UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND
POLLUTION PREVENTION

MEMORANDUM

Date: June 7, 2016

SUBJECT: **Malathion:** Acute and Steady State Aggregate (Food and Drinking Water) Dietary Exposure and Risk Assessments to Support Registration Review

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Risk Assessment Type: Dietary	**Case No.:** 0248
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MRID No.: NA	**40 CFR:** §180.111

FROM: Sheila Piper, Chemist *Sheila Piper*
Risk Assessment Branch VI
Health Effects Division (7509P)

THROUGH: Pete Savoia, Chemist *Peter Savoia*
Douglas Dotson, Chemist *D. Dotson*
Jennifer Tyler, Chemist *Kelly Bова FOC*
Dietary Exposure Science Advisory Council (DESAC)
and
Donna Davis, Branch Chief *OSDavis*
Risk Assessment Branch VI, HED (7509P)

TO: Steven Snyderman, Chemical Review Manager
Kelly Sherman, Acting Branch Chief
Risk Management and Implementation Branch 3
Pesticide Re-Evaluation Division (PRD) (7508P)

Executive Summary

Acute and steady state aggregate dietary food and drinking water exposure and risk assessments for malathion were conducted using the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database (DEEM-FCID) Version 3.16. This software uses 2003-2008 food consumption data from the U.S. Department of Agriculture's (USDA's) National Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA). These analyses were performed as part of the registration review for malathion/malaoxon and include the following updates to the previous risk assessment: (1) new toxicological endpoints; (2) updated monitoring data; and (3) new drinking water estimates provided by the Environmental Fate and Effects Division (EFED). These analyses were reviewed by two DESAC peer reviewers and by the DESAC on September 10, 2015, per the DESAC Standard Operating Procedure (SOP) 2012.1.

Acute Aggregate Dietary Exposure and Risk Results and Characterization

Malathion is an organophosphate (OP) insecticide that is used outdoors to control a wide variety of food/feed crops to control insects in agricultural settings and around homes. Malathion has also been used in public health mosquito control and fruit fly eradication programs. For the adulticide use, a residue value was translated from registered crops to unregistered crops. A highly refined probabilistic acute dietary exposure assessment was conducted for all food uses (registered and pending) and drinking water. The dietary exposure assessment incorporated the latest USDA Pesticide Data Program (PDP) monitoring data for malathion and its metabolite (malaoxon), field trial data, empirical and default DEEM processing factors, and percent crop treated (PCT) estimates. Malathion residue estimates used in this assessment include malathion and the oxygen analog metabolite, malaoxon. Malaoxon is considered more toxic than malathion. A comparative cholinesterase assay (CCA) with malathion and malaoxon was submitted in which cholinesterase activity was measured following gestational exposure; describing time of peak effect; and following acute exposures (postnatal day, PND 11). The toxicity adjustment factor (TAF) of 22x was derived from this data and was applied to residues of malaoxon for dietary exposure assessment. Also, the FQPA 10x Safety Factor is being retained for infants, children, youths, and women of childbearing age for all exposure scenarios due to uncertainty in the human dose-response relationship for neurodevelopment effects.

The Environmental Fate and Effects Division (EFED) provided daily time series outputs for six different application scenarios (FL cabbage, FL strawberry, MS cotton, WA cherry, WA cherry ultra low volume (ULV) and MS cotton ULV). The WA cherry maximum aerial scenario results in the highest estimated drinking water concentration. The drinking water distributions assume 100% conversion of malathion to malaoxon and incorporate the acute TAF of 22x.

Acute assessments were conducted for food only, drinking water only, and for food and drinking water to characterize dietary exposure. The food only acute dietary risk estimates are below HED's level of concern (<100 % of the acute population adjusted dose (aPAD)) for the U.S. population and all population subgroups at the 99.9th percentile. Malathion dietary exposure for food alone is 27% of the aPAD for the U.S. population, and children 1-2 years old, the most highly exposed population subgroup, is 74% of the aPAD at the 99.9th percentile. The WA cherry maximum aerial scenario results in dietary (drinking water only and food plus drinking water) risk estimates that are above HED's level of concern (>100 % of the aPAD) at the 99.9th percentile. For drinking water only, WA cherry results for the all infants (<1 year old) is 690% of

the aPAD, the highest exposed population subgroup. Combined dietary exposure from food and the highest drinking water scenario is 240% of the aPAD for the U.S. population and 690% of the aPAD for all infants (<1 year old), the highest exposed population subgroups. Drinking water is the risk driver when combining food and drinking water in the acute assessment for malathion, accounting for approximately 90% of estimated exposure in the acute assessment based upon critical exposure contribution analysis.

<u>Steady State Aggregate Dietary Exposure and Risk Results and Characterization</u>

OPs may exhibit a phenomenon known as steady state acetylcholinesterase (AChE) inhibition which is the most sensitive endpoint for all lifestages. After repeated dosing at the same dose, the amount of AChE inhibition in a given dose remains consistent across duration. For this reason, a steady-state point of departure (PoD) was selected for oral exposure to malathion (see Table 4).

The refined steady state dietary exposure assessment incorporated the latest PDP monitoring data for malathion and malaoxon, field trial data, empirical and default DEEM processing factors, PCT, and a TAF of 22x for the oxon. The drinking water distributions provided by EFED were converted into distributions of 21-day forward-rolling water averages using DEEM. For this analysis, the DEEM acute module is used to conduct a steady state assessment of the OP active ingredient using the steady state PoD, 2-day average food consumptions, and 21-day forward rolling drinking water averages. (See Section V for details).

Steady state assessments were conducted for food only, drinking water only, and for food and drinking water. The food only steady state results are below HED's level of concern (<100% of the steady state population adjusted dose (ssPAD) for the U.S. population and its population subgroups. Malathion dietary exposure at the 99.9th percentile from food alone was 24% of the ssPAD for the U.S. population and 48% of the ssPAD for children 1-2 years old, the most highly exposed population subgroup. The WA cherry maximum aerial scenario results dietary (drinking water only and food plus drinking water) estimates that are above HED's level of concern (>100 % of the ssPAD) at the 99.9th percentile. For drinking water only, WA cherry results for the all infants (<1 year old) is 480% of the ssPAD, the highest exposed population subgroup. Combined dietary exposure from food and drinking water is 170% of the ssPAD for the U.S. population and 470% of the ssPAD for all infants (<1 year old), the most highly exposed population subgroup.

Cancer Dietary (Food and Drinking Water) Exposure Results and Characterization

Malathion is classified as "suggestive evidence of carcinogenicity, but not sufficient to assess human carcinogenic potential." Therefore, a cancer quantitative dietary exposure analysis is not required.

I. Introduction

Dietary risk assessment incorporates both exposure and toxicity of a given pesticide. For acute and steady state assessments, the risk is expressed as a percentage of a maximum acceptable dose (i.e., the dose that HED has concluded will result in no unreasonable adverse health effects). This dose is referred to as the population adjusted dose (PAD). The PAD is equivalent to the point of departure (POD, NOAEL, LOAEL, e.g.) divided by the required uncertainty or safety factors.

For acute and steady state assessments, HED is concerned when estimated dietary risk exceeds 100% of the PAD. References that discuss dietary risk assessments in more detail are available on the EPA/pesticides web site: "Available Information on Assessing Exposure from Pesticides, A User's Guide," 21-JUN-2000, web link: http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2007-0780-0001; or see SOP 99.6 (20-AUG-1999).

The steady state assessments were conducted in the DEEM acute module using the steady-state point of departure, refined estimates of food exposure, and 21-day forward-rolling water averages to provide the 21-day ("steady-state") exposures and risk estimates. These steady state assessments were completed for drinking water alone, food alone, and food + drinking water. For drinking water alone, the steady state assessments, using a 21-day forward-rolling average water file, provide an accurate overall estimate of the 21-day ("steady-state") average daily exposures at the per-capita 95th or 99.9th percentile for drinking water, to the extent that predicted drinking water concentrations for any 21-day duration is known for any given year. For food alone, the steady state assessments reflect an average daily exposure for a steady state exposure duration rather than a 21-day exposure duration. Since the DEEM steady state assessment does not capture day-to-day variation in food residues, it will generally result in higher food-only exposure estimates than a model that calculates 21-day rolling averages for food. Although the DEEM steady state assessments may result in higher exposure estimates for food, the assessments provide an acceptable estimate of 21-day ("steady-state") average daily exposure for food + drinking water for use in risk assessment.

The most recent dietary risk assessment for malathion was conducted by S. Piper to support the continued post-harvest use on rice and wheat (11/12/2009, D371345).

II. Residue Information

Residue of Concern
The residues of concern in plants and livestock for risk assessment and tolerance enforcement was concluded to be parent and its metabolite, malaoxon (Metabolism Committee Issues Memo, R. Perfetti, 07/15/1992).

Table 1. Summary of Metabolites and Degradates to be included in the Risk Assessment and Tolerance Expression		Residues included in Risk Assessment	Residues included in Tolerance Expression
Matrix			
Plants	Primary Crop	malathion and malaoxon	malathion and malaoxon
	Rotational Crop	malathion and malaoxon	malathion and malaoxon
Livestock	Ruminant	180.6(a)(3)	180.6(a)(3)
	Poultry	180.6(a)(3)	180.6(a)(3)
Drinking Water		malathion and malaoxon	Not Applicable

Tolerances

Tolerances for residues of malathion are established under 40 CFR §180.111 in/on a wide variety of crops at levels ranging from 0.1 to 270 ppm. There are tolerances expressed in terms of the parent only for various commodities including livestock commodities in 40 CFR §180.111(1) and (3). However, for cereal grain commodities the tolerances are expressed in terms of the parent and malaoxon (40 CFR §180.111(2)). The residues of concern in plants and livestock for risk assessment are parent and malaoxon.

Adulticide Use

Malathion is also used in the Cotton Boll Weevil Eradication Program, Fruit Fly (Medfly) Control Program, and for mosquito-borne disease control. However, there are no tolerances established on any crops for residues of malathion as a result of adulticide use. While the registrant has petitioned for these tolerances, they have not been formally established. For this dietary assessment, the proposed tolerances or the translated residue and/or monitoring data on which they are based, are included in this assessment. The Agency notes that malathion is registered on almost all major crops in terms of acreage and consumption. Amongst the unregistered crops, only bananas, cilantro, and honey were analyzed by PDP for malathion from 2001-2010. Detectable residues were found only in cilantro samples from 2009- 2010 PDP data; 46 out of 739 total samples had detectable residues with the maximum residue at 0.263 ppm. No malaoxon residues were found in cilantro.

PDP Data

Extensive USDA Pesticide Data Program (PDP) monitoring data for residues of malathion and malaoxon in numerous commodities are available (1994- 2012). The PDP was specifically designed for risk assessment; analysts prepare samples in a manner similar to typical consumer practices, such as washing, coring, and peeling. Previous dietary assessments for malathion have used Food and Drug Administration (FDA) surveillance data; however, these data are considerably older than the available PDP data, and were not used in this assessment. If monitoring data were not available for a particular commodity (i.e. horseradish), but were available for a similar commodity (carrots), the available data were translated to the similar crop (HED SOP 99.3; HED SOP 2000.1) with similar use patterns. When data were translated, the residue distribution file (RDF) was adjusted to account for differences in percent crop treated. All RDFs were adjusted to account for the malaoxon TAF of 22x (See Table 2 below). Attachment 1 summarizes the residue inputs (RDFs, field trial data, processing factors, PCT, etc.) for the acute and steady state assessments. Attachment 2 summarizes all of the RDF files used for the acute and steady state assessments.

PDP monitoring data found several detectable residue of malathion in strawberries (1485 samples/345 detects), caneberries (1477 samples/73 detects), wheat grain (1361 samples/884 detects), wheat flour (1331 samples /587 detects), celery (1480 samples /300 detects), snap peas (1487 samples /107 detects), kale (802 samples /37 detects), and green onions (744 samples/36 detects). Malaoxon residues were in general undetectable in most crops except strawberries (218 detects; max residue 0.04 ppm), blueberries (9 detects; max residue 0.013 ppm) and kale (3 detects; max residue 0.05 ppm).

