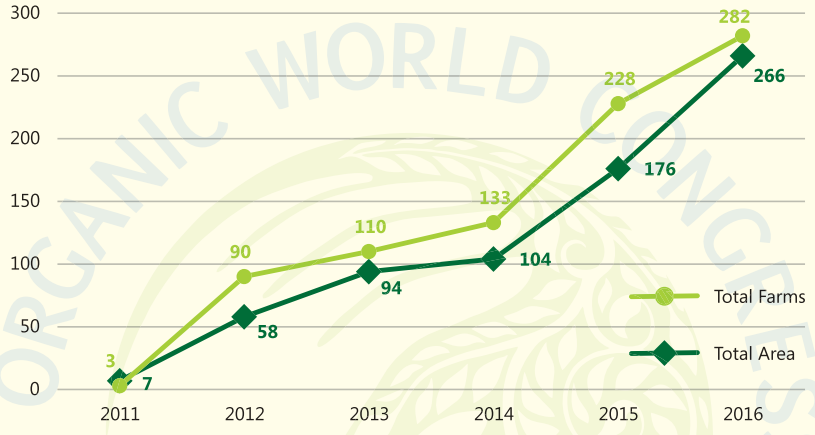


Figure 2. Growth in Green Conservation producers and total acres from 2011-2016.

Lastly, local food systems sustain organic agriculture practices in communities without adequate government support. In the past years, there has been substantial growth in certified organic land in Taiwan once small farmers receive incentives and adequate infrastructural aid from the Foundation. Smallholders can earn a reasonable price for their crops and farming becomes profitable by adopting sustainable crop production, encouraging equitable contract farming schemes and cooperative development through partnerships with Fuyah and Leezen.

In 2010, the Foundation launched a project in Taroko National Park to equip local farmers with the knowledge, skills, and practical experience to be successful in operating their own organic farms. The park suffered continuously from agricultural pollution of chemical pesticides and fertilizers, so TOAF devised an integrated rural landscape management initiative to protect its natural ecological system. After its implementation, the community is now home to many species and became environmentally friendly with the help of the Foundation. The farmers succeeded through a process of innovation, inclusion, partnerships, know-how, and patience. Production based on sound ecological processes are viable and sustainable in the long term – unlike many land reform projects in the past without the advantage of partnerships, and an established supply and marketing network. The number and area of certified farms in the community have grown steadily over the past six years, as well as the total certified farm area that is used for production of certified organic crops (Table 3).

Table 3. Trends in number of certified organic farmers, total crop production acres and total quantity of certified organic crops produced in Taroko National Park. Government grant ended in 2014. There are only eight farmers in the community.

Year	Number of certified organic farmers (8 in total)	Total certified farm production area (acres)	Total quantity of certified organic crops produced (kilograms)
2010	2	0.41	52,128
2011	7	3.53	50,858
2012	7	5.92	131,088
2013	7	6.81	200,926
2014	7	7.01	196,700
2015	7	6.68	148,756
2016	6	7.16	131,543

Conclusion

Over the past 20 years, TOAF implemented various initiatives through which small-scale farmers and agribusinesses can be integrated into the supply chain using a multi-actor approach. A complex network of partnerships along with trust, commitment, and effort from all industry stakeholders is the driving force behind the Foundation's work that aims to revitalize the local food system. In addition, farmer training, market coordination, and logistical support are critical success factors for smallholder participation from the pre-planning stages to production, marketing, and distribution. Collective action enables individual poor farmers to attain economies of scale in terms of size of supply and scope of produce, which allows them to engage on a level negotiation platform. Stakeholders collaborate in a responsible and environmentally smart way to protect natural resources while achieving food security and nutrition. For the communities which producers serve to prosper, the businesses that operate must prosper as well; and that over the long term, healthy populations, healthy economies, and healthy environments are mutually reinforcing. In creating shared values to help protect the environment for future generations, the actions of all stakeholders in the local food system, form the foundations for sustainability.

Economies of Scope: Context of Agriculture, Smallholder Farmers, and Sustainability

Amar KJR Nayak[1]

About Author

The author is Professor of Strategic Management and National Bank for Agriculture and Rural Development (NABARD), Chair Professor, Xavier Institute of Management, Xavier University Bhubaneswar, India

Key words: Economies of scope, economies of scale, climate smart agriculture, open systems, smallholder farmers, organizational design, institutional architecture and sustainability

Summary

Tracing the evolution of theory and practice of 'economies of scale' during the last three centuries of industrial revolution, the paper shows the irony of adopting economies of scale time and again only to face greater economic recession, market failures, climate changes, food crisis and growing un-sustainability of our ecosystem. The article analyzes the significance of 'economies of scope' in the context of (a) efficiency in agriculture versus industry, (b) operational dynamics of scope and scale across primary, secondary, & tertiary sectors in agriculture (c) organizational design and institutional architecture with the logic of scope. Further, through empirical evidences from small holder farmers and farmer producer organizations from across India, the paper highlights that 'economies of scope' in agriculture is not only more efficient for nutritious food production and climate smart but also for the sustainability of agricultural ecosystems and the overall socio-economic-environment. Arguments in the paper are based on action research as well as empirical evidences of farming practices and farmer producer organizations across India.

Introduction

In the last three hundred years of industrial revolution, the theory and practice of ***'economies of scale'*** has greatly snowballed. Scale has been the basis of efficiency and growth in industrial production. Accordingly the industrial enterprises and their shareholders in the secondary and tertiary economic activities across the globe have grown and prospered. More often than not, the governments across geographies have tried to resolve the problems of inefficiency in industry and economy through scale and technology. So has been the quest for scale under the aegis of globalization.

In the context of increasing mainstreaming of the ideas of ***economies of scale*** in agricultural production and its associated features across the value chain in agriculture; this paper

[1] Professor of Strategic Management, Xavier Institute of Management Bhubaneswar & NABRD Chair Professor, India, Email: amar@ximb.ac.in

explores into whether this mainstream thought is relevant to agriculture, small producers and retail consumers of agricultural products. Empirical evidences from a transitional economy like India from the domain of agricultural production, enterprises of smallholder farmers, purchase preference of retail consumers seem to suggest otherwise.

In the above light, this paper analyses the relevance and significance of ***'economies of scope'*** in the context of agriculture and smallholder farmers from efficiency and sustainability perspective. The comparative analysis of industry and agriculture for respective efficiency shall be on three key dimensions viz., (a) basis of efficiency, (b) dynamics of scale and scope in agriculture verses industry, and (c) organizational design and institutional architecture for agriculture to fit the logic of scope.

Before we discuss the relevance of *economies of scope* in agriculture and its impact on overall sustainability, let us first take a quick look at the evolution of the idea of *economies of scale* since 1770s and the intermittent debates on *economies of scope* in the 1950s and 1970s and subsequent mainstreaming of *economies of scale* and industrial organizational designs as engines of growth leading to a gradual death of the idea of *economies of scope*.

Economies of Scale: Evolution of Practice &Theory

Economies of scope' has been a powerful idea for achieving operational efficiency across the commercial and industrial enterprises. With the development of science and technology, came the Industrial Revolution in the eighteenth century. This second revolution of mankind has indeed greatly impacted the lives of human beings. It has not only transformed the nature and quality of human life but has also transformed the first revolution of agriculture and our ecosystems as a whole. Over the years, the logic of economies of scale has also impacted agricultural production globally.

From an open production system in agriculture, industrial revolution adopted the closed production system by way of factory production. Factories were owned by the rich and wealthy individuals, where operational efficiency became the major concern of factory managers as would be desired by the owners of these factories. Unlike in an open system, many of the variables of production could be controlled in a closed factory production system and hence the efficiency of operations surely improved in such systems.

Since the factors of production could be controlled, there was scope for individual owners and their managers to better manage the variables and hence be more efficient. Increase in scale of production led to lowering costs and hence there was a natural logic for greater efficiency. Scale lowers cost of production and helps in several ways such as (a) purchase and make use of specialized manufacturing equipments, (b) derive saving from operational expansion and quicker pay back of investments in production facilities and capacity expansion, (c) promote in-depth employee specialization based on an intricate division of labor, (d) extract rent from experiential learning and benefits of high frequency with which same tasks are carried out,

and (e) reduce per unit overhead cost (Dobrev & Carrol, 2003). Greater factory efficiency in production attracted more entrepreneurs to invest in the factory system of large production. Further, scale facilitate gain substantial market share in a competitive market economy. It also helps large scaled firms to force customers and suppliers to become price takers and serves as a strong barrier to entry.

Individual & Family vs. Enterprise

These obvious advantages of scale in industrial production have caught the imagination of the economists from the time of Adam Smith in the 1770s; from the beginning of industrial revolution. While the idea of *'economies of scale'* has been the mainstay of discussion and research among the economists since 1770s, the idea of *'economies of scope'* have appeared intermittently within the history of economic thoughts. In his book Wealth of Nations, Adam Smith (1776) discusses the notion of *economies of scope* in the light of how division of labor is limited by the extent of the market for a product or service. He observed that a person needs to engage in multiple activities because the product or service that a person offers is limited to the nearby smaller market and cannot be sold in far off and large markets. In other words, "scope limited growth" and for one to reach his product or service in far off larger markets, enterprise has to specialize on a particular product or service. In the context of industrial culture and production economics, Adam Smith and the other leading economists were indeed right and rightly so, they buried the idea of *economies of scope*.

As the industrial enterprises grew with the growth in industrial production and trade, several social, cultural, and environmental issues emerged. Marx (1927) described the problems of value appropriate of labor by the owners of the enterprise and the alienation of man from his life and culture due to over mechanization and industrialization. Joseph Schumpeter (1942), on the other hand argued that capitalistic model of production led to creative destruction and loss of value for the society; which may therefore ultimately collapse from its own internal contradiction and weight. However, the idea of *economies of scale* as propounded by Smith and others along with the industrialists who had a great appetite for growth; kept the idea of scale to grow. That the division of labor is limited to the extent of market; proposed by Smith was reiterated by Stigler (1951).

With markets becoming more competitive for the industrial products during the first 200 years of industrial revolution, the idea of *economies of scope* reemerged in 1970s. Panzar &Willig (1977) brought it back to the discourse of economic thinking by arguing for *economies of scope* in multi-output production. David Teece (1980) extended this idea by his empirical observations of scope for diversification to multi-output from single input especially in the petroleum industry in USA. *Economies of scope* in business and product diversification were seen as ways to open new avenues of growth in highly competitive industries and markets. The ideas of scale and scope were however applied essentially to industrial production

systems, at the secondary level production. Over the years, the idea of *economies of scale* has been proposed further by economists and practitioners and business school to build and strengthen private enterprise that have evolved to be large multinational companies.

Basis of Efficiency in Agriculture versus Industry

In this section author shall explore whether *economies of scale* is the logic for efficiency in both industry and agriculture by comparing (a) process dynamics in both systems of production and (b) characteristics of typical investor in agriculture and industry in terms of resource and competence base.

It is increasingly being pointed out that sustainability of agriculture shall depend on systematic and scientific management of soil, seed, moisture, plant protection and integration of agriculture. More than the external industrial inputs of fertilizers, chemicals, pesticides, healthy soil management have been explained to be the key to high yield and sustainable production (Howard 1943, 2013). Soil health is linked to the overall management of other dimensions of moisture management, seed, cropping pattern, and integration of agriculture with livestock and forestry. All these improve the micro ecosystem that enhances the condition for better plant protection and better agriculture (Collette & Kenmore et al 2011, Rupela 2011).

Similarly, the scientific experiments in the recent years in India prove the above points (Gopalakrishnan & Rupela et al 2012, Pannerselvam 2013). A large number of research studies across India also lead to the same conclusion that productivity and efficiency in agriculture lay in sustainable agriculture practices (Shiva.1993, Alvares 2009, Nayak 2012, CRIDA 2012, and Nayak 2014).

International research and studies across the world by different agencies are also building up the argument that agriculture has to adopt sustainable methods by following the basic principles of bringing back life to the soil through integrated agro ecological agricultural practices (IAASTD 2009, Third World Network 2012, and UNCTAD 2013). Several research reports from across the world indeed argue for small scale diversified and integrated methods of agriculture. These studies essentially suggest that it would be logically flawed if *'economies of scale'* were applied in agricultural ecosystem unlike the logic of scale in industrial production.

The core contextual difference between agriculture and industry is on the nature of production system. On the one hand, high bio-diversity in the life systems, deep interconnections and high levels of interdependence characterizes the open system of agricultural production. On the other hand single product specialization, sequential, linear and uni-directional relationships are the characteristics of a closed industrial production systems.

Contrary to the basis of efficiency in a closed system, the basis of efficiency in an open system is the high degree of interdependence and cooperation. The high frequency of interactions and high degree of relationships among the various actors and actants are the sources of

efficiency in production. The network of relationships is often of dense and complex in nature. Bio-diversity is the essence of life in such networks.

The idea of scope can be appreciated by analyzing the relevance of *'economies of scope'* at the base of our production system (plant-process-person) viz., plant as a source that converts the solar energy to plant biomass and food crops. It exhibits a dynamic interrelationship of sunlight, moisture, air, soil, plant/crop bio-diversity, micro-organisms, livestock and seeds for sustainable production in an open agricultural ecosystem. In other words, *economies of scope* seem to provide a coherent logic of agricultural ecosystems and the basis of efficiency and sustainability in agriculture.

Characteristics of Owners in Agriculture versus Industry:

It is also important to understand the characteristics of the owners of production in agriculture and industry. On the one hand, over 70% of the owners of production in agriculture are the smallholder farmers. Their resource base in terms of assets, capital, technology, information, modern equipments and associated skills are rather weak. Their capabilities are more on indigenous knowledge and techniques of production and most of their resources are in the form of common resources. On the other hand, the owners of industrial production comparatively have greater asset, capital and technology base that are governed by private property rights. Given the different levels of factors of productions and the principles that govern them, mechanism to achieve efficiency could be quite different for these two diverse groups of producers.

Further, while the purpose of an investor/owner in an industrial production system is to rotate capital for generate greater return on capital invested; over 70% of the owners involved in agriculture are into subsistence agriculture with a purpose to ensure food and nutritional security of their families. With the above differing objective functions and characteristics, which of the two methods viz., *economies of scale* or *economies of scope* would be appropriate to the investors in industry and smallholder farmers of agriculture?

Operational dynamics of scale and scope across sectors in Agriculture

The operational dynamics of scale and scope at different stages of economic activity in a sector; especially agriculture could possibly provide an understanding to the core of the lock-in effect problem. We shall explore this dimension in agriculture in terms of where does the point of control lie and how does the direction of control shifts across primary, secondary and tertiary sectors in an economy over time that create a lock-in effect for policy and technology.

In the first stage of evolution of an economy, agriculture; the primary sector typically is the main driver of an economy. In the second stage of evolution, the secondary or manufacturing sector including the value adding activities of agricultural produce drives the economy. As the economy matures, the tertiary or service sector which includes retailing of food products drives the economy.

As the value chain of primary, secondary and tertiary economic activities of agriculture evolves and matures, the point of gravity moves from the community of farmers to secondary level processing factory. For some period of time, the processing factory becomes the centre of gravity in the value chain that balances both the farming community and the retail outlets/ chains (intermediate market place). As the retail outlet/chain grows larger, develops good hold over the final consumers, and grows in its size of business, it becomes the centre of control on the other actors of the value chain. The direction of control over time gradually shifts from the farmer to the marketer and finally the direction of control of what is to be produced and at what price is reversed.

As the focus of control shifts to the manufacturer / food processor, who is preoccupied with the efficiency of the capital employed in the factory, the processor will naturally adopt ***economies of scale.*** In return the manufacturer / factory processing unit will promote production of a single crop (say baby corn) that his factory specializes in processing and packaging. In the subsequent stage, the tertiary economic agent, the owner of a large retail chain or a large exporter of processed food may emerge to be centre of gravity or the point of control in the value chain. The primary concern of this tertiary actor, efficiency of capital employed for marketing shall be best with economies of scale. Accordingly, the demand and price mechanism for the single product (say baby corn) both the secondary level and tertiary level of this value chain will alter the cropping pattern of the farming community and make them largely a baby corn producing community. **Figure 1** represents the different stages of an economy and the associated centre of gravity and how the direction of control shifts; transforming the cropping pattern at the farmers' level and reduction in choice of products at the final consumer level.

Scale of operation of individual enterprise in the value chain appears to determine the power of control. Among the three actors in the value chain, the capacity to engage in large scale operations is available with either the owner of the food processing unit or the owner of the large retail chain / processed food exporter. Given the limited resource base, it is unlikely that the smallholder farmers become the centre of gravity in the evolved value chain under the industrial product-market economy. Hence the smallholder farmer is bound by the demands of the secondary and tertiary sectors that are driven by the logic of mono-cropping or ***economies of scale.***

Given the logic for scale by the intermediaries in the secondary and tertiary stages, the smallholder farmers are forced to adopt mono-cropping practices. At the cost of his own sustainability and the sustainability of the agricultural ecosystem the smallholder resource poor farmer seems to subsidize the efficiency and growth of actors in the secondary and tertiary sectors in the agricultural value chain. The source of tension between smallholder farmers and the intermediaries of secondary and tertiary sectors is hence clear.

The tensions across these three sectors arise out of multiple perspectives, viz., moral, technical, and systems perspectives. On the moral perspective; whose efficiency viz., smallholder farmers, investors in processing facilities or investors in retail chains should be of greater importance. On the technical perspectives; which technical efficiency viz., nutritional efficiency of smallholder farmers, production efficiency of food processor or operational efficiency of the retailer should be prioritized. On the systems perspective; how different types of institutional architecture and relationships are critical for sustainability in each of the three sectors. **Table 1** provides the details of the three perspectives under different stage of economic activity.