Also, to determine whether or not residues are present in fish, HED now routinely checks PDP monitoring data regardless of the pesticide's uses and physicochemical properties. PDP

monitored pesticide residues in catfish in 2008, 2009, and 2010 and in salmon in 2013. In general, pesticide residues would not be expected to be found in fish unless the pesticide bioaccumulates or has an aquatic use. PDP did monitor for residues of malathion in fish/shellfish; however, no detects were found out of the 1479 samples. Also, PDP monitor for salmon in 2013 and no detects were found out of the 323 samples. Due to the adulticide use, PDP data was used for fish.

Processing Factors
DEEM default processing factors were used for all commodities when available with the exception of the oilseed crops. An empirical reduction factor of 0.05x (for cottonseed oil) was used for oilseeds (W.Smith, D255365, 5/10/99). If PDP analyzed a processed food item, empirical and/or default processing factors were not incorporated into the assessment because the PDP samples already reflect the reduction or concentration of residues due to processing. This applies to tomato paste and citrus juices. If PDP sampled a fresh or frozen food item and empirical and/or default processing factors are available, these factors were used along with the PDP data. See Attachment 1.

Methodology for Combining Residues of Malathion and Malaoxon
USDA PDP analyzes for residues of malathion and malaoxon separately. Since the residues of concern for risk assessment are malathion and malaoxon, these residues need to be combined for use in the dietary risk assessment. This was done using a Statistical Analysis System (SAS) program that matches residues of malathion and malaoxon from the same samples using the PDP sample IDs. The SAS program adjusted the residues of malaoxon using the TAF of 22x, and then added the adjusted malaoxon residue with the malathion residue from the same sample. The SAS program directly created the RDFs for use in the acute and steady state analyses. Attachment 2 summarizes all of the RDFs.

In some cases, residues of either malathion or malaoxon may not have been detected or the samples may not have been analyzed for both residues. When this occurs, the following approach outlined in Table 2 were used to combine the residues for each sample.

Table 2. Method for Combining Residues of Malathion and Malaoxon from the Same PDP Sample.		
Malathion	Malaoxon	Treatment[1]
Detect	detect	Malathion detect + (22x) malaoxon detect
Detect	non-detect	Malathion detect + (22x) ½ LOD for malaoxon for that sample
non-detect	detect	½ LOD for malathion for that sample + (22x) malaoxon detect
Detect	not-analyzed	detect for malathion + (22x) ½ average LOD[2] malaoxon

[1] The acute and steady state assessments use the acute TAF of 22x.
[2] This value is calculated by taking the average malaoxon limit of detection (LOD) for all years of interest of the PDP data and dividing by two (i.e., if PDP data are available for 2001, 2002, 2010, 2011, and 2012, and the assessment uses the PDP data for 2010-2012, the average malaoxon ½ LOD would be calculated using the 2010-2012 LODs for malaoxon).

Field Trial Data

Field trial data for malathion and malaoxon were designed for tolerance setting purposes and reflect the maximum proposed application rate, maximum number of seasonal applications, and shortest interval between treatment and harvest. Actual residues seen in monitoring data are typically much lower than residues seen in field trials. However, monitoring data, or appropriate translation of monitoring data are not available for all crops. Chestnuts, cotton, dates, figs, guava, macadamia nuts, spearmint, peppermint, passion fruit, pecan and walnuts were the raw agricultural commodities for which field trial data were used in the dietary exposure assessment. Only dates, mints, guava and cotton had detectable residues of malaoxon. Each malaoxon residue was multiplied by the 22x to adjust for the higher toxicity of malaoxon. A tolerance was used for hops (1 ppm). Attachment 3 gives full details of the residue data used for malathion and malaoxon for each field trial.

III. Percent Crop Treated Information

The Biological and Economic Analysis Division (BEAD) has provided an updated Screening Level Usage Analysis (SLUA) for malathion (J. Alsadek, 04/01/2015) which includes both an average and maximum PCT for the established uses.

The acute and steady state analyses incorporated maximum percent crop treated data for the following crops: alfalfa: <2.5%; apple: <2.5%; apricot: <2.5%; asparagus: 10%; avocado: 5%; barley: 5%; bean, green: <2.5%; blueberries: 40%; broccoli: 5%; Brussel sprouts: 20%; cabbage: 5%; caneberries: 70%; canola: 10%; cantaloupes: 5%; carrots: 20%; cauliflower: 5%; celery: 30%; cherries: 25%; corn: <2.5%; cotton: 20%; cucumbers: 5%; dates: 10%; dry bean/peas: <2.5%; eggplant: 5%; fig: 10%; garlic: 10%; grapefruit: 15%; grapes: <2.5%; lemons: <2.5%; lettuce: 15%; oats: <2.5%; onions 10%; oranges: 20%; peaches: 5%; peanuts: 2.5%; pears: <2.5%; peas, green: 2.5%; pecans: 5%; peppers: 5%; plums/prunes: <2.5%; potatoes: 2.5%; pumpkins: 10%; rice: <2.5%; sorghum: <2.5%; soybeans: <2.5%; spinach: 5%; squash: strawberries: 55%; sugar beets: <2.5%; sugarcane: <2.5%; sunflowers: <2.5%; sweet corn: <2.5%; tangerines: 25%; tomatoes: 5%; walnuts: 15%; watermelons: 5%; and wheat: <2.5%. See Attachment 34.

IV. Drinking Water Data

References: *Drinking Water Assessment for Registration Review of Malathion, D420234, A. Shelby, 08/13/2015.*

The estimated drinking water concentrations (EDWCs) for malathion residues in surface water were generated using the Surface Water Concentration Calculator (SWCC) computer model, which is derived from the Pesticide Root Zone Model and Exposure Analysis Modeling System (PRZM/EXAMs) to generate EDWCs. The residue of concern for risk assessment in drinking water is the parent and malaoxon. Malathion exposed to chlorine in drinking water treatment facilities is expected to be rapidly and completely converted to malaoxon. Therefore, each drinking water value was converted from malathion to malaoxon on a molecular weight basis and multiplied by the TAF of 22x to take into account for the malaoxon. Because EDWCs from surface water modeling are at least two orders of magnitude larger than those estimated from this screening level approach for groundwater, no further groundwater estimates were derived.

Assessment of Agricultural Uses

Twenty modeled scenarios were chosen to represent a range of malathion agricultural uses with large usage and the geographic area encompassed. In an effort to model uses with highest exposure potential, EFED prepared six 30-year time series files for select malathion uses based on highest 1-in-10-year annual averages. Those uses with highest 1-in-10-year annual averages were anticipated to also have the highest 21-day rolling averages because annual averages are expected to be primarily influenced by concentrations near the time of application due to malathion's rapid metabolism in soil and rapid hydrolysis in water. Aerial applications are modeled using a 25 foot buffer to waterbodies and ULV applications are modeled with a 50 foot buffer to waterbodies per label restrictions. Parameterizations for these scenarios are presented in Table 3 below.

Table 3. Application information for modeled agricultural scenarios based on maximum labeled application rates.

SWCC Scenario	Application Method	Application Rate (lbs a.i./ac)	Number of Applications	Application Interval	First Application Date
Florida Cabbage	Aerial	1.25	6	7	1-Jan
Florida Strawberry	Aerial	2	4	7	15-Jan; 1-May[*]
Mississippi Cotton	Aerial	2.5	3	7	1-Jun
Mississippi Cotton	Aerial/ULV	1.22	3	7	1-Jun
Washington Cherry	Aerial	1.75	4	3	1-Jan
Washington Cherry	Aerial/ULV	1.22	6	7	1-Jan

* 2 applications performed per season; ULV=Ultra Low Volume parameterization

ULV Applications
Ultra low volume (ULV) applications of malathion are conservatively accounted for in modeling and in resulting EDWCs. ULV application rates are as high as 1.22 lbs a.i./A for agricultural uses (cotton and cherries) and 0.23 lb a.i./A for wide area public health use. The uses with the highest application rate are modeled and conservatively represent all ULV uses. Drift from agricultural ULV uses are conservatively parameterized assuming a release height of 25 feet, a wind speed of 3 mph (minimum required on label), a droplet spectrum with median diameter of 60 μm and a 90th percentile diameter of 100 μm (label requirement), swath displacement yielding half of application efficiency at edge of field (130 ft; AgDisp user manual recommendation), and buffer to waterbodies of 50 feet (label requirement).

EDWCs in Groundwater
As a screening level assessment for groundwater exposure to malathion, PRZM-GW was run using the Florida avocado application parameters (2 applications of 4.7 lbs a.i./A) to represent the highest possible labeled application rate for the six currently available PRZM-GW scenarios. The Florida citrus PRZM-GW scenario estimated the highest concentrations with a highest daily value of 0.324 ppb and a post-breakthrough average of 0.000892 ppb. Because EDWCs from surface water

modeling are at least two orders of magnitude larger than those estimated from this screening level approach for groundwater, no further groundwater estimates were derived.

Summary of Drinking Water Residues Used in the Assessment

For the acute and steady state assessments, the entire 30-year distribution of estimated daily concentrations was incorporated into the Pesticide Root Zone Model and Exposure Analysis Modeling System (PRZM/EXAMs) and used in the DEEM-FCID probabilistic analyses. For steady state the daily time series were recalculated using the 21-day forward rolling averages. In the 21-day rolling average distributions, the first data point is the average of days 1-21, the second data point is the average of days 2-22, the third data point is the average of days 3-23, etc.

Both the acute and steady state dietary assessments, the water residues distribution were incorporated in the DEEM-FCID into the food categories "water, direct, all sources" and "water, indirect, all sources." The model and its description are available at the EPA internet site: http://www.epa.gov/oppefed1/models/water/.

V. DEEM-FCID Program and Consumption Information

Malathion acute and steady state (two-day average) dietary exposure assessments were conducted using the DEEM-FCID, Version 3.18, which incorporates 2003-2008 consumption data from USDA's NHANES/WWEIA. The data are based on the reported consumption of more than 20,000 individuals over two non-consecutive survey days. Foods "as consumed" (e.g., apple pie) are linked to EPA-defined food commodities (e.g., apples, peeled fruit - cooked; fresh or N/S; baked; or wheat flour - cooked; fresh or N/S, baked) using publicly available recipe translation files developed jointly by USDA/ARS and EPA. For chronic exposure assessment, consumption data are averaged for the entire U.S. population and within population subgroups. However, for acute exposure assessment, consumption data are retained as individual consumption events. Based on analysis of the 2003-2008 WWEIA consumption data, which took into account dietary patterns and survey respondents, HED concluded that it is most appropriate to report risk for the following population subgroups: the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, adults 20-49, females 13-49, and adults 50-99 years old.

For an acute exposure assessment, individual one-day food consumption data are used on an individual-by-individual basis. The reported consumption amounts of each food item can be multiplied by a residue point estimate and summed to obtain a total daily pesticide exposure for a deterministic exposure assessment, or "matched" in multiple random pairings with residue values and then summed in a probabilistic assessment. The resulting distribution of exposures is expressed as a percentage of the aPAD on both a user (i.e., only those who reported eating relevant commodities/food forms) and a per-capita (i.e., those who reported eating the relevant commodities as well as those who did not) basis. In accordance with HED policy, per capita exposure and risk are reported for analyses performed at all levels of refinement. However, for deterministic assessments, any significant differences in user vs. per capita exposure and risk are specifically identified and noted in the risk assessment.

For steady state assessment, food consumptions are calculated on an individual-by-individual basis. The reported consumption amounts of each food item for each day are added together and

then divided by two days. For example, if an individual reports eating 100 grams of apple on the first day and 0 grams of apple on the second day, the two-day average consumption amount would be 50 grams/day of apple [(100 grams + 0 grams)/2 days = 50 grams/day]. The resulting two-day average consumption amount can then be multiplied by a residue point estimate and summed to obtain a total daily pesticide exposure for a deterministic exposure assessment, or "matched" in multiple random pairings with residue values and then summed in a probabilistic assessment. The resulting distribution of exposures is expressed as a percentage of the ssPAD on both a user (i.e., only those who reported eating relevant commodities/food forms) and a per-capita (i.e., those who reported eating the relevant commodities as well as those who did not) basis. In accordance with HED policy, per capita exposure and risk are reported for analyses performed at all levels of refinement. However, for deterministic assessments, any significant differences in user vs. per capita exposure and risk are specifically identified and noted in the risk assessment.