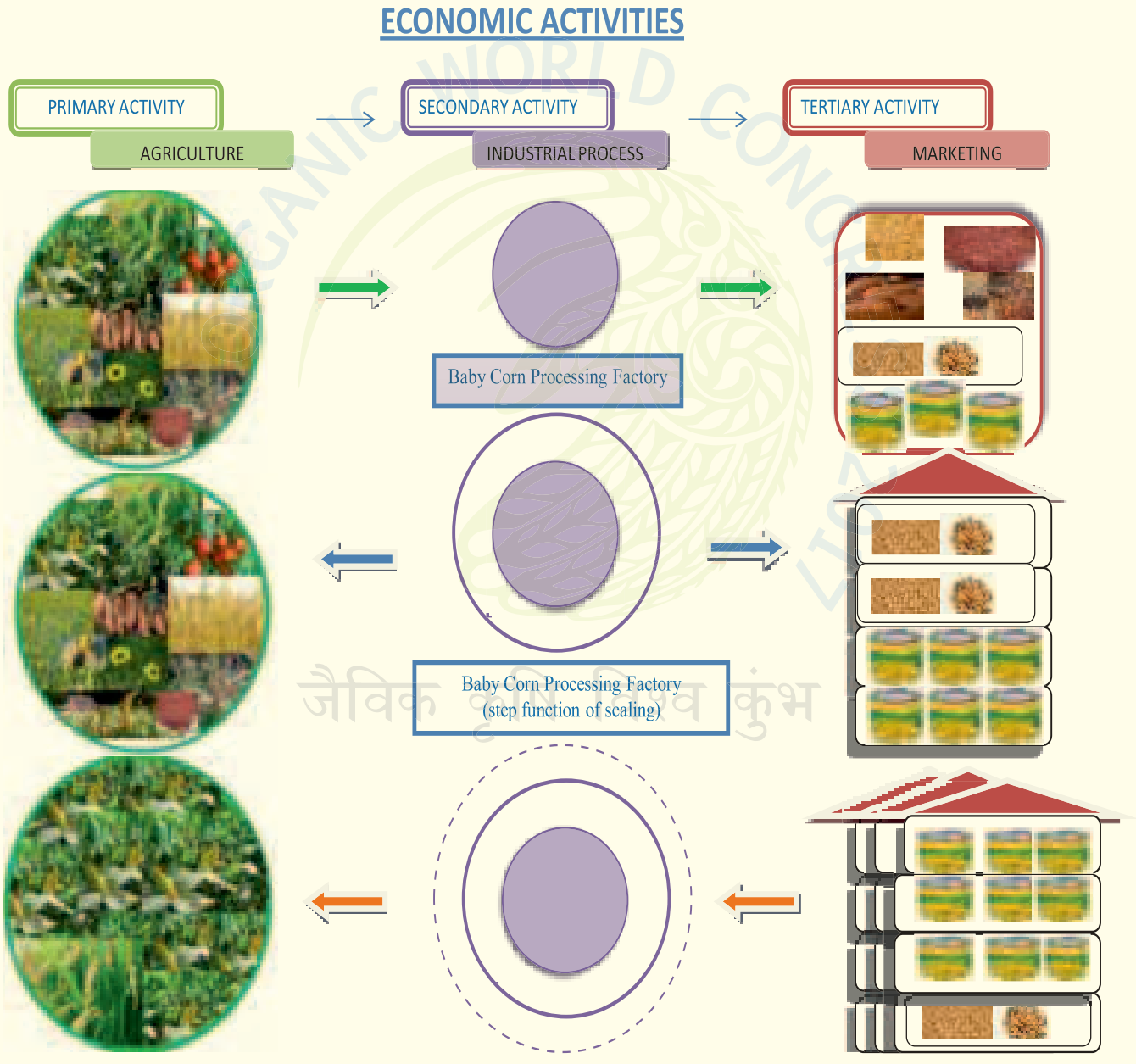


Figure 1: Direction and Point of Control at different stage of evolution of a Value Chain

Table 1: Moral, Technical & Systems Perspective at different levels of economic activity

Perspective	Primary Economic Activity	Secondary Economic Activity	Tertiary Economic Activity
Moral Perspective: Primary Stakeholders	• Smallholder Farmers • Rural Youth • Rural Resource Poor	• Industrialists • Investors in Manufacturing • Technical professionals	• Banks & Financiers • Large Wholesalers, Distributors & Retail Chains • MBAs/Professionals • Neo classical Economists
Technical Perspective: Efficiency Criterion	• Economies of Scope *(Nutritional Efficiency)*	• Economies of Scale *(Production Efficiency)*	• Economies of Scale *(Operational Efficiency)*
Systems Perspective: Institutional Architecture & their relationship	• Interconnections • Interdependence • Higher frequency of interactions • Bio-diverse and networked relationship • Greater depth of relationships that not only facilitate efficiency but sustainability	• Relationships are more linear as in a chain • Relationships are contractual in nature • Institutional architecture is a top-down design • Chain, contractual, arms length relationship is preoccupied with achieving efficiency	• Relationships are more linear in design • Relationships are contractual with institutional buyers and need to be contractual as well as personal with retail buyers. • Institutional architecture is a top-down design

Organizational Design & Institutional Architecture with logic of Scope

If we recognize that the logics of efficiency viz., economies of scope and economies of scale are different for agriculture, factory manufacturing and retail business and that these economic activities are deeply interconnected with each other, the first challenge is to appropriately design organization with one or the other logic. The second and the more challenging issue is how to develop an institutional architecture such that the tensions across the three sectors are optimally balanced to ensure stable relationship and sustainable governance.

Depending on the logic of efficiency adopted, whether scope or scale, the associated organization design variables viz., size, technology, ownership, and management will vary. The deep seated logic, language and values will be different for each of these paradigms (Nayak, 2014). The institutional architecture could vary from being top-down under scale economies to bottom up under scope economies. Further, under scope economies, there would be optimal lower and upper limit to the institutional architecture unlike the borderless view under scale economies.

Empirical observations however suggest the policies and practices on the ground do not seem to observe these differences. The performance of farmers and farmer producer organizations that do not distinguish these differences also show varying performance. Like in industrial production, the institutional architecture for agriculture is top-down. Policies and programmes flow down from the central and state governments to the farmers. These programmes are also

controlled from the top making the local institutions very weak. There is very little research on whether there exist an optimal lower limit and upper limit for institutional architecture for agricultural systems to be sustainable. Let us systematically look at the empirical evidences of farmers and their farmer producer organizations across India.

Summary and Research ahead:

At the base of our production pyramid, basic energy conversion processes of plants and agricultural ecosystem is highly complex and interdependent process. The processes at this level appear to be based on the science of interconnectedness and interdependence of sunlight, moisture, air, soil, plant/crop bio-diversity, micro-organisms, livestock and seeds. In other words, 'economies of scope' rather than 'economies of scale' is indeed the science of efficient and sustainable production at the primary food production level. The perspective of 'systems thinking' and rather than the perspective of 'linear thinking' can explain these dynamics of production in nature.

Further, the resource (land) position and capability of the position of the producers also does not technically favor economies of scale in either at the stage of agricultural production or at the subsequent stage of value addition. From a nutritional security and convenience (lower transaction cost) point of view, economies of scope is also efficient and sustainable in agriculture. Empirical evidences on performance of integrated agricultural practices at the farmer level and the performance of farmer producer organization in terms of total benefit to the small producers across the country strongly support the logic of economies of scope for greater efficiency and overall sustainability of agro-ecological systems.

The discussion on the ideas of scope and scale, the key pillars of the two major revolutions of human history viz., agriculture and industrial revolution is indeed a discussion of the ongoing battle between these two revolutions. The scholarship till date has hardly dealt seriously with the idea and significance of economies of scope. Since the industrial revolutions during the last three hundred years, there have been limited and short lived interjections on the ideas of economies of scope. But these analyses have been limited to exploring the economies of scope of production within industrial production systems and therefore it only focused on multi-product outputs in industrial production units. The idea of economies of scope and its science with regard to agricultural ecosystems has not been explored by scholarship and hence the policy on agriculture across the world has grievously gone against the nature and poses serious challenges to our sustainability. The ongoing silent but brutal war of industrial revolution over agriculture and our ecosystem is indeed unnecessary, uncreative and disastrous.

References:

- Alvares, Claude. (2009). The organic Farming Source Book, Other India Press and Third World Network

- Chandler, Jr. A. D. (1992). Organizational capabilities and the economic history of the industrial enterprise. The Journal of Economic Perspectives, 6(3), 79-100
- Chandler, Jr. Alfred D. (1990). Scale & Scope, the dynamism of industrial capitalism
- Chandler, Jr. Alfred D. and Mazlish, Bruce (eds) (1995). Leviathans. Multinational corporations and the new global history. Cambridge
- Collettte, Linda et al. (2011). Save and Grow: A policy maker's guide to the sustainable intensification of smallholder crop production, Food & Agricultural Organization, UNO
- CRIDA, (2013). National Workshop, Rainfed Farming Systems Program under 12th Five Year Plan: Evolving Operational Framework, CRIDA, Hyderabad
- Dobrev, S. D., & Carroll, G. R. (2003). Size (and competition) among organizations: modeling Scale-based selection among automobile producers in four major countries, 1885-1981. Strategic Management Journal, 24 (6), 541-558.
- Gopalakrishnan,S., et al. (2012). Plant growth-promoting traits of bio control potential bacteria isolated from rice rhizosphere, Springer Plus 2012, 1:71
- Howard, Albert. (1940). Agricultural Testament, Oxford University Press
- Howard, Albert. (1947). The Soil and Health – A Study of Organic Agriculture, The University Press of Kentuchy
- IAASTD. (2009). Agriculture at a Crossroads, International Assessment of Agricultural Knowledge Science and Technology, Island Press, Washington, DC
- Keynes, John Maynard. (1936). The General Theory of Employment, Interest and Money, Palgrave Macmillan
- Kondratiev, Nikolai Dmitriyevich. (1921). New Economic Policy, 10th Congress, All Russian Communist Party
- Marx, Karl (1927). Economic and philosophic Manu script of 1844
- Nayak, Amar KJR. (2008). Multinational in India, FDI and Complementation Strategy in a Developing Country, London: Palgrave Macmillan
- Nayak, Amar KJR. (2011). Indian Multinationals, The Dynamics of Explosive Growth in a Developing Country Context, London: Palgrave Macmillan
- Nayak, Amar KJR (2012). Integrated Low Cost Agriculture for Internal Consistency and External Synergy for Sustainability of Smallholder Farmers: Case of Nava Jyoti Agricultural Community, Sustainability Seminar Series 4.0, August 2012, NABARD Chair Unit, XIMB
- Nayak, Amar KJR. (2012). Implementing Community Enterprise System for Sustainability of Rural Agricultural Communities – A Manual, NABARD-XIMB-RBF Publication

- Nayak, Amar KJR. (2012).Management @ Grassroots, A management curriculum for rural youth to professionally manage Community based Producer Organizations, XIMB-SFAC Publication
- Nayak, Amar KJR. (2013). Implementing Community Enterprise System for Sustainability of Rural Agricultural Communities – A Manual, 2nd Edition, NABARD-XIMB-RBF Publication
- Nayak, Amar KJR. (2013). Report on Baseline Survey of Farmers under the Pilot Project for Augmenting Farm Productivity in Balasore District, Odisha, A study under NABARD Chair Unit, XIMB
- Nayak, Amar KJR. (2014). All India Baseline Study on Natural Farming Practices, A study under NABARD Chair Unit, XIMB, Forthcoming
- Nayak, Amar KJR. (2014). All India Baseline Study on Producer Companies, A study under NABARD Chair Unit, XIMB, Forthcoming
- North, D. C. (1984). Transition costs, institutions and economic history. Zeitschrift fur die gesamteStaatswissenschaft/Journal of Institutional and Theoretical Economics, 140 (1), 7-17
- Panneerselvam, P. et al (2013). Food security of Small holding Farmers: Comparing Organic and Conventional System in India
- Panzar, J. & Willig, R. (1975).Economics of scale and economics of scope in multi-output production. Econ. Disc. Paper no. 33, Bell Laboratories
- Porter, M. E. (1991). Know your place, how to assess the attractiveness of your industry and your company's position in it. Inc
- Prahalad, C. K. & Hamel, G. (1990).The core competence of the corporation. Havard Business Review, (V. 68, no.3). PP. 79-91
- Rupela, O.P. (2011). Of Soil, Subsidies, & Survival, A report on Living Soils, Greenpeace
- Schumacher, E. F. (1973). A study of Economics as if people mattered. Bloride & Briggs
- Schumpeter, J.A. (1943). Capitalism, Socialism & Democracy, Routledge, UK
- Shiva, Vandana. (1993). Monocultures of Mind: Perspective on Biodiversity and Biotechnology, Palgrave Macmillan
- Smith, Adam. (1776), Wealth of Nations, Oxford University Press, Reprint 1993, Oxford
- Stigler, G. (1951). The division of labor is limited by the Extent of the market. J.polit. Econ. 1951, June, 59. 185-93
- Teece, D. 1980. Economics of scope and scope of enterprises. J. Economic Behavior Organization

- Third World Network. (2012). Scaling up Agro ecology, HIRD World Network Information Services on Sustainable Agriculture
- UNCTAD. (2013). Wake up before it is too late, Trade and Environment Review, UNCTAD
- Vernon, R. (1971).Sovereignty at Bay: the multinational spread of V. S. enterprises, New York: Basic Books
- Vernon, R. (1977). Storm over the Multinationals. The Real Issue. London: Macmillan Press
- Vernon, R. (2009). In the Hurricane's Eye: The Troubled Prospects of Multinational Enterprises. Harvard University Press

Acknowledgements:

I would like to thank all the farmers practicing sustainable agriculture across India who gave me the confidence to explore this idea. Mr. Subash Sharma, Mr. Deepak Suchde, and Mr. Natabar Sarangi are few such farmers. I would like to thank the scientists, researchers, environmentalists, and activists and especially to Dr. Om Rupela, Dr. Peter Kenmore, Mr. Subhash Mehta, Dr. Claude Alvares Dr. Bharatendu Prakash and Prof. Radhamohan for providing me the lead to the subject of sustainable agriculture.

The Strength of a Farmer's Network Serving the Development of Organic and Local Agriculture Towards Organic 3.0

Isabelle Joncas[1]

About Author

Isabelle Joncas has been head coordinator of the Family Farmers Network at Equiterre for the last 16 years. Her work includes strategical development planning, members' recruitment (farmers and consumers), budgetary management, raising public awareness about local and organic agriculture (conferences, media), marketing planning and partnership planning.

Key words: Farmer's network, CSA (community supported agriculture), marketing.

Summary

Located in Québec province, Canada, ***Equiterre's Family Farmers Network*** *is celebrating its 20th anniversary in 2016. The network links together 130 organic farmers and 20,000 subscribers on the community supported agriculture concept. Supported by a prominent local not-for-profit organization, the consumers grew almost 100 folds in 20 years from 250 in 1996 to 20,000 in 2017. By recruiting new CSA farmers, the network is helping the growth in supply. By providing a wealth of services to CSA farmers, by creating a positive environment for new farms to settle and for long time farms to expand, the network helps to meet market demand. Raising that demand is also in the network's mission. This is done by great marketing work that is at the centre of its activities. It provides the farmers with professional communication tools and it reaches out directly to the consumers by local and nation-wide media launches and first-rate advertising campaigns.*

Introduction

Organic 3.0 is about bringing organic out of its current niche and into the mainstream. In this presentation authors demonstrate how a non-profit organisation can become a real growth driver for the organic movement. With 20 years of history, authors say that Equiterre's Family Farmers Network was there right at Organic 1.0 and is now already working for Organic 3.0. Details are provided on how the Network was created within the Equiterre organization, in coherence with its mission and core values. Following the continuous growth of the Network, authors go through the wealth of services the network has been providing to the CSA organic farmers, thus greatly participating in the growth of the supply for organic produce in Québec Province. Authors also describe how this alliance has been really helpful in ensuring those farmers with a rising demand for their products, by allowing them to have easy access to professional and very effective marketing services.

[1] terrasativa@globetrotter.net

About Equiterre:

Equiterre was created in 1995. Its mission is to helps build a social movement by encouraging individuals, organizations and governments to make ecological and equitable choices, in a spirit of solidarity. Its consulting, awareness raising and research projects offer concrete solutions to promote human and environmental health, social justice and community development at home and abroad. Authors also advocate publicly on environmental and social issues, encouraging decision makers to adopt laws and practices that contribute to a society that is sustainable and fair.

About the Family Farmers Network:

The Network was created in 1995, when citizens asked Equiterre to find a farmer that would provide them with fresh organic vegetables. The community supported agriculture took root for a win-win mutual engagement for a whole season's harvest. The first goal was to recruit farmers and customers and get them to meet. The Network therefore produced a list of farms and advertised it. The number of farms and consumers grew rapidly. The project is self-funded by adding an annual fee to the CSA shares farmers sell to customers. This money allows for services for the farms and marketing. The CSA team is 5 persons. The Network has been growing steadily since 1995 and now has more than 100 human-scale farms that feed over 35,000 Quebecers each year through almost 20,000 subscriptions made available.

Increasing the demand for local organic produce by advertising CSA:

Effective publicity being assured by the Network made members free to concentrate on their farm activity rather than on marketing. Work done by the Network in this regard is positively impacting on the population awareness and interest for organic and local food.

Table 1 : Evolution of the publicity budget over the years

Year	2009	2010	2011	2012	2013	2014	2015	2016
Publicity Budget ($)	0	10,000	10,000	10,000	17,000	17,000	21,000	35,000

Actions by Equiterre's Family Farmers Network

Promotion of the CSA concept aiming at individuals and businesses

- Publicity expenses (mainly on social media)
- Press releases and media launches
- Social media along with Equiterre's large impact (88,000 fans)
- Printed material: posters and tracks to be distributed by farmers and by Equiterre
- Websites paniersbio.org / organicbaskets.org and http://www.equiterre. org/en/ solution/ organic-baskets

Promotion of the CSA with corporate partners

- Since 2013, Equiterre developed partnership with the suburbs of Montreal's train service and with a local supermarket chain to install drop off points at train stations and supermarket parking lots
- These partners also do marketing tools and post them on drop off point location as shown below
- Some other partners are individual companies, public places (hospitals, government offices) that are host of a drop-off point.

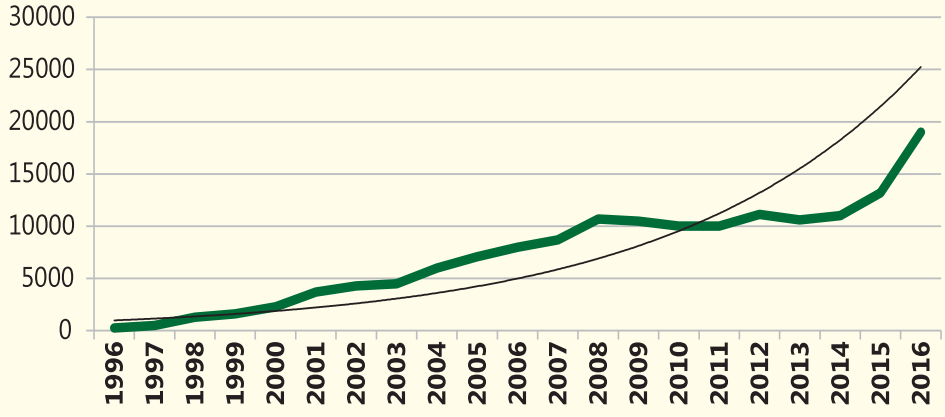
Table 2: Impact of corporate partnerships on the CSA development in Quebec

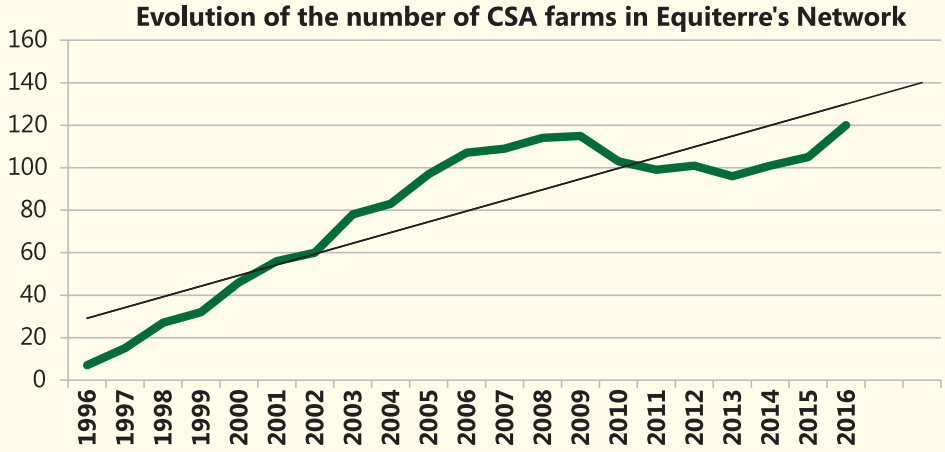
Year	2013		2014		2015		2016	
	F	C	F	C	F	C	F	C
Super markets Metro	13	337	19	525	32	1064	45	1261
Train stations	4	87	6	210	8	272	8	305