The steady state assessments were conducted in the DEEM acute (two-day average) module using the steady state point of departure, refined food exposure values, and 21-day forward-rolling water averages to provide 21-day ("steady state") exposure and risk estimates. These steady state assessments were completed for drinking water alone, food alone, and food and drinking water. For drinking water alone, the steady state assessments, using a 21-day forward-rolling average water file, provide an accurate overall estimate of the 21-day ("steady state") average daily exposures at the per capita 95th or 99.9th percentile for drinking water, to the extent that predicted drinking water concentrations for any 21-day duration is known for any given year. For food alone, the steady state assessments reflect an average daily exposure for a two-day exposure duration rather than a 21-day exposure duration. Since the DEEM steady state does not capture day to day variation in food residues, it will generally result in higher food-only exposure estimates than a model that calculates 21-day rolling averages for food. Although the DEEM steady state assessments may result in higher exposure estimates for food, the assessments provide an acceptable estimate of 21-day ("steady state") average daily exposure for food and drinking water for use in risk assessment.

VI. Toxicological Information

Malathion is a member of the organophosphate (OP) class of pesticides. Like other OPs, the initiating event in the adverse outcome pathway (AOP), also often called the mode of action (MOA), for malathion involves inhibition of the enzyme acetylcholinesterase (AChE) via phosphorylation of the serine residue at the active site of the enzyme.

Malaoxon is a more potent AChE inhibitor. Based on a comparative cholinestearase assay (CCA) study with malathion and malaoxon, the revised acute and steady state toxicity adjustment factor (TAF) is calculated to be 22x, which means that malaoxon is estimated to be 22 times more toxic than malathion. This TAF was applied to residues of malaoxon for risk assessment of all exposure durations, routes, and scenarios. ToxSAC concluded that for malathion, acute (single day) and steady state durations are appropriate for human health risk assessment (June 5, 2014). Please refer to the risk assessment for a discussion of the additional 10x SF due to the uncertainty in the epidemiology data. The FQPA 10X Safety Factor due to uncertainty in the human dose-response relationship for neurodevelopmental effects will be retained for infants, children, youths, and women of childbearing age for all exposure scenarios. Therefore, the dietary exposure results for the general U.S. Population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, females 13-49, and adults 20-49 will

include an 10x FQPA SF with the exception of adults 50-99 years. Given the results in Table 4, for malathion, acute (single day) and steady state durations are appropriate for human health risk assessment.

Table 4. Summary of Toxicological Doses and Endpoints and Points of Departure for Malathion

Exposure Scenario	Point of Departure (mg/kg/day)	Study and Toxicological Effects
Acute Dietary (all populations, except adults 50-99)	PoD = 10 mg/kg/day UF_A = 10x UF_H = 10x FQPA SF = 10x Acute PAD = 0.01 mg/kg/day	CCA Studies (MRID 45566201, 46822201, 47373704) Inhibition of RBC AChE in rat pups (PND 11). $BMDL_{10}$ ranged 9-14 mg/kg/day BMD_{10} ranged 13-18 mg/kg/day
Acute Dietary (adults 50-99)	PoD = 10 mg/kg/day UF_A = 10x UF_H = 10x FQPA SF = 1x Acute PAD = 0.1 mg/kg/day	CCA Studies (MRID 45566201, 46822201, 47373704) Inhibition of RBC AChE in rat pups (PND 11). $BMDL_{10}$ ranged 9-14 mg/kg/day BMD_{10} ranged 13-18 mg/kg/day
Steady-State Dietary (all populations, except adults 50-99)	PoD = 10 mg/kg/day UF_A = 10x UF_H = 10x FQPA SF = 10x Steady State PAD = 0.01 mg/kg/day	CCA Studies (MRID 45566201, 46822201, 47373704) Inhibition of RBC AChE in rat pups (PND 11). $BMDL_{10}$ ranged 9-14 mg/kg/day BMD_{10} ranged 13-18 mg/kg/day
Steady-State Dietary (adults 50-99)	PoD = 10 mg/kg/day UF_A = 10x UF_H = 10x FQPA SF = 1x Steady State PAD = 0.1 mg/kg/day	CCA Studies (MRID 45566201, 46822201, 47373704) Inhibition of RBC AChE in rat pups (PND 11). $BMDL_{10}$ ranged 9-14 mg/kg/day BMD_{10} ranged 13-18 mg/kg/day
Cancer (oral, dermal, inhalation)	Classification: "Suggestive evidence of carcinogenicity, but not sufficient to assess human carcinogenic potential". Quantification of risk using a non-linear approach (i.e. the chronic reference dose) will adequately protect for all chronic toxicity including carcinogenicity.	

BMD = Benchmark dose. BMDL = Benchmark dose lower confidence limit. HED = Human equivalent dose. Point of Departure (PoD) = A data point or an estimated point that is derived from observed dose-response data and used to mark the beginning of extrapolation to determine risk associated with lower environmentally relevant human exposures. NOAEL = no observed adverse effect level. LOAEL = lowest observed adverse effect level. UF = uncertainty factor. UF_A = extrapolation from animal to human (interspecies). UF_H = potential variation in sensitivity among members of the human population (intraspecies). FQPA SF = FQPA Safety Factor. PAD = population adjusted dose.

VII. Results/Discussion

As stated above, for acute and steady state assessments, HED is concerned when dietary risk exceeds 100% of the PAD. The DEEM-FCID analyses estimate the dietary exposure of the U.S. population and various population subgroups. The results reported in Tables 5- 10 are for the general U.S. Population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, females 13-49, adults 20-49, and adults 50-99 years.

Acute assessments were conducted for food only, drinking water only, and for food and drinking water to characterize dietary exposure. The food only acute dietary risk estimates are summarized in Table 5 and are below HED's level of concern (<100% of the aPAD) for the U.S. population and all population subgroups at the 99.9th percentile. Malathion dietary exposure for food alone is 27% of the aPAD for the U.S. population, and children 1-2 years old, the most highly exposed population subgroup, is 74% of the aPAD at the 99.9th percentile.

For the acute drinking water only runs, six different application scenarios (FL cabbage, FL strawberry, MS cotton, WA cherry, WA cherry ULV and MS cotton ULV) were analyzed. The WA cherry maximum aerial scenario results dietary drinking water only and food plus drinking water estimates that are above HED's level of concern (>100 % of the aPAD) at the 99.9th percentile. For drinking water only, WA cherry results for the all infants (<1 year old) is 690% of the aPAD, the highest exposed population subgroup. The results for all application scenarios, including the scenario that resulted in the highest exposure are summarized below in table 6.

Combined dietary exposure from food and the highest drinking water scenario is 240% of the aPAD for the U.S. population and 690% of the aPAD for all infants (<1 year old), the highest exposed population subgroups. The results for all population subgroups (general U.S. Population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, females 13-49, adults 20-49, and adults 50-99 years) for all runs are summarized in tables 7.

Table 5. Summary of Acute Dietary (Food Only) Exposure and Risk for Malathion

Population Subgroup	aPAD (mkd)[1]	95th Percentile		99th Percentile		99.9th Percentile	
		Exposure (mkd)	% aPAD	Exposure (mkd)	% aPAD	Exposure (mkd)	% aPAD
General U.S. Population		0.000328	3.3	0.000683	6.8	0.002701	27
All Infants (<1 year old)		0.000437	4.4	0.000679	6.8	0.003694	37
Children 1-2 years old		0.000661	6.6	0.001520	15	**0.007434**	**74**
Children 3-5 years old		0.000527	5.3	0.001170	12	0.004276	43
Children 6-12 years old	0.01	0.000344	3.4	0.000815	8.2	0.004107	41
Youth 13-19 years old		0.000203	2.0	0.000455	4.6	0.002361	24
Adults 20-49 years old		0.000274	2.7	0.000588	5.9	0.002899	29
Adults 50-99 years old[1]		0.000252	<1	0.000597	<1	0.001642	1.6
Females 13-49 years old		0.000211	2.1	0.000473	4.7	0.003144	31

mkd = mg/kg/day. aPAD= acute population adjusted dose; Highest exposure at the 99.9th percentile is in bold font
[1]Subpopulation adults 50-99 years old; aPAD= 0.1 mkd

Table 6. Summary of Acute Assessment Results for Maximum Application Rate of Drinking Water Only

Drinking Water Scenario	Acute WATER ONLY (All Infants <1 year old)				Acute WATER ONLY (Children 1-2 years old)			
	95th Percentile		99.9th Percentile		95th Percentile		99.9th Percentile	
	Exposure (mkd)	% aPAD	Exposure (mkd)	% aPAD	Exposure (mkd)	% aPAD	Exposure (mkd)	% aPAD
FL Cabbage	0.002846	28	0.024218	240	0.0001707	17	0.013005	130
FL Strawberry	0.002205	22	0.034855	350	0.001458	15	0.018610	190
MS Cotton	0.000157	1.6	0.015996	160	0.000231	2.3	0.008550	86

WA Cherry	0.001354	14	0.068773	690	0.001564	16	0.036267	363
WA Cherry ULV	0.000010	<1	0.000066	<1	0.000006	<1	0.000036	<1
MS Cotton ULV	0.000001	<1	0.000046	<1	0.000001	<1	0.000024	<1

mkd = mg/kg/day. aPAD= acute population adjusted dose; Highest exposure at the 99.9th percentile is in bold font
[1]Subpopulation adults 50-99 years old; aPAD= 0.1 mkd

Table 7. Summary of Acute Dietary (Food and WA Cherry Drinking Water) Exposure and Risk for Malathion

Population Subgroup	aPAD (mkd)	95th Percentile		99th Percentile		99.9th Percentile	
		Exposure (mkd)	% aPAD	Exposure (mkd)	% aPAD	Exposure (mkd)	% aPAD
General U.S. Population	0.01	0.001462	15	0.008444	84	0.024399	240
All Infants (<1 year old)		0.001832	18	0.025723	260	**0.068903**	**690**
Children 1-2 years old		0.002393	24	0.012608	130	0.037478	380
Children 3-5 years old		0.001901	19	0.010497	110	0.028678	290
Children 6-12 years old		0.001394	14	0.007678	77	0.022784	230
Youth 13-19 years old		0.000968	10	0.006321	63	0.019591	200
Adults 20-49 years old		0.001437	14	0.008573	86	0.023019	230
Adults 50-99 years old[1]		0.001561	1.6	0.008142	8.1	0.021052	21
Females 13-49 years old		0.001369	14	0.008596	86	0.023309	230

mkd = mg/kg/day. aPAD= acute population adjusted dose; Highest exposure at the 99.9th percentile is in bold font
[1]Subpopulation adults 50-99 years old; aPAD= 0.1 mkd

Steady state assessments were conducted for food only, drinking water only, and for food and drinking water to characterize dietary exposure. The food only steady-state estimates are summarized in Table 8 and are below HED's LOC (<100% of the ssPAD) for the U.S. population and all population subgroups at the 99.9th percentile. The U.S. population utilized 24% of the ssPAD and children 1-2 years old. The most highly exposed population subgroup, is 48% of the ssPAD. The WA cherry maximum aerial scenario results dietary (drinking water only and food plus drinking water) estimates that are above HED's level of concern (>100 % of the ssPAD) at the 99.9th percentile. For drinking water only, WA cherry results for the all infants (<1 year old) is 480% of the ssPAD, the highest exposed population subgroup. Combined dietary exposure from food and drinking water is 170% of the ssPAD for the U.S. population and 470% of the ssPAD for all infants (<1 year old), the most highly exposed population subgroup. See tables 8-10.