F = farmers, C = consumers

Impact of Marketing Strategy

Evolution of the number of CSA shares in Equiterre's network





Support to Farmers - marketing and more

A glimpse of services and programs available to the Network members, and how it come down to ensuring quality and growth in supplying the demand is given below:

a) Marketing and consumer retaining

- Offering promotion services and printed marketing tools (website, tracks, posters, banners) as the example below (To your good health poster)
- Hiring marketing firms and staff to plan, deploy and quantify the marketing strategy and tools
- Media launches (local and national) to announce the beginning of the summer delivery season (tv, radio, press, web, blogs, magazines, etc.)
- Other local media events

b) Farm support services

- For new CSA projects, a starting kit along with a training workshop on crop planning and social and logistic aspects when starting a CSA plus mentorship,
- Coaching in launching the project, reaching out to subscribers and setting the delivery locations
- Offering free customizable management tools such as crop planning grids and continuously aiming at developing a cost-effective CSA model that can be reproduced and adapted
- Managing and monitoring of the over-all distribution of the 650 delivery points in Quebec province in part by building partnership with corporations
- Training workshops in winter and summer farm to farm visits to share farming knowledge
- Vegetable market price monitoring
- A "privilege card" for farmers to get discounts at many common suppliers
- Classified advertising for farmers (farm labor, produce or machinery sales)

- Providing up-to-date information and latest news on organic and local agriculture (meetings, conferences, publications, etc.)
- A collective Web app that farmers can use to offer online subscription and online payments to their subscribers, and manage the group online.

Conclusion

For farmers, benefiting from the expertise of an organization helps them concentrate in the field, where they excel. As a farmer said "I believe Equiterre's Network has contributed a great deal in the success and viability of our CSA farms both on the marketing and consumer's side but as well as on the production side as we work with peer farmers" mentioned Noemie Labrosse from Terra Sativa farm. The network support the growth of organic and local farms and these can evolve and multiply without fearing a shortage in the demand because of the strong marketing Equiterre does.

As is evident that, by making its resources and reputation available to the Network, Equiterre is acting not so much as an umbrella organization but more as an effective growth leverage for both the supply and the demand for organic and local produce. Thus, the Network has been and still is able to play a significant role in bringing organic into the mainstream, reaching more and more homes and businesses every year.

Lessons from the 1st European Census of Community Supported Agriculture conducted in 23 Different Countries

***Jocelyn Parot*[1]**

About Author

Jocelyn Parot has been the General Secretary of Urgenci, the international CSA network, since 2009. Urgenci with its allies has been instrumental in offering a solid frame for face-to-face, farmers to-farmers and consumers' meetings around the globe.

Key words: CSA, Local Food

Summary

Community Supported Agriculture has been growing within the organic movement as a practical, easy-to-handle solution to secure access to markets for small-holders. The former Special Envoy for the UN General Secretary on the Right to Food, Olivier de Schutter, often pointed CSA out as an effective model to provide the missing link between producers and consumers. Yet, even if there have been CSA initiatives in Europe for some decades now, it remains a nascent movement, which identity is still being defined. What do farmers and eaters mean when they say "they do CSA"? How large is the spectrum of CSA models, if we follow CSA activists' self-definition? There are three main lessons to learn from this initial European mapping: 1) the movement is dynamic, growing steadily, but still unbalanced from a geographical perspective; 2) the movement is creative, with different models, based on the origin of the partnership or other criteria; 3) CSA members are very committed, and their commitment takes various shapes.

Introduction

The Urgenci CSA Research Group conducted the first European CSA Census during the second half of 2015. Its goal was threefold. One objective was related to movement building. The census was part of a larger project, called "Common Ground", where the other main topic was the collective writing process of an "European Declaration of CSA". The second goal was to question the practical implementation of our common principles in different contexts. And the third goal was to support advocacy actions by counting the movement's forces.

During an initial meeting, the group worked out a definition: "CSA is a direct partnership between a group of consumers and producer(s) whereby the risks, responsibilities and rewards of farming activities are shared through long-term agreements. Generally operating on a small and local scale, CSAs aim at providing quality food produced in an agroecological way."

Material and methods

This definition was the basis for the 6-month-investigation that was led by a group of 25 researchers (academicians and practitioners) in 23 different countries. One country report

[1] jocelyn.parot@urgenci.net

was delivered for each country. Some of the reports were drafted as compilations of already existing data. Others were also using the results from an European questionnaire campaign, which was answered by 403 CSA groups all across the continent in October-November 2015.

Reporting from this European Census experience is crucial, at a moment when CSA movements, and more largely speaking local, agro-ecological food movements are structuring themselves at the international level. There are many different attempts to research and come up with Common Ground declarations, the latest one being an attempt in the US to come up with a definition of CSA.

1) The CSA movement is dynamic but still unbalanced from a geographical point of view

This is shown by the figure below, reflecting the year of creation of the CSAs responding to the survey. One can see a major surge in the creation of partnerhsips starting in 2004. The movement now numbers between 500,000 and 1 million consumers, in Europe only, and between 2,700 and 5,500 farms.

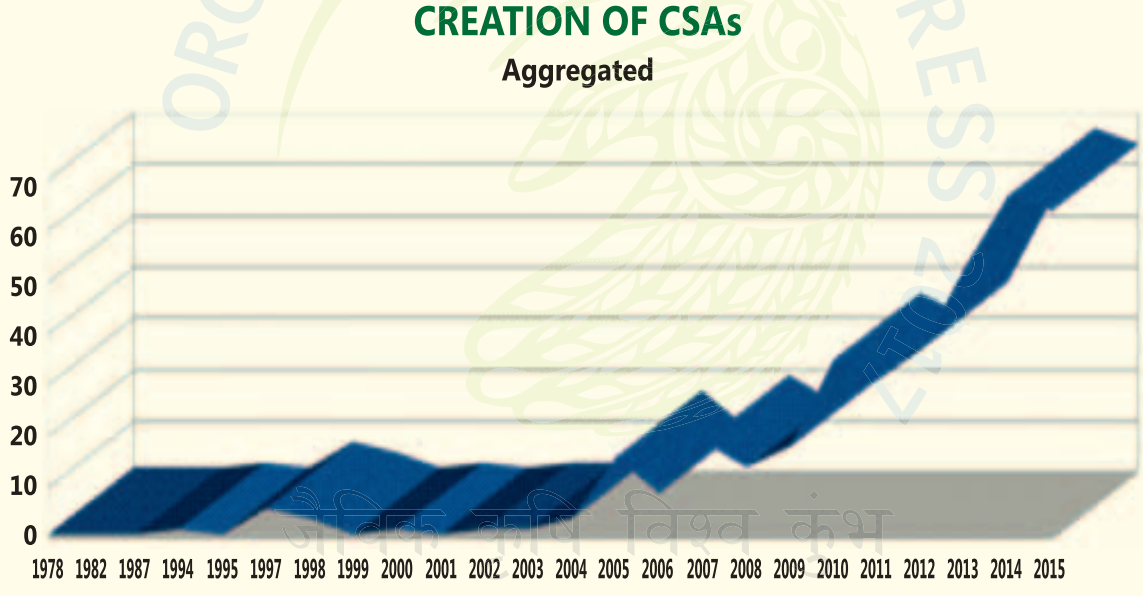


Fig. 1: Creation of CSAs: classification of CSA groups responding to the European questionnaire according to their dates of creation.

2) The movement is creative and diverse

There are many different stories behind the direct food relationship organized around a CSA group. We can use the figure below as a starting point. This figure reflects the perfect balance within the movement between farm-initiated CSAs and consumers-initiated CSA. This creativity and diversity appeared through out the responses to the questionnaire, but it appeared even more clearly in the qualitative part of the research, called "country reports". These features are actually, for the CSA members, key elements of the definition of what is CSA.

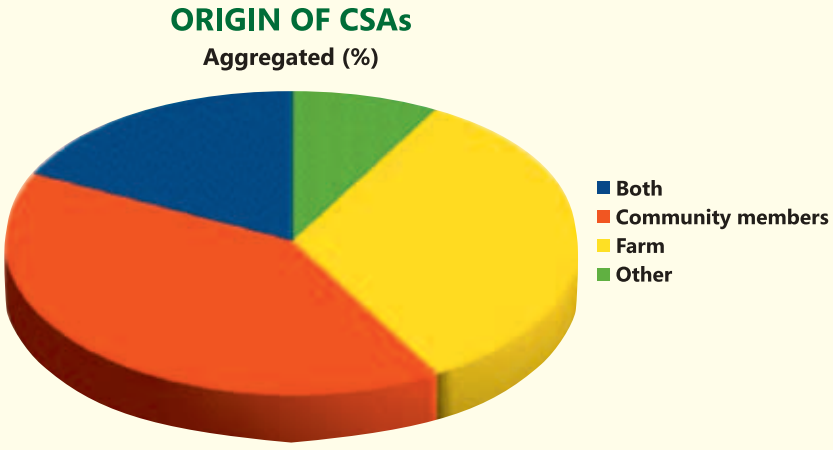


Fig. 2: origin of CSAs, with a distinction between "farm-initiated CSAs", "Community-initiated CSAs", "both" and "other.

3) CSA members display a high level of commitment

The census confirms that the CSA model relies on strong commitment from the consumers' side. One part of the questionnaire tried to check that the practitioners' understanding was in line with the definition worked out by the research group. The results tend to show that this definition is the right one (especially the elements of "direct partnership", "agreement", "agroecology", "quality food"), except maybe for the "shared responsibilities", which seems to be recognized by less than half the respondents.