Table 8. Summary of Steady State Dietary (Food Only) Exposure and Risk for Malathion

Population Subgroup	ssPAD (mkd)	95th Percentile		99th Percentile		99.9th Percentile	
		Exposure (mkd)	% ssPAD	Exposure (mkd)	% ssPAD	Exposure (mkd)	% ssPAD
General U.S. Population	0.01	0.000313	3.1	0.000607	6.1	0.002413	24
All Infants (<1 year old)		0.000430	4.3	0.000676	6.8	0.002251	23
Children 1-2 years old		0.000646	6.5	0.001399	14	**0.004761**	**48**
Children 3-5 years old		0.000497	5.0	0.000936	9.4	0.002872	29
Children 6-12 years old		0.000329	3.3	0.000713	7.1	0.003251	33
Youth 13-19 years old		0.000188	1.9	0.000420	4.2	0.001379	14
Adults 20-49 years old		0.000254	2.5	0.000519	5.2	0.002814	28
Adults 50-99 years old[1]		0.000239	<1	0.000516	<1	0.001365	1.4

Table 8. Summary of Steady State Dietary (Food Only) Exposure and Risk for Malathion

Population Subgroup	ssPAD (mkd)	95th Percentile		99th Percentile		99.9th Percentile	
		Exposure (mkd)	% ssPAD	Exposure (mkd)	% ssPAD	Exposure (mkd)	% ssPAD
Females 13-49 years old		0.000199	2.0	0.000428	4.3	**0.002646**	26

mkd = mg/kg/day. ssPAD = steady-state population-adjusted dose. Highest exposure at the 99.9th percentile is in bold font
[1]Subpopulation adults 50-99 years old; ssPAD= 0.1 mkd

Table 9. Summary of Steady State Assessment Results for Maximum Application Rate of Drinking Water Only

Drinking Water Scenario	Acute WATER ONLY (All Infants <1 year old)				Acute WATER ONLY (Children 1-2 years old)			
	95th Percentile		99.9th Percentile		95th Percentile		99.9th Percentile	
	Exposure (mkd)	% ssPAD	Exposure (mkd)	% ssPAD	Exposure (mkd)	% ssPAD	Exposure (mkd)	% ssPAD
FL Cabbage	0.003495	35	0.016537	170	0.001786	18	0.008952	90
FL Strawberry	0.003025	30	0.019562	200	0.001554	16	0.009984	100
MS Cotton	0.000750	7.5	0.011172	110	0.000512	5.1	0.005532	55
WA Cherry	**0.003595**	**36**	**0.047901**	**480**	**0.002779**	**28**	**0.024247**	**240**
WA Cherry ULV	0.000011	<1	0.000049	<1	0.000006	<1	0.000027	<1
MS Cotton ULV	0.000001	<1	0.000044	<1	0.000022	<1	0.004829	<1

mkd = mg/kg/day. ssPAD= acute population adjusted dose; Highest exposure at the 99.9th percentile is in bold font
[1]Subpopulation adults 50-99 years old; ssPAD= 0.1 mkd

Table 10. Summary of Steady State Dietary (Food and WA Cherry Drinking Water) Exposure and Risk for Malathion

Population Subgroup	ssPAD (mkd)	95th Percentile		99th Percentile		99.9th Percentile	
		Exposure (mkd)	% ssPAD	Exposure (mkd)	% ssPAD	Exposure (mkd)	% ssPAD
General U.S. Population		0.002147	21	0.006825	68	0.016610	170
All Infants (<1 year old)		0.003910	39	0.021553	220	**0.047290**	**470**
Children 1-2 years old		0.003291	33	0.010527	110	0.024835	250
Children 3-5 years old		0.002765	28	0.008419	84	0.019446	190
Children 6-12 years old	0.01	0.001986	20	0.006118	61	0.014652	150
Youth 13-19 years old		0.001450	15	0.005283	53	0.012409	120
Adults 20-49 years old		0.002180	22	0.006866	69	0.015436	150
Adults 50-99 years old[1]		0.002210	2.2	0.006460	6.5	0.014391	14
Females 13-49 years old		0.002110	21	0.007007	70	0.015356	150

mkd = mg/kg/day. ssPAD = steady-state population-adjusted dose. Highest exposure at the 99.9th percentile is in bold font
[1]Subpopulation adults 50-99 years old; ssPAD= 0.1 mkd

VIII. Characterization of Inputs/Outputs

HED has conducted highly refined acute and steady state dietary exposure and risk assessments for malathion and malaoxon. The assumption with respect to food made in this acute and steady state dietary assessment include the latest PDP monitoring data for malathion and its metabolite (malaoxon), field trial data, DEEM default processing factors and empirical and PCT. For the adulticide use, a residue value was translated from registered to unregistered crops. The FQPA

10x Safety Factor was retained for infants, children, youths and women of childbearing age for all exposure scenarios; and in lieu of malathion specific oxon CCA data, an oxon TAF of 22x was used. Drinking water was a main driver in the acute and steady state food and drinking water assessments, particularly for infants. Additional characterizations and refinements may include use of typical rates, application timing with respect to individual run-off events, spatial distribution of usage footprint, and sensitivity to scenario curve number. These factors resulted in the acute and steady state aggregate (food and drinking water) dietary exposure estimates to be above HED's level of concern for the general U.S. population and all population subgroups for most scenarios.

IX. Conclusions

These highly refined analyses are not likely to underestimate risk, but do indicate the potential for risks of concern, driven by risks in drinking water, from the established and proposed uses of malathion. No further refinements to the risk assessments are available at this time.

X. List of Attachments

Attachment 1: Summary of Residues Used in Acute and Steady State Assessment
Attachment 2: Acute and Steady State Residue Distribution Files for Malathion
Attachment 3: Field trials for chestnuts, cotton, dates, figs, guava, hops, macadamia nuts, mints, passion fruit, and walnuts
Attachment 4: Acute (Food Alone) Residue Input File
Attachment 5: Acute (Food Alone) Results File
Attachment 5: Acute Critical Exposure Contribution Analysis (Food and Drinking Water)
Attachment 6: Acute FL Cabbage (Drinking Water Alone) Input and Results File
Attachment 7: Acute FL Strawberry (Drinking Water Alone) Input and Results File
Attachment 8: Acute MS Cotton (Drinking Water Alone) Input and Results File
Attachment 9: Acute WA Cherry (Drinking Water Alone) Input and Results File
Attachment 10: Acute WA Cherry ULV (Drinking Water Alone) Results File
Attachment 11: Acute MS Cotton ULV (Drinking Water Alone) Results File
Attachment 12: Acute Food and FL Cabbage Results File
Attachment 13: Acute Food and FL Strawberry (Drinking Water) Results File
Attachment 14: Acute Food and MS Cotton (Drinking Water) Results File
Attachment 15: Acute Food and WA Cherry (Drinking Water) Results File
Attachment 16: Acute Food and WA Cherry ULV (Drinking Water) Results File
Attachment 17: Acute Food and MS Cotton ULV (Drinking Water) Results File
Attachment 18: Steady State (Food Alone) Results File (same tox endpt as acute dietary)
Attachment 19: Steady State Critical Exposure Contribution Analysis (Food Alone)
Attachment 20: Steady State FL Cabbage (Drinking Water Only) Input and Results File
Attachment 21: Steady State FL Strawberry (Drinking Water Only) Results File
Attachment 22: Steady State MS Cotton (Drinking Water Only) Results File
Attachment 23: Steady State WA Cherry (Drinking Water Only) Results File
Attachment 24: Steady State WA Cherry ULV (Drinking Water Only) Results File
Attachment 25: Steady State MS Cotton ULV (Drinking Water Only) Results File
Attachment 26: Steady State Food and FL Cabbage Results File
Attachment 27: Steady State Food and FL Strawberry Results File
Attachment 28: Steady State Food and MS Cotton Results File
Attachment 29: Steady State Food and WA Cherry Results File
Attachment 30: Steady State Food and WA Cherry ULV Results File
Attachment 31: Steady State Food and MS Cotton ULV Results File
Attachment 32: SLUA for Malathion

Attachment 1: Summary of Residues Used in Acute and Steady State Assessment

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Root and Tuber Vegetables (CG 1)								
Arrowroot, flour	B	Potato PDP 2008, 2009	1488/0	0.0023			100	0.0023
Artichoke, Jerusalem	NB	Potato PDP 2008, 2009	1488/0	0.0023			100	0.0023
Beet garden, roots	NB/PB	Garden Beet PDP 2011	756/0	0.0045	8		100	RDF#1
Beet, sugar/molasses	B	Garden Beet PDP 2011	756/0	0.0045	8		<2.5	0.0045
Burdock, edible	NB	Potato PDP 2008, 2009	1488/0	0.0023			100	0.0023
Carrot	NB/PB	Carrot PDP 2006, 2007	1488/0	0.002	8		20	RDF#2
Cassava	NB/PB	Potato PDP 2008, 2009	1488/0	0.0023			100	0.0023
Celeriac	NB	Garden Beet PDP 2011	756/0	0.0045			100	0.0045
Chicory, root	NB	Carrot PDP 2006, 2007	1488/0	0.002			100	0.002
Dasheen, corm	NB	Potato PDP 2008, 2009	1488/0	0.0023			100	0.0023
Ginger	NB/PB/B	Potato PDP 2008, 2009	1488/0	0.0023			100	0.0023
Ginseng, dried	B	Carrot PDP 2006, 2007	1488/0	0.002			100	0.002
Horseradish	NB/PB	Carrot PDP 2006, 2007	1488/0	0.002	8		100	0.002
Parsley, turnip root	NB	Carrot PDP 2006, 2007	1488/0	0.002			100	0.002
Parsnip	NB	Carrot PDP 2006, 2007	1488/0	0.002	8		100	0.002

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Potato	NB/PB	Potato PDP 2008, 2009	1488/0	0.0023	8		<2.5	RDF#3
Potato, dried/ flour	B	Potato PDP 2008, 2009	1488/0	0.0023	8	6.5 dried	<2.5	0.0023
Potato, frozen	NB/PB	Potato w/o Peel Frozen PDP 2006, 2007	1544/0	0.0034	8		<2.5	RDF#4
Radish Oriental root	NB	Carrot PDP 2006, 2007	1488/0	0.002			100	0.0045
Radish root	NB/PB	Garden Beet PDP 2011	756/0	0.0045	8		100	0.0045
Rutabaga	NB/PB	Garden Beet PDP 2011	756/0	0.0045	8		100	0.0045
Salisfy, root	NB	Carrot PDP 2006, 2007	1488/0	0.002			100	0.002
Sweet Potato	NB/PB	Sweet Potato PDP 2008, 2009, 2010	1476/0	0.0056	1		<2.5	RDF#5
Sweet Potato, babyfood	NB/PB	Sweet Potato PDP 2010, 2011	776/0	0.0028			<2.5	RDF#6
Tanier, corm	NB	Sweet Potato PDP 2010, 2011	776/0	0.0028			100	0.0056
Turmeric	NB/PB	Potato PDP 2008, 2009	1488/0	0.0023			100	0.0023
Turnip, root	NB/PB	Garden Beet PDP 2011	756/0	0.0045			100	0.0045
Yam	NB	Sweet Potato PDP 2008, 2009, 2010	1476/0	0.0056			<2.5	RDF#5
Leaves and Root and Tuber Vegetables (CG2)								
Beet, garden, top	PB	Garden Beet PDP 2011	756/0	0.0045			100	RDF#1
Chicory, top	NB/PB	Garden Beet PDP 2011	756/0	0.0045			100	RDF#1
Dasheen, leave	PB	Garden Beet PDP 2011	756/0	0.0045			100	RDF#1
Radish Oriental, top	PB	Garden Beet PDP 2011	756/0	0.0045			100	RDF#1

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Radish, top	PB	Garden Beet PDP 2011	756/0	0.0045	8		100	RDF#1
Salsify, top	PB	Garden Beet PDP 2011	756/0	0.0045	8		100	RDF#1
Bulb Vegetables (CG3)								
Chives	B	Green Onion PDP 2008, 2009	744/36	0.0015	(0.27)		10	RDF#8
Garlic	NB/PB/B	Onion Bulb	744/0	0.0036	8		10	RDF#7
Leek	NB/PB	Green Onion PDP 2008, 2009	744/36	0.0015	8 (0.27)		10	RDF#8
Onion, bulb	NB/PB	Onion Bulb PDP 2011, 2012	744/0	0.0036	8		10	RDF#7
Onion, bulb, dried	B	Onion Bulb	744/0	0.0036	8	9.0 dried	10	0.0036
Onion, green	PB	Green Onion PDP 2008, 2009	744/36	0.0015	8 (0.27)		10	RDF#8
Shallot	NB	Onion Bulb	744/0	0.0036	8		10	RDF#7
Leafy Vegetables except Brassica Vegetables (CG 4)								
Amaranth, leafy	PB	Spinach PDP 2008, 2009	1488/2	0.0043	8 (0.054)		100	RDF#99
Arugula	PB	Spinach PDP 2008, 2009	1488/2	0.0043	8 (0.054)		100	RDF#99
Cardoon	NB	Celery PDP 2007, 2008	1480/300	0.0029	8 (0.742)		100	RDF#98
Celery	NB/PB	Celery PDP 2007, 2008	1480/300	0.0029	(0.742)		30	RDF#12

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Celtuce	NB	Celery PDP 2007, 2008	1480/300	0.0029	8 (0.742)		100	RDF#98
Chrysanthemum, garland	PB	Spinach PDP 2008, 2009	1488/2	0.0043	8 (0.054)		100	RDF#99
Cress, garden	PB	Spinach PDP 2008, 2009	1488/2	0.0043	8 (0.054)		100	RDF#99
Cress, upland	PB	Spinach PDP 2008, 2009	1488/2	0.0043	8 (0.054)		100	RDF#99
Dandelion, leave	PB	Spinach PDP 2008, 2009	1488/2	0.0043	8 (0.054)		100	RDF#99
Endive	PB	Spinach PDP 2008, 2009	1488/2	0.0043	8 (0.054)		100	RDF#99
Fennel, Florence	NB	Celery PDP 2007, 2008	1480/300	0.0029	8 (0.742)		100	RDF#98
Lettuce, head	NB/PB	Lettuce head PDP 2010, 2011	669/0	0.002	8		15	RDF#95
Lettuce, leaf	NB/PB	Lettuce leaf PDP 2010, 2011	782/0	0.002	8		15	RDF#96
Parsley, leaves	PB	Spinach PDP 2008, 2009	1488/2	0.0043	8 (0.054)		100	RDF#99
Radicchio	NB	Lettuce head	669/0	0.002	8		100	0.002
Rhubarb	NB/PB	Celery PDP 2007, 2008	1480/300	0.0029	8		100	RDF#98

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
					(0.742)			
Spinach	PB	Spinach PDP 2008, 2009	1488/2	0.0043	8 (0.054)		5	RDF#9
Spinach, frozen	PB	Spinach frozen PDP 2010, 2011	389/1	0.005	8 (0.398)		5	RDF#10
Spinach, canned	PB	Spinach canned PDP 2010, 2011	379/0	0.005	8		5	RDF#11
Swiss chard	NB	Celery PDP 2007, 2008	1480/300	0.0029	8		100	RDF#98
Brassica Cole Leafy Vegetables (CG5)								
Broccoli	NB/PB	Broccoli PDP 2006, 2007, 2008	1475/3	0.004	8 (0.034)		5	RDF#13
Broccoli raab	NB	Kale PDP 2006, 2007, 2008	802/37	0.0044	8 (1.49)		100	RDF#17
Broccoli Chinese	NB	Broccoli PDP 2006, 2007, 2008	1475/3	0.004	8 (0.034)		100	RDF#97
Brussel sprouts	NB/PB	Cabbage PDP 2010, 2011	1485/0	0.0605	8		20	RDF#101
Cabbage	NB/PB	Cabbage PDP 2010, 2011	1485/0	0.0605	8		5	RDF#14
Cabbage, Chinese, boy choy	PB	Kale PDP 2006, 2007, 2008	802/37	0.0044	8 (1.49)		100	RDF#17
Cabbage, Chinese, mustard	NB/PB	Broccoli PDP 2006, 2007, 2008	1475/3	0.004	8		100	RDF#97

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
					(0.034)			
Cabbage, Chinese, napa	NB/PB	Cabbage PDP 2010, 2011	1485/0	0.0605	8		100	0.0605
Cauliflower	NB/PB	Cauliflower PDP 2011,2012	923/1	0.002	8 (0.0035)		5	RDF#15
Collard	PB	Collard PDP 2006,2007,2008	679/4	0.0043	(0.33)		100	RDF#16
Kale	PB	Kale PDP 2006, 2007, 2008	802/37	0.0044	8 (1.49)		100	RDF#17
Kohlrabi	NB	Cabbage PDP 2010, 2011	1485/0	0.0605	8		100	0.0605
Mustard green	PB	Kale PDP 2006, 2007, 2008	802/37	0.0044	8 (1.49)		100	RDF#17
Rape green	PB	Kale PDP 2006, 2007, 2008	802/37	0.0044	8 (1.49)		100	RDF#17
Turnip green	NB/PB	Kale PDP 2006, 2007, 2008	802/37	0.0044	8 (1.49)		100	RDF#17
Legume Vegetables Succulent and Dried(CG6)								
Bean, seed-ALL	B	Black Bean PDP 2010	367/0	0.002	8		<2.5	0.002
Bean, black, seed	B	Black Bean PDP 2010	367/0	0.002	8		<2.5	0.002
Bean, kidney, seed	B	Bean Kidney PDP 2008, 2009	372/0	0.002	8		<2.5	0.002
Bean, pinto, seed	B	Bean Pinto PDP 2009	372/0	0.002	8		<2.5	0.002

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Bean, succulent	PB	Bean green PDP 2007, 2008	1480/0	0.0041	8		<2.5	RDF#19
Bean, succulent, babyfood	PB	Bean green babyfood PDP 2010, 2011	776/0	0.0028	8		<2.5	RDF#22
Bean, succulent, frozen	PB	Bean green frozen PDP 2005	555/0	0.0054	8		<2.5	RDF#20
Bean, succulent, canned	PB	Bean green canned PDP 2003, 2004	928/0	0.0056	8		<2.5	RDF#21
Bean, cowpea,succl	PB	Pea snap PDP 2011, 2012	1487/107	0.0025	8		<2.5	RDF#23
Lentil, seed	B	Black Bean	367/0	0.002	8		<2.5	0.002
Pea, snap	PB	Pea snap PDP 2011, 2012	1487/107	0.0025	8 (0.088)		<2.5	RDF#23
Pea, snap, seed/dry	B	Pea snap PDP 2011, 2012	1487/107	0.0025	8 (0.088)		<2.5	0.0032
Pea, frozen	PB	Pea snap frozen PDP 2006	744/0	0.0058	8		<2.5	RDF#24
Pea, canned	PB	Pea snap canned PDP 2003, 2004	1485/0	0.0044	8		<2.5	RDF#25
Soybean	B	Soybean PDP 2011	289/11	0.0043	8 (0.204)		<2.5	RDF#18
Fruiting Vegetable (CG8)								
Eggplant	NB/PB	Eggplant PDP 2005, 2006	1476/3	0.0135	8		5	RDF#26

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
					(0.051)			
Okra	NB/PB	Eggplant PDP 2005, 2006	1476/3	0.0135	8 (0.051)		5	RDF#26
Pepper bell	NB/PB	Pepper bell PDP 2010, 2011, 2012	1671/7	0.005	8 (0.371)		5	RDF#27
Pepper bell, dried	B	Pepper bell PDP 2010, 2011, 2012	1671/7	0.005	8 (0.371)		5	0.005
Pepper non-bell	NB/PB	Pepper non-bell PDP 2010, 2011	739/17	0.002	8 (0.371)		5	RDF#28
Pepper non-bell, dried	B	Pepper non-bell PDP 2010, 2011	739/17	0.002	8 (0.371)		5	0.002
Tomatillo	NB/PB	Tomato cherry PDP 2011, 2012	1482/31	0.0025	(0.171)		100	RDF#29
Tomato tree	NB	Tomato cherry PDP 2011, 2012	1482/31	0.0025	(0.171)		100	RDF#29
Tomato/ juice	NB/PB	Tomato PDP 2007, 2008	1481/3	0.01	8 (0.033)	1.5 juice	5	RDF#30
Tomato, dried	B	Tomato PDP 2007, 2008	1481/3	0.01	8 (0.033)	14.3 dried 3.3 puree	5	0.01
Tomato, paste	B	Tomato paste PDP 2009	742/0	0.0365	8		5	RDF#31

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Tomato, puree	B	Tomato PDP 2007, 2008	1481/3	0.01	8 (0.033)		5	RDF#30
Tomato, canned	PB	Tomato canned PDP 1999, 2000	737/1	0.0044	8 (0.01)		5	RDF#32
Cucurbit Vegetables (CG 9)								
Balsam Pear	NB	Cucumber PDP 2009, 2010	1488/0	0.0026			100	0.0026
Cantaloupe	NB/PB	Cantaloupe PDP 2010, 2011, 2012	1482/0	0.01			5	RDF#33
Chayote fruit	NB	Summer Squash PDP 2012	186/0		8		100	0.0048
Chinese waxgourd	NB	Cucumber PDP 2009, 2010	1488/0	0.0026			100	0.0026
Cucumber	NB/PB	Cucumber PDP 2009, 2010	1488/0	0.0026	8		5	RDF#35
Honeydew melon	NB/PB	Cantaloupe	1482/0	0.01	8		5	RDF#33
Pumpkin	NB/PB	Summer Squash PDP 2012	186/0	0.0048	8		10	RDF#103
Pumpkin seed	B	Summer Squash PDP 2012	186/0	0.0048	8		10	RDF#103
Squash, summer	NB/PB	Summer Squash PDP 2012	186/0	0.0048	8		10	RDF#36
Squash, winter	NB/PB	Winter Squash PDP 2011, 2010	928/0	0.0022	8		10	RDF#37

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Squash, winter frozen	PB	Winter Squash PDP 1997, 1998, 1999	470/0	0.0038	8		10	RDF#38
Watermelon	NB	Watermelon PDP 2010	371/0	0.0021	8		5	RDF#34
Citrus Fruits (CG10)								
Citron	NB	Orange PDP 2009, 2010	1488/0	0.0089		100	100	0.0089
Citrus hybrids	NB	Orange PDP 2009, 2010	1488/0	0.0089		100	100	0.0089
Citrus oil	B	Orange PDP 2009, 2010	1488/0	0.0089		100	100	0.0089
Grapefruit	NB/PB	Grapefruit PDP 2005, 2006	1485/6	0.0018	8 (0.045)	10	15	RDF#39
Grapefruit juice	NB	Grapefruit juice PDP 2010, 2011, 2012	1106/0	0.002	8	10	15	RDF#117
Kumquat	PB	Orange PDP 2009, 2010	1488/0	0.0089	8	100	100	0.0089
Lemon	NB/PB	Orange PDP 2009, 2010	1488/0	0.0089	8		<2.5	RDF#104
Lemon juice	PB	OJ PDP 2010, 2011, 2012	1106/0	0.002	8		<2.5	RDF#105
Orange	NB/PB	Orange PDP 2009, 2010	1488/0	0.0089	8		20	RDF#40
Orange juice	PB	OJ PDP 2010, 2011, 2012	1106/0	0.002	8		20	RDF#41