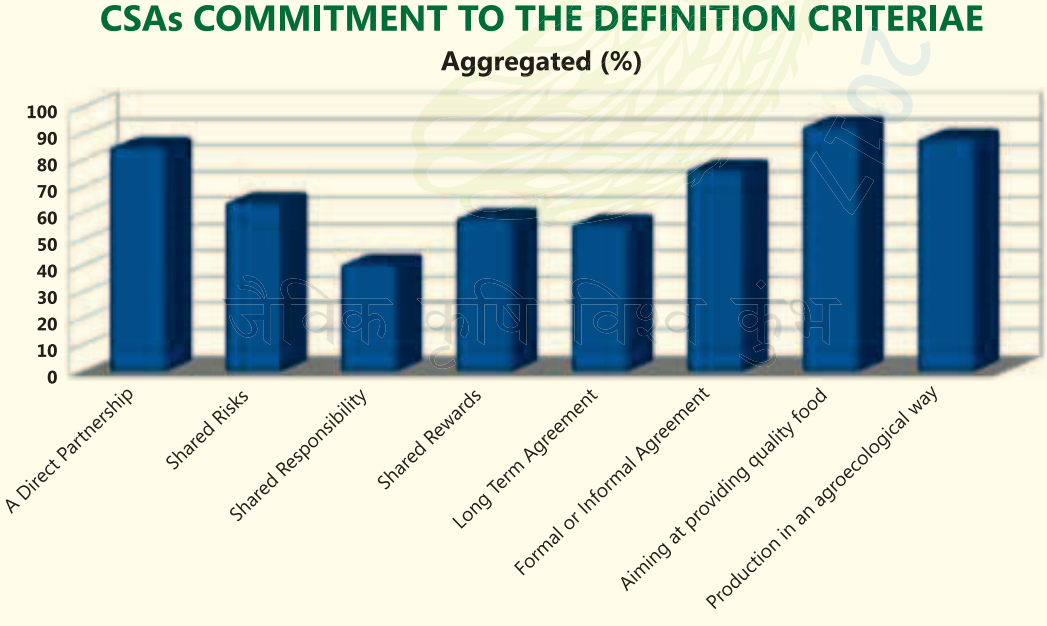


Fig. 3: Commitment shown by responding CSA groups to each of the CSA definition criteria.

The practicalities of this commitment are manifold. The Census unveils different types of engagement between the consumers and the farms: open days, social events, helping to grow produce, helping to pack/deliver, helping with administration/ organization in some cases.

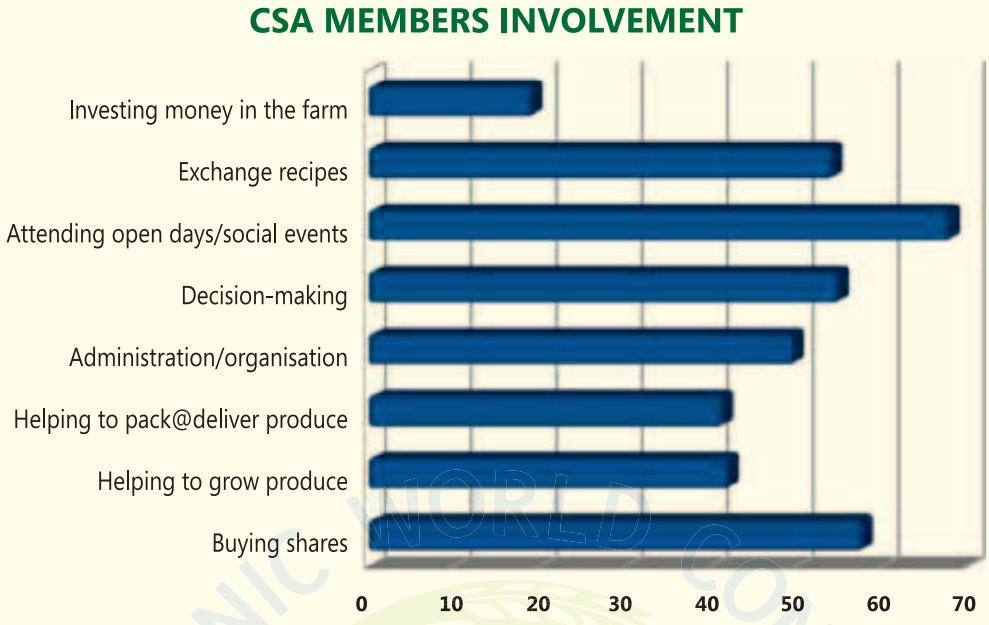


Fig. 4: CSA members' involvement. How does consumers' commitment materialize?

Core messages and conclusions

As a model requiring high level of commitment, CSA is also facing some limits, which the Census started to identify. One is that the composition of the CSA groups is quite homogeneous. The discriminatory criteria is not culture or wealth, but the level of education. As most of the citizens giving their time as volunteers in our societies, CSA members are well-educated people, with a high conscious of their responsibilities as citizens. The CSA movement thus has to work in order to increase its social outreach. It has to find ways to correct the exclusion mechanisms and to open up to all layers of the society, as some CSA initiatives around Europe are trying to do.

References

- Parot J (2016): After Ostrava, Guidelines for the Future of the European Declaration on CSA". In: Iserte M, Parot J, Perenyi Z, Valeska J (eds): Report from Ostrava. 3rd European Meeting of CSA Movements. Kernel Editions 4-10.
- Volz P, Weckenbrock P, Cressot N, Parot J (eds) (2016): Overview of Community Supported Agriculture in Europe, Aubagne, Kernel Editions.

Green Conservation Program: A System for Biodiversity Conservation and Sustainable Agriculture in Taiwan

Rung-Tsung Chen

About Author

Rung Tsung Chen is a specialist at the Tse Xin Organic Agriculture Foundation. Currently he is working on the promotion of Green Conservation programme and to establish other conformity assessment procedures such as participatory guarantee system in Taiwan (ROC).

Key words: farmers, sustainable, agriculture, biodiversity, conservation, program

Summary

Founded in 1997, Tse-Xin Organic Agriculture Foundation (TOAF) is a non-profit organization committed to promoting a healthy environment while improving livelihoods and human well-being through the principles of organic agriculture. However, many small farmers cannot bear the costs and paperwork requirements of third party certifications which affect the livelihood of existing small farmers and inhibit the conversion of more small farmers to organic practices. In collaboration with the Forestry Bureau, TOAF launched a Green Conservation (GC) program to train and support more farmers to adopt organic agriculture. As an alternative to third party certification, the program certifies environmentally friendly farms to conserve biodiversity and ensure sustainable livelihoods for agricultural communities. The total area under organic farming has increased to 282 hectares (ha) with over 266 organic producers and 48 species at risk currently protected throughout many habitats as a result of the program between 2010 and 2016.

Introduction

A growing movement has emerged for innovative alternatives of sustainable agriculture production. Sustainable agriculture seeks to sustain farmers, resources, and communities by promoting farming practices and methods that are profitable, environmentally sound, and good for communities. Apart from third-party certification standards, the Foundation has taken deliberate measures to support sustainable crop production systems which include the formulation and introduction of the GC program. Green Conservation is a certification system that trains, supports, and certifies producers who practice environmentally friendly agriculture that promotes ecological balance and biodiversity conservation. The primary focus of the program is to preserve priority species and restore their natural habitats through technical aid to farmers who are transitioning from conventional to organic agriculture. The approach is to protect and restore the habitats on which endangered species, rare species, indicator species, endemic species, and other wildlife depend for their survival while encouraging

environmentally friendly land management practices. Through sustainable use of natural resources and by taking natural habitats into account when planning land use, farmers can also join the program if they preserve such habitats or selected habitats that are either particularly important or valuable to the region in question. Natural habitats with conservation status in the GC program can be terrestrial, freshwater, or diverse.

In 2009, TOAF formulated the GC program with an emphasis on sustainable production and wildlife conservation and, in 2015, the Foundation amended its regulations to encompass environmental protection of natural habitats as well. These criteria now apply to both species and habitats focusing on global importance, regional importance, rarity, sensitivity, ecological role (e.g. indicator species), and population decline. The species list was expanded to include a wider range of species at risk. To promote the adoption of GC standards, TOAF mainly supports organizing farmers into groups and associations, training farmers on good agriculture practices, and making sure they comply with GC standards which aim to increase product quantity and quality and enhance market recognition of responsible farming (and thus GC-certified products). This helps farmers to retain current markets and tap into new ones. The successful GC certification of small farmers needed significant involvement of different actors in the value chain, in addressing bottlenecks that prevent small farmers from implementing GC criteria practices. This involvement ranges from changing the mindset of small farmers, through introductory training to achieve GC certification, to hands-on guidance, and practical advice. In contrast to the traditional system, it involves a more intensive interaction between the farmer and the guarantee organization. The GC program integrates capacity building and allows farmers and facilitators to help solve practical problems which will enable producers to follow the GC standards. It encourages more responsibility and active involvement in the production and certification processes.

Methodology

For the initiative, author carried out qualitative interviews with farmers, focus group discussions, and field visits to farms. Staff held community meetings with farm households about the initiative. Other data sources included review of documents and training reports. In addition, staff offered training workshops, technical assistance, networking resources, and ongoing consultations to help transitioning farmers learn the skills necessary to sustain small-scale agricultural operations that are organic or environmentally friendly. Based on findings, author analysed the impact of the GC program on the adoption of conservation-friendly practices and biodiversity.

In the GC program, training is conducted at community level with a group of farmers as a means of communication by facilitators to improve farmers' skills and practical experience. Farmers help each other by exchanging experiences, valuable techniques, and information.

After a few months of basic training, farmers become proficient in the principles of growing a healthy crop, applying suitable integrated pest management techniques, from land preparation to harvest, seed preparation, composting, preparing insect zoos, documentation, and other necessary information.

Biodiversity conservation has always been an important focus of the GC program, and this emphasis is reflected in the sustainability standards with regard to environmental protection. In addition to promoting conservation through the standards, program facilitators provide training on biodiversity-related topics for farmers who are preparing for certification or have already achieved certification. For instance, training curricula address the identification and protection of natural ecosystems, sensitization to the value of wildlife, protection of water bodies, and best practices for managing crops to deliver multiple benefits for farm productivity and conservation.