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Pummelo	NB	Grapefruit PDP 2005, 2006	1485/6	0.0018	(0.045)		100	0.0089
Tangerine	NB	Tangerine PDP 2011, 2012	1426/4	0.01	8 (0.032)		25	RDF#42
Tangerine juice	PB	OJ PDP 2010, 2011, 2012	1106/0	0.002	8		25	RDF#107
Pome Fruits (CG11)								
Apple	NB/PB	Apple PDP 2009, 2010, 2012	1565/3	0.0031	8 (0.016)		<2.5	RDF#43
Apple, dried	B	Apple PDP 2009, 2010, 2012	1565/3	0.0031	8 (0.016)	8.0 dried	<2.5	0.0001
Apple juice	PB	Apple juice PDP 2012	396/0	0.002	8		<2.5	RDF#44
Apple sauce	PB	Apple sauce PDP 2006	744/0	0.0031	8		<2.5	RDF#45
Crabapple	NB	Apple PDP 2009, 2010, 2012	1565/3	0.0031	(0.016)		100	0.0031
Loquat	NB	Pear PDP 2012	100/0	0.002			100	0.002
Pear	NB/PB	Pear PDP 2012	100/0	0.002	8		<2.5	RDF#46
Pear, dried	B	Pear PDP 2012	100/0	0.002	8	6.25 dried	<2.5	0.002
Pear, babyfood	PB	Pear BF PDP 2010, 2011	776/0	0.003	8		<2.5	RDF#48
Pear, canned	PB	Pear canned PDP 1999, 2000	737/0	0.0056	8		<2.5	RDF#47
Quince	PB	Pear PDP 2012	100/0	0.002	8		100	0.002

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Stone Fruit (CG12)								
Apricot	NB/PB	Peach PDP 2007, 2008, 2012	1191/6	0.0032	8 (0.192)		<2.5	RDF#112
Apricot, dried	B	Peach PDP 2007, 2008, 2012	1191/6	0.0032	8 (0.192)	6.0 dried	<2.5	0.01
Apricot, canned	NB/PB	Peach canned PDP 2003, 2004	1485/0	0.011	8		<2.5	RDF#118
Cherry	PB	Cherry PDP 2007	419/10	0.0023	8 (0.013)	1.5 juice	25	RDF#50
Nectarine	NB	Nectarine PDP 2007, 2008	1235/0	0.01	8		100	RDF#51
Peach	NB/PB	Peach PDP 2007, 2008, 2012	1191/6	0.003	8 (0.192)		5	RDF#52
Peach, dried	B	Peach PDP 2007, 2008, 2012	1191/6	0.0032	8 (0.192)	7.0 dried	5	0.0034
Peach, canned	NB/PB	Peach canned PDP 2003, 2004	1485/0	0.011	8		5	RDF#53
Plum	NB/PB	Plum PDP 2011, 2012	840/0	0.0022	8	5.0 dried 1.4 juice	<2.5	RDF#54
Berries (CG13)								
Blackberry	PB	Caneberry PDP 2007, 2008	1477/73	0.0029	8 (0.33)		70	RDF#100

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Blueberry	PB	Blueberry PDP 2007, 2008	1477/73	0.0029	8 (0.33)		40	RDF#56
Boysenberry	PB	Caneberry PDP 2007, 2008	1477/73	0.0029	8 (0.33)		70	RDF#100
Cranberry	PB	Cranberry PDP 2006	316/1	0.0017	8	1.1 juice	45	RDF#82
Currant	PB	Blueberry PDP 2007, 2008	1477/73	0.0029	8 (0.33)		70	RDF#100
Elderberry	PB	Caneberry PDP 2007, 2008	1477/73	0.0029	(0.33)		70	RDF#100
Gooseberry	PB	Caneberry PDP 2007, 2008	1477/73	0.0029	8 (0.33)		70	RDF#100
Grape	PB	Grape PDP 2009, 2010	1489/0	0.0032	8		<2.5	RDF#83
Grape juice	PB	Grape juice PDP 2008	745/4	0.001	8 (0.0015)		<2.5	RDF#84
Grape raisin	PB	Grape raisin PDP 2006,2007	744/0	0.0066			<2.5	RDF#85
Huckleberry	PB	Caneberry PDP 2007, 2008	1477/73	0.0029	(0.33)		70	RDF#100
Kiwifruit	NB	Grape PDP 2009, 2010	1489/0	0.0032			100	0.0032
Loganberry	PB	Caneberry PDP 2007, 2008	1477/73	0.0029	8 (0.33)		70	RDF#100
Mulberry	PB	Caneberry PDP 2007, 2008	1477/73	0.0029	(0.33)		70	RDF#100

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Raspberry	PB	Caneberry PDP 2007, 2008	1477/73	0.0029	(0.33)		70	RDF#100
Strawberry	PB	Strawberry PDP 2008, 2009	1485/345	0.0022	8 (0.944)		55	RDF#92
Strawberry, frozen	PB	Strawberry frozen PDP 1998, 1999, 2000	155/38	0.006	8 (0.102)		55	RDF#93
Tree Nuts (CG14)								
Almond	PB	Almond PDP 2007, 2008	547/0	0.003	50	100	100	RDF#57
Brazil nut	PB	Almond PDP 2007, 2008	547/0	0.003		100	100	RDF#57
Butternut	NB	Walnut FT (MRID 44383301)	10/0	0.05		100	100	RDF#115
Cashew	PB	Walnut FT (MRID 44383301)	10/0	0.05		100	100	RDF#115
Chestnut	PB	Chestnut FT (MRID 4478401)	4/4	0.05	1 (1.174)	100	100	RDF#106
Hazelnut	PB	Walnut FT (MRID 44383301)	10/0	0.05	1	100	100	RDF#115
Hickory nut	PB	Walnut FT (MRID 44383301)	10/0	0.05		100	100	RDF#115
Macadamia nut	PB	Macadamia FT (MRID 44076801)	4/0	0.05	1	100	100	RDF#111

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT	Anticipated Residue Estimates/Tolerance (ppm)
							Max.	Acute (Tol., AR, RDF) ppm
Pecan	PB	Walnut FT (MRID 44383301)	10/0	0.05	8	<2.5	5	RDF#115
Pine nut	PB	Almond PDP 2007, 2008	547/0	0.003		100	100	RDF#57
Pistachio	PB	Almond PDP 2007, 2008	547/0	0.003		100	100	RDF#57
Walnut	PB	Walnut FT (MRID 44383301)	10/0	0.05	8 (0.575)	5	15	RDF#115
Cereal Grains (CG15)								
Barley bran/flour/pearled	B	Barley Grain PDP 2002, 2003	1094/13	0.0075	8 (0.649)	<1	<2.5	RDF#58
Buckwheat	B	Wheat Grain PDP 2005, 2006	1361/884	0.004	(2.58)	<1	<2.5	RDF#66
Corn, field	B	Corn Grain PDP 2007, 2008	1310/469	0.003	8 (4.74)	<1	<2.5	RDF#59
Corn pop	B	Corn Grain PDP 2007, 2008	1310/469	0.003	8 (4.74)	<1	<2.5	RDF#59
Corn Syrup	B	Corn Syrup PDP 1998, 1999	454/0	0.0007	8	<1	<2.5	RDF#60
Corn sweet	NB/PB	Corn Sweet PDP 2008, 2009, 2010	1300/0	0.0069	8	<1	<2.5	RDF#61
Corn sweet canned	NB/PB	Corn Sweet canned PDP 2001, 2002	723/0	0.006	8	<1	<2.5	RDF#63

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Corn sweet frozen	NB/PB	Corn Sweet PDP 2008, 2009, 2010	181/0	0.0087	8	<1	<2.5	RDF#62
Millet grain	B	Wheat Grain PDP 2005, 2006	1361/884	0.004	(2.58)		<2.5	RDF#66
Oat bran/flour/groats	B	Wheat Flour PDP 2003, 2004	1331/587	0.004	(0.688)		<2.5	RDF#67
Rice	B	Rice PDP 2008, 2009	619/16	0.008	8		<2.5	RDF#65
Rye flour/grain	B	Wheat Flour PDP 2003, 2004	1331/587	0.004	8 (0.688)		<2.5	RDF#67
Sorghum grain/syrup	B	Wheat Grain PDP 2005, 2006	1361/884	0.004	8 (2.58)		<2.5	RDF#66
Triticale flour	B	Wheat Flour PDP 2003, 2004	1331/587	0.004	(0.688)		<2.5	RDF#67
Wheat bran/germ/grain	B	Wheat Grain PDP 2005, 2006	1361/884	0.004	8 (2.58)		<2.5	RDF#66
Wheat Flour	B	Wheat Flour PDP 2003, 2004	1331/587	0.004	8 (0.688)		<2.5	RDF#67
Wild rice	B	Rice PDP 2008, 2009	619/16	0.008	8 (0.015)		<2.5	RDF#65
Alfalfa Seed	B	Black Bean PDP 2010	367/0	0.002			<2.5	0.002
Sesame Seed	B	Black Bean PDP 2010	367/0	0.002			<2.5	0.002

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Sunflower Seed	B	Black Bean PDP 2010	367/0	0.002	8		<2.5	0.002
Herbs and Spices (CG19)								
Basil dried/fresh	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Chive	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Cilantro	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Cinnamon	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Coriander seed	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Dill seed	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Herbs	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Lemongrass	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Marjoram	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Parsley dried leaves	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Pepper, black and white	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Savory	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Spices	B	Cilantro PDP 2009, 2010	739/46	0.003	(0.232)		100	RDF#68
Coconut oil	B	Cottonseed FT (MRID 43585301)	--	0.05		0.65	10[1]	0.11
Cottonseed oil	B	Cottonseed FT (MRID 43585301)		0.05		0.65	20	0.11
Flax seed oil	B	Cottonseed FT (MRID 43585301)		0.05	0.1	0.65	10[1]	0.11
Rapeseed oil	B	Cottonseed FT (MRID 43585301)		0.05		0.65	10[1]	0.11
Safflower oil	B	Cottonseed FT (MRID 43585301)		0.05		0.65	10[1]	0.11
Sesame oil	B	Cottonseed FT (MRID 43585301)		0.05		0.65	10[1]	0.11
Sunflower oil	B	Cottonseed FT (MRID 43585301)		0.05		0.65	<2.5	0.11
Miscellaneous								
Acai berry	PB	Guava FT	20/20	0.05	(4.26)		100	RDF#109
Acerola	NB	Guava FT	20/20	0.05	(4.26)		100	RDF#109
Agave	NB	Asparagus PDP 2008, 2009, 2010	1488/0	0.0083	8		100	0.0083

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Amaranth grain	B	Wheat Grain PDP 2005, 2006	1361/884	0.004	(2.58)		100	RDF#66
Artichoke globe	NB/PB	Celery PDP 2007, 2008	1480/300	0.0029			100	RDF#98
Asparagus	NB/PB	Asparagus PDP 2008, 2009, 2010	1488/0	0.0083	8		10	RDF#79
Asparagus canned	NB/PB	Asparagus canned PDP 2003	354/0	0.0035	8		10	RDF#80
Atemoya	PB	Mango PDP 2010	372/1	0.01			100	RDF#87
Avocado	PB	Avocado PDP 2012	372/ 0	0.0120	8		5	RDF#102
Bamboo shoots	PB	Celery PDP 2007, 2008	1480/300	0.0029	(0.742)		100	RDF#98
Banana	PB	Banana PDP 2012	559/ 0	0.0058			100	RDF#81
Banana, dried	B	Banana PDP 2012	559/ 0	0.0058		3.9 dried	100	0.0058
Belgium endive	PB	Spinach PDP 2008, 2009	1488/2	0.0043	(0.054)		100	RDF#99
Breadfruit	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Cactus	NB	Asparagus PDP 2008, 2009, 2010	1488/0	0.0083			100	0.0083
Canistel	NB	Avocado PDP 2012	372/ 0	0.0120			100	0.0120
Carob	B	Fig FT	6/6	0.05	(1.30)		100	RDF#110
Cherimoya	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Cocoa bean	B	Black Bean PDP 2010	367/0	0.002			100	0.002
Coconut	NB/PB	Macadamia FT (MRID 44076801)	4/0	0.05			100	RDF#111