As a result of training and application of GC principles and criteria, small farms certified by TOAF use the GC trademark seal for marketing their products. The principles address environmental issues (social and environmental management system, ecosystem conservation, wildlife protection, water conservation); and farm management principles (integrated crop management, soil management and conservation, integrated waste management). To implement standards compliance, farmers are trained on both standard principles, criteria, theories, and specific practices. Practices that comply with environmental principles include those areas of production that have no negative effect on wildlife shelters and endangered species, human activity, and natural vegetation. Farmers learn how to identify and prepare inventories of natural ecosystems, and protect and restore them through a conservation program.

In the context of Taiwan's Guantian district in Tainan City, farmers widely cultivate water caltrops in flooded paddy fields which support many resident and migratory birds, including the Pheasant-tailed Jacana. In 2009, destruction of its natural habitat, disturbance of its breeding areas, and poisoning from pesticides threatened the survival of many local bird populations especially jacanas. In response to the crisis, the Foundation initiated the GC program to help support key activities such as: educating farmers on sustainability; conducting ground-level studies of the Pheasant-tailed Jacana; holding meetings with local officials; promoting bird-friendly agricultural practices to help protect local birds that suffered drastic population decline.

Results

In this section, author reviews the effect of GC certification system on the adoption of environmentally friendly farming practices as well as key outcomes related to natural ecosystems and wildlife. The conservation-friendly practices have increased the quantity

and quality of natural habitats in agricultural landscapes, and helped sustain populations of native species. GC certified farms play an important role in biodiversity conservation, as native species on certified farms demonstrated high levels of survivorship. For example, a study on jacana population in Tainan City's Guantian district found the abundance of jacanas increased on GC fields from just 399 in 2010 to approximately 1,272 by 2016, with especially large increases between 2015 and 2016 (Table 1). Surveys showed the death of birds was mainly due to local farmers' intensive use of synthetic pesticides and other chemicals in agricultural areas that jacanas depend upon for nesting and feeding. The number and area of certified farms have grown steadily over the years, with especially large increases in production area between 2015 and 2016 (Figure 1). Total certified farm area increased several-fold: there were 3 hectares of certified farm area in 2011, compared with nearly 40 hectares in 2016 (Figure 1). GC producers also grew from 7 in 2011 to 25 by the close of 2016 (Figure 1). TOAF helped local farmers preserve Guantian district's natural wetland habitats and convert agricultural land to environmentally friendly management to stop pollution and prevent further destruction of wildlife.

Table 1. Abundance of jacanas on Green Conservation farms in Guantian district in 2010-2016.

Year	2010	2011	2012	2013	2014	2015	2016
Total production area	1	3	9	15	17	20	40
Total number of jacanas	399	458	549	617	663	711	1272

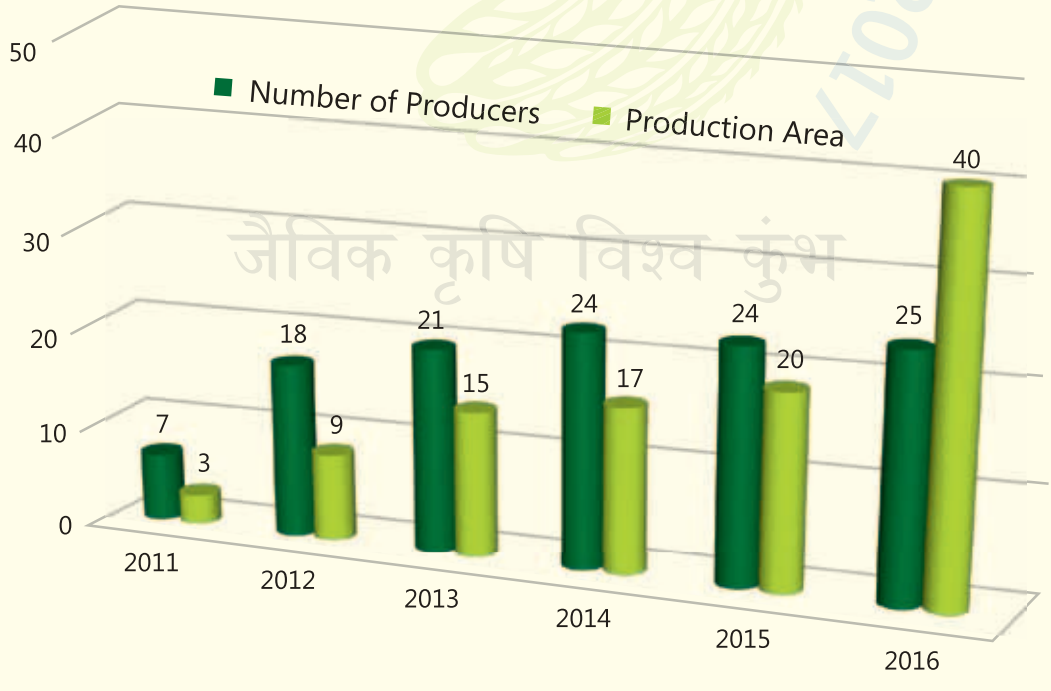


Figure 1. Growth in Green Conservation producers and production hectares in Tainan City's Guantian district from 2011 to 2016.Production hectares refers to land under certified crops.

After just six years, data are revealing just how important restored natural ecosystem is for protecting rare species and providing habitats for a diverse array of plants and animals. Strategically focusing efforts on these species also helped conserve the many other species which share their habitats and or are vulnerable to the same threats. In consideration of substantial demands for qualification and resources which pose limitations to its applications, the GC program expanded its application requirements to include the protection of natural habitats in 2015. As of 2016, there were over 266 GC farmers with 282 hectares of land under certified crops (Figure 2). And, of the 48 species at stake now protected within the program, 9 are from terrestrial habitats, 11 are from freshwater habitats, and 28 are of diverse habitats. Among the species under protection in GC certified farms by category, 82% are endangered, 10% are indicator, 7% are endemic, and 1% are rare. Approximately 18% of GC certified areas protect natural habitats, with 58.3% for diverse, 22.9% for freshwater, and 18.8% for terrestrial habitats.

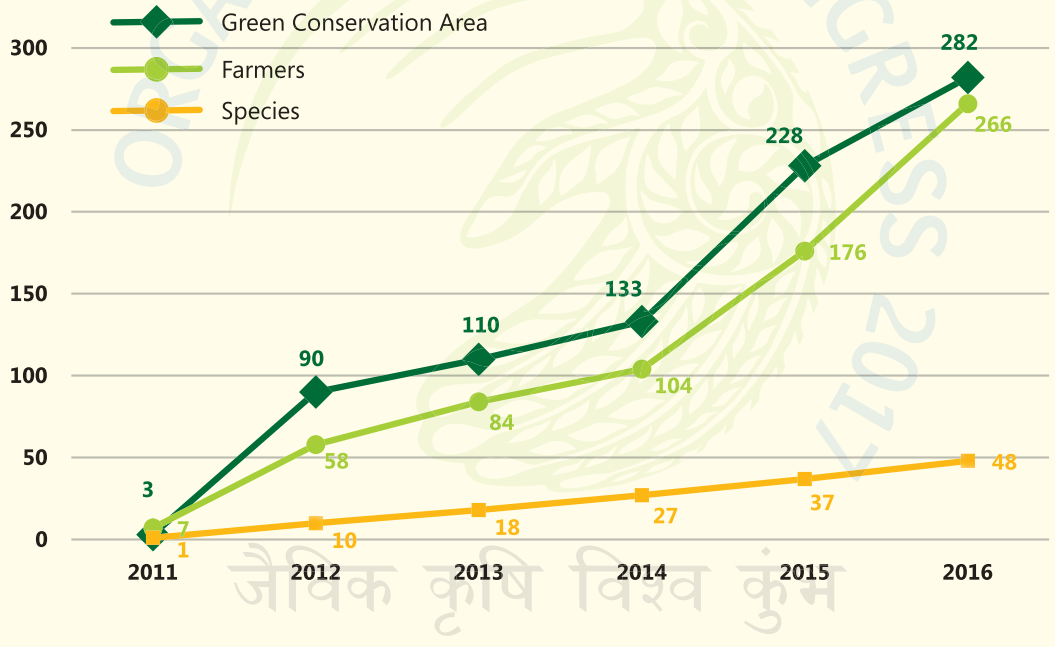


Figure 2. Growth in Green Conservation certified producers, production hectares, and species in Taiwan from 2011-2016. Production hectares refers to land under certified crops only.

Discussion

Collaboration and communication among major stakeholders, and local community involvement are two of the major factors for sustainable development. The GC system is transferable to other districts in Taiwan provided that the target areas have high levels of community-oriented interaction, participation, and pro-environmental attitudes. These elements are critical for the establishment of locally driven goals and enterprises. Moreover, it is easier for NGOs and government agencies to provide legal, financial, institutional, and technical support when there is a strong, honest, accountable leadership for community-

based initiatives. What is needed is a key enabling organization for supporting community-based initiatives. In the case of Taiwan, it was the Foundation that acted as an important catalyst in helping farmers to adopt ecological practices, build capacity within communities, and establish strategic linkages with government agencies. The success of a community-based initiative often relies on the impetus of a core group of dedicated people who have a shared vision and are willing to work closely with each other. The Foundation strives to promote high standards of sustainability in agriculture, environmental management, and community involvement. In the program, facilitators mentor farming communities in ways of dealing directly with farmers and of having a long-term engagement with them. Over the years, TOAF has developed a capacity to engage rural agricultural communities effectively. Consequently, relationships have been developed between individuals such that collaboration is based on strong personal and institutional relationships.

Conclusion

This paper explored a system for sustainable agriculture with an example of GC certification in Tainan City's Guantian district. The initiative was spearheaded by the Foundation and the Forestry Bureau to develop a program that supports farmers in the adoption of sustainable practices. Farmers and rural agricultural communities benefited from environmental conservation and wildlife protection, which resulted in returning species at risk. By conducting agricultural activities at district level and involving facilitators ease farmers into being receptive to new sustainable agriculture practices, especially for small farmers where certification costs are high, since this will speed up the certification process. Through these systems of training and certification, the initiative functioned as a catalyst in drawing producers to the GC standard and therefore motivated them to evaluate its importance positively for both policy and institutional support. By training farmers to implement the sustainable agriculture practices, TOAF was able to effectively mobilize support in agricultural communities for biodiveristy conservation with the aid of GC program facilitators.

The facilitators in the GC program, with support from the Forestry Bureau, have continuously engaged farmers in training sessions or activities to build their capacity in understanding the benefits of adopting sustainable practices. During implementation, farmers gradually developed an increasing appreciation of the advantages of sustainable agricultural practices for their products. With ongoing use of these practices in an integrated approach, farmers have been able to notice the difference in the form of improved soil health; reduced pest pressure and regeneration of natural enemies to pests; and high-quality produce from their fields. This has attracted other farmers into the system to enjoy the benefits of these sustainable practices. The continued use of ecological practices has become a culture among many farmers in Taiwan with obvious benefits.

The Foundation's work in the community has made an impact in terms of human resource capacity (skills), knowledge, and understanding of sustainable agriculture. These impacts are manifest through the level of community action and interaction which provide enabling conditions for sustainable results to continue over time and spread throughout the communities. The potential for sustainable agriculture in Taiwan is viable because of TOAF's consistent efforts to find sustainable interventions to improve the well-being and livelihoods of agricultural communities through training and development to advance community-based initiatives. By securing committed involvement from small farmers, Tse-Xin Organic Agriculture Foundation has successfully promoted a system for biodiversity conservation and sustainable agriculture in Taiwan through the Green Conservation program.

National Programme for Organic Production (NPOP)

TRACENET
Ensuring Integrity through Traceability

ABOUT TRACENET

Trace Net is a web based Certification cum Traceability System for monitoring of Process Certification (Production, Processing and Trade) for export of organic products from India complying with the National Programme for Organic Production (NPOP) & National Organic Programme (NOP) standards. It is being implemented by APEDA since June 2010.

Objectives

- To streamline and fasten the process of Organic certification
- To monitor each consignment that goes in to trade
- To trace the consignments up to farm level for Organic traceability
- To stop fraudulent activities and ensure credibility of India Organic products in the global market
- Quality assurance to gain trust of the Consumers in the global market

Salient features

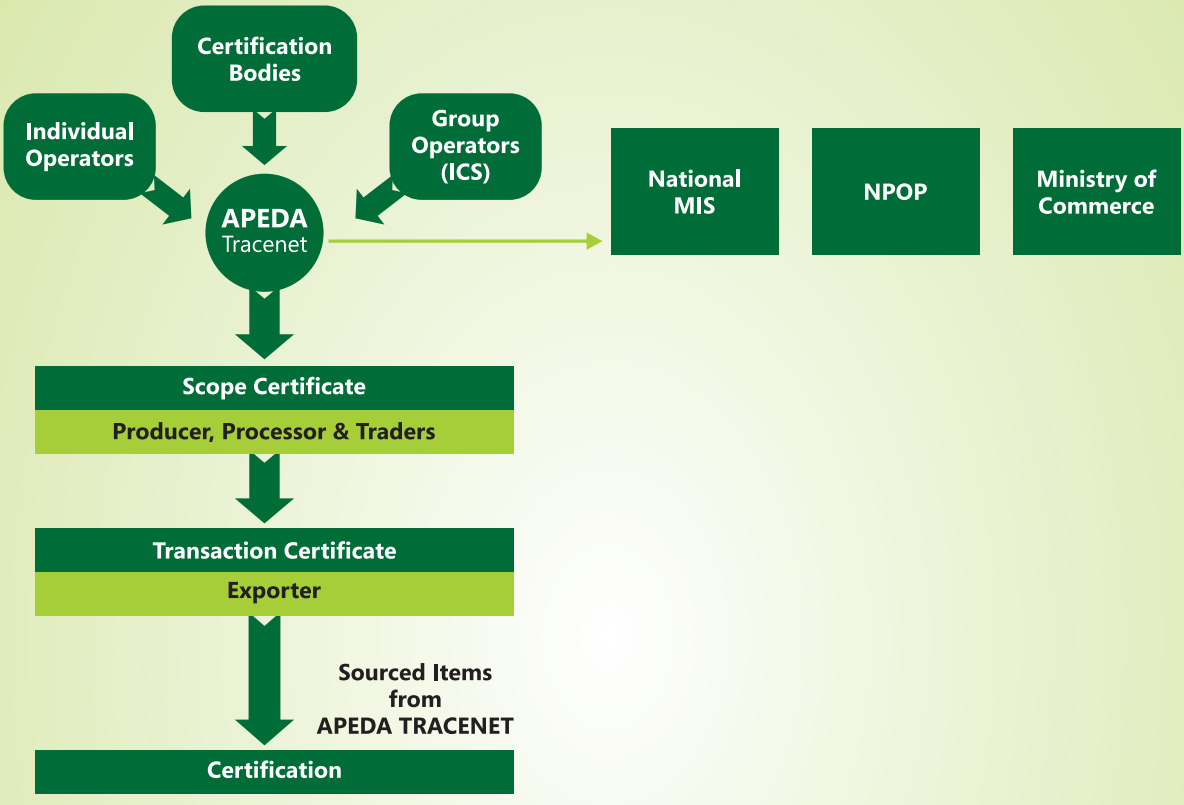
1. Only authorized registered stakeholders can have access to Trace Net
2. All certificates are issued with unique Barcode and QR Code.
3. Registered Producers, Processors and Traders are issued with Scope certificates annually.
4. The Producers may be individual farmers or group of small farmers (ICS)
5. Transaction certificates are issued every time when there is a process of buying and selling among the stakeholders.

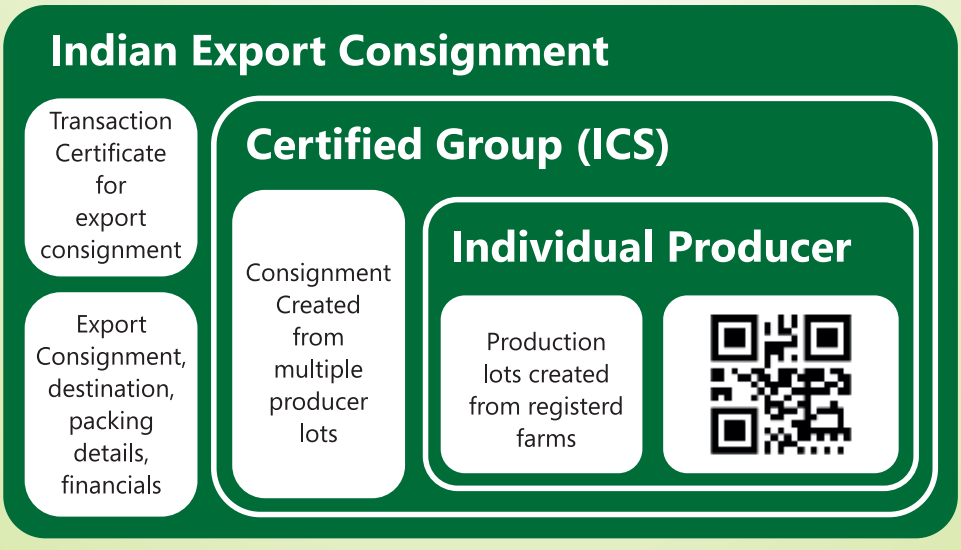
Tracenet Ensures

- Traceability from farm to fork throughout the process
- Authenticity of the certificates online (Scope and Transaction)
- Ensures the compliance of the standards
- Credibility of certification process and genuineness of product in national and international market

TRACENET

A Web Based Traceability Platform for Organic Products of India





Operated by

Agricultural and Processed Food Products Export Development Authority, Ministry of Commerce and Industry, Government of India.

APEDA

Driving Growth Beyond Boundaries

India has diverse agro-climatic zones, which aid its tremendous agricultural potential. The potential makes the country, 7th largest exporter of agricultural products in the world. All these agricultural and processed food exports are implemented and enforced by a governing body – **The Agricultural and Processed Food Products Export Development Authority (APEDA).**

APEDA was established in February 1986 by the Ministry of Commerce through an act of Parliament. Its constitution comprises experts from the fields of agriculture, research, packaging, export promotion, economics and product marketing.

APEDA provides a platform to showcase India's quality produce in the global market. The mandate for APEDA is to develop and promote the export of 14 major product categories: Fruits, Vegetables and their products; Meat and Meat Product; Poultry and Poultry products; Dairy Products; Confectionery, Biscuits and Bakery products; Honey, Jaggery and Sugar products; Cocoa and by-products; Alcoholic and Non-alcoholic beverages; Cereals and Cereal products; Groundnuts, Peanuts and walnuts; pickles, papads and chutney; Guar Gum; Floriculture and related products, and Herbal and Medicinal plants.

APEDA is also the secretariat for National Programme for Organic production, which provides an institutional support for Accreditation of certification agencies and surveillance and monitoring of organic certification process.

APEDA also plays a pivotal role in developing the database of the mandated products, markets, services, and distribution of related information to exporters. The authority extends financial assistance under its Agriculture and promotion Plan Scheme under various components like Market Development, Infrastructure Development and Quality Development.

Sharad

एपीडा
APEDA

The Agricultural and Processed Food Products Export Development Authority (APEDA)

3rd Floor, NCUI Building 3, Siri Institutional Area,
August Kranti Marg, (Opp. Asiad Village),
New Delhi - 110 016, India