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Coconut, dried	B	Macadamia FT (MRID 44076801)	4/0	0.05		2.1 dried	100	0.05
Coffee	B	Black Bean PDP 2010	367/0	0.002			100	0.002
Date	PB	Date FT	3/3	0.05	8 (1.10)		10	RDF#108
Feijoa	NB	Guava FT	3/3	0.05	(4.26)		100	RDF#109
Fig	NB	Fig FT	6/6	0.05	8		10	RDF#110
Guava	NB/PB	Guava FT	20/20	0.05	8 (4.26)		100	RDF#109
Honey	PB	Honey PDP 2007, 2008	744/0	0.002			100	RDF#86
Hop	B	Hop Tolerance	--	--	1		100	1
Jackfruit	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Longan	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Lychee	NB	Mango PDP 2010	372/1	0.01		1.85 dried	100	RDF#87
Mamey apple	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Mango	NB/PB	Mango PDP 2010	372/1	0.01	8		100	RDF#87
Maple syrup	B	Garden Beet PDP 2011	756/0	0.0045			100	0.0045
Mushroom	PB	Mushroom PDP 2011, 2012	930/ 0	0.002	8		100	RDF#88
Olive	PB	Mango PDP 2010	372/1	0.01			100	RDF#87
Palm heart	PB	Asparagus PDP 2008, 2009, 2010	1488/0	0.0083			100	0.0083

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Palm oil	B	Cottonseed FT (MRID 43585301)	--	0.05			100	0.11
Papaya	NB/PB	Papaya PDP 2011, 2012	750/0	0.005	1	1.5 juice	100	RDF#89
Papaya, dried	B	Papaya PDP 2011, 2012	750/0	0.005	1	1.8 dried	100	0.005
Passionfruit	NB	Passionfruit FT	7/6	0.05	8		100	RDF#114
Pawpaw	NB	Guava FT	20/20	0.05	(4.26)		100	RDF#109
Peanut	B	Peanut butter PDP 2006	739/1	0.01	(0.022)		<2.5	RDF#90
Peppermint	B	Mint FT (MRID 44124801)	5/5	0.05	8		100	1.915
Peppermint oil	B	Mint FT (MRID 44124801)	--	0.05			100	13.97
Persimmon	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Pineapple	NB/PB	Pineapple PDP 200, 2001, 2002	1454/0	0.0174	8		100	RDF#91
Pineapple, dried	B	Pineapple PDP 200, 2001, 2002	1454/0	0.0174	8	5.0 dried	100	0.0174
Plantain	NB/PB	Banana PDP 2012	559/ 0	0.0058			100	RDF#81
Plantain, dried	B	Banana PDP 2012	559/ 0	0.0058		3.9 dried	100	0.0058
Pomegranate	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Psyllium, seed	B	Rice PDP 2008, 2009	619/16				100	RDF#65

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
				0.008				
Quinoa grain	B	Wheat Grain PDP 2005, 2006	1361/884	0.004	(2.58)		100	RDF#66
Sapote mamey	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Seaweed	PB	Kale PDP 2006, 2007, 2008	802/37	0.0044			100	RDF#17
Soursop	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Spanish lime	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Spearmint	B	Mint FT (MRID 44124801)	5/5	0.05	8		100	1.915
Spearmint oil	B	Mint FT (MRID 44124801)	--	0.05			100	13.97
Starfruit	NB	Guava FT	20/20	0.05	(4.26)		100	RDF#109
Sugar apple	NB	Mango PDP 2010	372/1	0.01			100	RDF#87
Sugarcane/ molasses	B	Garden Beet PDP 2011	756/0	0.0045			<2.5	0.0045
Tamarind	PB	Mango PDP 2010	372/0	0.01			100	RDF#87
Tea	B	Hops, dried- tolerance	--	--			100	1
Teff flour	B	Wheat Flour PDP 2003, 2004	1331/587	0.004			100	RDF#67
Vinegar	B	Apple juice PDP 2012	396/0	0.002			100	0.002
Water chestnut	NB/PB	Potato PDP 2008, 2009	1488/0	0.0023			100	0.0023

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT Max.	Anticipated Residue Estimates/Tolerance (ppm) Acute (Tol., AR, RDF) ppm
Watercress	PB	Spinach PDP 2008, 2009	1488/2	0.0043			100	RDF#99
Livestock, Milk and Eggs								
Beef/Goat/Sheep, fat		Beef, fat PDP2009	292/0	0.002	4	1.92 dried	100	RDF#70
Beef/Goat/Sheep, liver		Beef, liver PDP 2001, 2002	624/0	0.0046	4		100	RDF#71
Beef/Goat/Sheep, Meat		Beef, Meat PDP 2009	292/0	0.002	4		100	RDF#69
Beef/Goat/Sheep meat byproduct/ kidney		Beef, liver PDP 2001, 2002	624/0	0.0046	4		100	RDF#71
Horse/Rabbit Meat		Beef, Meat PDP 2009	292/0	0.002	4		100	RDF#69
Pork meat		Pork, meat PDP 2005	352/0	0.0008	4		100	RDF#72
Pork fat/kidney/byproduct		Pork, fat PDP2005	352/0	0.002	4		100	RDF#73
Milk		Milk PDP 2011	743/0	0.003	0.5		100	RDF#74
Milk fat		Milk cream butter PDP 2012	792/0	0.003	0.5		100	RDF#94
Chicken/Turkey, meat		Chicken, meat PDP 2006	1310/0	0.0045	4		100	RDF#75
Chicken/Turkey, liver/byproduct/skin		Chicken, liver PDP 2001	634/0	0.0125	4		100	RDF#76
Egg		Egg PDP 2010, 2011	742/0	0.005	0.1		100	RDF#77

Commodity	DEEM Food Form/ (Classification[1])	Data Source	No. of Samples/ No. of Detectable Residues	½ LOQ/LOD (ppm)	Tolerance (Highest detectable residue) ppm	Processing Factors	% CT	Anticipated Residue Estimates/Tolerance (ppm)
							Max.	Acute (Tol., AR, RDF) ppm
Fish, ALL		Catfish PDP 2008, 2009, 2010	1479/0	0.0005			100	RDF#78

[1]Based on canola %CT info

NB= Not Blended; PB=Partially Blended; B=Blended

All food commodities were included in the acute and steady state dietary assessment. However, the grey shaded are commodities that are not being supported by the registrant (almonds, cranberry, lentil, peanut, plum, safflower oil, soybean, sugar beet, sunflower seed, and grape raisin.

in); Red fonts- included for adulticide use only

Attachment 2: Acute and Steady State Residue Distribution Files for Malathion

RDF#1 Beet_garden.rdf: BTCA (2011), Total Samples=756, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=756 LODRES=0.0045	RDF#2 Carrot: CRFR (2006,2007), Total Samples=1488, Total Detects=0 MaxPCT =0.200 TOTALZ=1190 TOTALLOD=298 LODRES=0.0020	RDF#3 Potato_w/Peel_Uncooked: POFR (2008,2009), Total Samples=1488, Total Detects=0 MaxPCT =0.025 TOTALZ=1451 TOTALLOD=37 LODRES=0.0023
RDF#4 Potato_w/o peelFrozen: PZFZ (2006,2007), Total Samples=1544, Total Detects=0 MaxPCT =0.025 TOTALZ=1505 TOTALLOD=39 LODRES=0.0034	RDF#5 Potato_Sweet.rdf: SWFR (2008,2009,2010), Total Samples=1476, Total Detects=0 MaxPCT =0.025 TOTALZ=1439 TOTALLOD=37 LODRES=0.0056	RDF#6 Potato_Sweet_BF : ISGJ,ISPC,ISSE (2010,2011), Total Samples=776, Total Detects=0 MaxPCT =0.025 TOTALZ=757 TOTALLOD=19 LODRES=0.0028
RDF#7 Onion_Bul: ONFR (2011,2012), Total Samples=744, Total Detects=0 MaxPCT =0.100 TOTALZ=670 TOTALLOD=74 LODRES=0.0036	RDF#8 Onion_Green: GOFR (2008,2009), Total Samples=744, Total Detects=36 MaxPCT = =0.10 TOTALZ=670 TOTALLOD=38 LODRES=0.0015 0.27 0.21 0.11 0.034 0.03 0.028 0.025 0.021 0.021 0.02 0.017 0.016 Additional data.....	RDF#9 Spinach_Fresh: SPFR (2008,2009), Total Samples=1488, Total Detects=2 MaxPCT=0.050 TOTALZ=1414 TOTALLOD=72 LODRES=0.0043 0.05405 0.0308

RDF#10 Spinach_Frozen : SFFZ,SPFZ (2010,2011), Total Samples=389, Total Detects=1 MaxPCT =0.050 TOTALZ=370 TOTALLOD=18 LODRES=0.0050 0.3982	RDF#11 Spinach_Canned: SCCA (2010,2011), Total Samples=379, Total Detects=0 MaxPCT= =0.050 TOTALZ=360 TOTALLOD=19 LODRES=0.0050	RDF#12 Celery: CEFR (2007,2008), Total Samples=1480, Total Detects=300 MaxPCT=0.300 TOTALZ=1036 TOTALLOD=144 LODRES=0.0029 0.7415 0.612 0.502 See additional data...
RDF#13 Broccoli: BRFR (2006,2007,2008), Total Samples=1475, Total Detects=3 MaxPCT= 0.050 TOTALZ=1401 TOTALLOD=71 LODRES=0.0040 0.0335 0.0115 0.0065	RDF#14 Cabbage: CGFR (2010,2011), Total Samples=1485, Total Detects=0 MaxPCT= 0.050 TOTALZ=1411 TOTALLOD=74 LODRES=0.0605	RDF#15 Cauliflower: CFFR (2011,2012), Total Samples=923, Total Detects=1 MaxPCT= 0.05 TOTALZ=877 TOTALLOD=45 LODRES=0.0020 0.0035
RDF#16 Collards: GLFR (2006,2007,2008), Total Samples=679, Total Detects=4 MaxPCT=1.000 TOTALZ=0 TOTALLOD=675 LODRES=0.0043 0.33 0.0785 0.0268 0.0091	RDF#17 Kale: GKFR (2006,2007,2008), Total Samples=802, Total Detects=37 MaxPCT=1.000 TOTALZ=0 TOTALLOD=765 LODRES=0.0044 1.49 1.156 0.2426 0.1915 0.1515 0.0598 0.0478 0.0418	RDF#18-BLENDED Soybean_Grain: SYGR,SYOT (2011), Total Samples=300, Total Detects=11 'MaxPCT=0.025 TOTALZ=0 TOTALLOD=289 LODRES=0.0043 0.20435 0.01335 0.01205 0.01125 0.01115 0.01025 0.00975 0.00855 0.00825

	0.0358 0.0315 0.0255 0.0255 0.0255 0.0255 0.0238 0.0228 0.0168 0.0093 0.0091 0.0091 0.0091 0.0091 Additional data...	0.00785 0.00755
RDF#19 Bean_Green_Fresh: GBFR (2007,2008), Total Samples=1480, Total Detects=0 MaxPCT =0.025 TOTALZ=1443 TOTALLOD=37 LODRES=0.0041	RDF#20 Bean_Green_Frozen: GBFZ,GZFZ (2005), Total Samples=555, Total Detects=0 MaxPCT =0.025 TOTALZ=541 TOTALLOD=14 LODRES=0.0054	RDF#21 Bean_Green_Canned: GBCA,GCCA (2003,2004), Total Samples=928, Total Detects=0 MaxPCT =0.025 TOTALZ=905 TOTALLOD=23 LODRES=0.0056
RDF#22 Bean_Green_BabyFood: IGGJ,IGPC (2010,2011), Total Samples=776, Total Detects=0 MaxPCT =0.025 TOTALZ=757 TOTALLOD=19 LODRES=0.0028	RDF#23 Pea_Snap: SNFR (2011,2012), Total Samples=1487, Total Detects =107 MaxPCT=0.025 TOTALZ=1380 TOTALLOD=0 LODRES=0.0025 0.08775 0.0835 0.0635 0.0425 0.0405 0.03875 0.0375 0.0375 0.0355 0.03475 0.0295	RDF#24 Pea_Sweet_Frozen: PSFR,PSFZ (2006), Total Samples=744, Total Detects =0 MaxPCT=0.025 TOTALZ=725 TOTALLOD=19 LODRES=0.0058

	0.0275	
	0.0255	
	0.0235	
	0.0225	
	0.0195	
	0.0195	
	0.0185	
	0.0185	
	0.0175	
	0.01675	
	Additional data….	
RDF#25 Pea_Sweet_Canned: PSCA (2001,2002), Total Samples=729, Total Detects=0 MaxPCT =0.025 TOTALZ=711 TOTALLOD=18 LODRES=0.0044	RDF#26 Eggplant: EPFR (2005,2006), Total Samples=1476, Total Detects=3, Total LODs=1473, Total Zeros=0 MaxPCT =0.05 TOTALZ=1402 TOTALLOD=74 LODRES=0.0135 0.0505 0.0225 0.0225	RDF#27 Pepper_Bell: PPFR (2010,2011,2012), Total Samples=1671, Total Detects=7 MaxPCT==0.050 TOTALZ=1587 TOTALLOD=77 LODRES=0.0050 0.371 0.0163 0.012 0.012 0.0109 0.0096 0.0091
RDF#28 Pepper Nonbell: HPFR (2010,2011), Total Samples=739, Total Detects=17 MaxPCT=0.050 TOTALZ=702 TOTALLOD=20 LODRES=0.0020 0.0165 0.01505 0.0135 0.0115 0.0103 0.0075 0.0065 0.0065	RDF#29 Tomato_Cherry: CTFR (2011,2012), Total Samples=1482, Total Detects=31 MaxPCT =0.050 TOTALZ=1408 TOTALLOD=43 LODRES=0.0025 0.171 0.161 0.131 0.081 0.058 0.057 0.045 0.038	RDF#30 Tomato_Fresh: TOFR (2007,2008), Total Samples=1481, Total Detects=3 MaxPCT =0.050 TOTALZ=1407 TOTALLOD=71 LODRES=0.0100 0.0325 0.0155 0.0155

0.0065	0.036	
0.0053	0.032	
0.00455	0.031	
0.004	0.03	
0.0036	0.027	
0.0034	0.024	
0.0028	0.023	
0.0026	0.019	
0.0021	0.018	
	0.017	
	0.017	
	0.016	
	0.015	
	0.011	
	0.006	
	0.006	
	0.006	
	0.006	
	0.006	
	0.006	
	0.006	
	0.006	
	0.006	
RDF#31	RDF#32	RDF#33
Tomato_Paste: TPCA,TPGJ (2009), Total Samples=742, Total Detects=0 MaxPCT=0.050 TOTALZ=0 TOTALLOD=742 LODRES=0.0365	Tomato_Canned: TCCA (1999,2000), Total Samples=737, Total Detects=1 MaxPCT =0.050 TOTALZ=700 TOTALLOD=36 LODRES=0.0044 0.009857868	Cantaloupe: CNFR (2010,2011,2012), Total Samples=1482, Total Detects=0 MaxPCT =0.05 TOTALZ=1408 TOTALLOD=74 LODRES=0.0100
RDF#34	RDF#35	RDF#36
Watermelon: WMFR (2010), Total Samples=371, Total Detects=0 MaxPCT =0.050 TOTALZ=352 TOTALLOD=19 LODRES=0.0021	Cucumber: CUFR (2009,2010), Total Samples=1488, Total Detects=0 MaxPCT=0.050 TOTALZ=1414 TOTALLOD=74 LODRES=0.0026	Squash_Summer: SSFR (2012), Total Samples=186, Total Detects=0 MaxPCT=0.100 TOTALZ=167 TOTALLOD=19 LODRES=0.0048
RDF#37	RDF#38	RDF#39

Squash_Winter_Fresh: WSFR (2011,2012), Total Samples=928, Total Detects=0 MaxPCT=0.100 TOTALZ=835 TOTALLOD=93 LODRES=0.0022	Squash_Winter_Frozen: WZFZ (1997,1998,1999), Total Samples=470, Total Detects=0 MaxPCT=0.100 TOTALZ=423 TOTALLOD=47 LODRES=0.0038 ˙	Grapefruit:GFFR (2005,2006), Total Samples=1485, Total Detects=6 MaxPCT=0.150 TOTALZ=1262 TOTALLOD=217 LODRES=0.0018 0.0445 0.0445 0.0445 0.0445 0.0445 0.0026
RDF#40 Orange: OGFR (2009,2010), Total Samples=1488, Total Detects=0 MaxPCT=0.20 TOTALZ=1190 TOTALLOD=298 LODRES=0.0089	RDF#41 Orange_Juice: OJCO,OJFZ,OJRE (2010,2011,2012), Total Samples=1106, Total Detects=0 MaxPCT=0.200 TOTALZ=885 TOTALLOD=221 LODRES=0.0020	RDF#42 Tangerine: TAFR (2011,2012), Total Samples=1426, Total Detects=4, MaxPCT=0.250 TOTALZ=1069 TOTALLOD=353 LODRES=0.0100 0.032 0.024 0.018 0.016
RDF#43 Apple_Fresh: APFR (2009,2010,2012), Total Samples=1565, Total Detects=3 MaxPCT=0.025 TOTALZ=1526 TOTALLOD=36 LODRES=0.0031 0.0155 0.0105 0.0095	RDF#44 Apple_Juice: AJCA,AJCO,AJFZ,AJOT,AJRE (2012), Total Samples=396, Total Detects=0 MaxPCT=0.025 TOTALZ=386 TOTALLOD=10 LODRES=0.0020	RDF#45 Apple_Sauce: ACCA,ACGJ,ACNP,ACOT,ACPC (2006), Total Samples=744, Total Detects=0 MaxPCT=0.025 TOTALZ=725 TOTALLOD=19 LODRES=0.0031
RDF#46 Pear: PEFR (2012), Total Samples=100, Total Detects=0 MaxPCT=0.025	RDF#47 Pear: Canned: CPCA (1999,2000), Total Samples=737, Total Detects=0	RDF#48 Pear BF: IPGJ,IPPC,IPSE (2010,2011), Total Samples=776, Total Detects=0

TOTALZ=97	MaxPCT=0.025	MaxPCT=0.025
TOTALLOD=3	TOTALZ=719	TOTALZ=757
LODRES=0.0020	TOTALLOD=18	TOTALLOD=19
	LODRES=0.0056	LODRES=0.0030
RDF#49	RDF#50	RDF#51
Pear Juice: PJCO (2003),	Cherry: CHFR (2007), Total	Nectarine: NEFR
Total Samples=66, Total	Samples=419, Total	(2007,2008), Total
Detects=0	Detects=10,	Samples=1235, Total Total
MaxPCT=0.025	MaxPCT=0.250	Zeros=0
TOTALZ=64	TOTALZ=314	MaxPCT=1.000
TOTALLOD=2	TOTALLOD=95	TOTALZ=0
LODRES=0.0035	LODRES=0.0023	TOTALLOD=1235
	0.013	LODRES=0.0100
	0.0084	
	0.0055	
	0.0051	
	0.005	
	0.0042	
	0.004	
	0.004	
	0.004	
	0.004	
RDF#52	RDF#53	RDF#54
Peach Fresh: PCFR	Peach Canned: CCCA,PCCA	Plum: PUFR (2011,2012),
(2007,2008,2012), Total	(2003,2004), Total	Total Samples=840, Total
Samples=1191, Total	Samples=1485, Total	Detects=0
Detects=6	Detects=0	MaxPCT=0.025
MaxPCT=0.050	MaxPCT=0.050	TOTALZ=819
TOTALZ=1131	TOTALZ=1411	TOTALLOD=21
TOTALLOD=54	TOTALLOD=74	LODRES=0.0022
LODRES=0.0032	LODRES=0.0110	
0.1915		
0.013		
0.0085		
0.0085		
0.0085		
0.0085		
RDF#55	RDF#56	RDF#57
Plum Prune: PDOT	Blueberry Fresh:	Almond:
(2005,2006), Total	BBFR,BZFZ (2007,2008),	ALCA,ALFR,ALPC,ALSE
Samples=377, Total	Total Samples=1477, Total	(2007,2008), Total
Detects=0	Detects=73	Samples=547, Total
MaxPCT=0.025	MaxPCT=0.400	Detects=0
TOTALZ=368	TOTALZ=886	MaxPCT=1.000

TOTALLOD=9 LODRES=0.0135	TOTALLOD=518 LODRES=0.0029 0.33 0.322 0.3038 0.206 0.187 0.184 0.162 0.1515 0.1515 0.142 0.136 0.1215 0.0835 Additional data.....	TOTALZ=0 TOTALLOD=547 LODRES=0.0030
RDF#58 BLENDED Barley Grain: BYGR,BYOT (2002,2003), Total Samples=1094, Total Detects=13 'MaxPCT=1.000 TOTALZ=0 TOTALLOD=1081 LODRES=0.0075 0.649 0.383 0.3765 0.173 0.126 0.125 0.099 0.081 0.076 0.043 0.024 0.015 0.013	RDF#59 BLENDED Corn Grain: COGR (2007,2008), Total Samples=1310, Total Detects=469 'MaxPCT=0.025 TOTALZ=0 TOTALLOD=841 LODRES=0.0030 4.736 0.874 0.697 Additional data....	RDF#60 Corn Syrup: CYOT (1998,1999), Total Samples=454, Total Detects=0 MaxPCT=0.025 TOTALZ=0 TOTALLOD=454 LODRES=0.0007
RDF#61 Corn_Sweet_Fresh: CBFR (2008,2009,2010), Total Samples=1300, Total Detects=0 MaxPCT=1.000	RDF#62 Corn_Sweet_Frozen : CSFZ (2008,2009,2010), Total Samples=181, Total Detects=0 MaxPCT=1.000	RDF#63 Corn_Sweet_Canned: CSCA (2001,2002), Total Samples=723, Total Detects=0 MaxPCT=1.000

TOTALZ=0	TOTALZ=0	TOTALZ=0
TOTALLOD=1300	TOTALLOD=181	TOTALLOD=723
LODRES=0.0069	LODRES=0.0087	LODRES=0.0060
RDF#64	RDF#65	RDF#66
Oat_Grain:	Rice_White: RIGR,RIOT	Wheat_Grain: WHGR,WHOT
OAGR,OARO,OASC (2010),	(2008,2009), Total	(2005,2006), Total
Total Samples=297, Total	Samples=619, Total	Samples=1361, Total
Detects=1	Detects=16	Detects=884
'MaxPCT=1.000	MaxPCT=0.025	MaxPCT=0.025
TOTALZ=0	TOTALZ=0	TOTALZ=0
TOTALLOD=296	TOTALLOD=603	TOTALLOD=477
LODRES=0.0080	LODRES=0.0080	LODRES=0.0040
0.015	0.046	2.5795
	0.02	2.3725
	0.02	2.2465
	0.02	2.0775
	0.02	1.8355
	0.02	1.6455
	0.02	1.4265
	0.02	1.4025
	0.02	1.3305
	0.02	1.1755
	0.02	
	0.02	Additional data…..
	0.02	
	0.02	
	0.02	
	0.02	
RDF#67	RDF#68	RDF#69
Wheat_Flour: WFGR	Cilantro_Fresh: CLFR	Beef_Meat: BMFZ (2009),
(2003,2004), Total	(2009,2010), Total	Total Samples=292, Total
Samples=1331, Total	Samples=739, Total	Detects=0
Detects=587	Detects=46	MaxPCT=1.000
MaxPCT=0.025	MaxPCT=1.000	TOTALZ=0
TOTALZ=0	TOTALZ=0	TOTALLOD=292
TOTALLOD=744	TOTALLOD=693	LODRES=0.0020
LODRES=0.0040	LODRES=0.0030	
0.6875	0.2315	
0.3305	0.1815	
0.2545	0.1215	
0.2425	0.0675	
0.1725	0.0405	
0.1285	0.0265	
	0.0255	

	0.0165 0.0165 0.0145 0.0135 0.0135 0.0135 0.0135 0.0125 Additional data	
Additional data….		
RDF#70 Beef_Fat: BAFZ (2009), Total Samples=292, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=292 LODRES=0.0020	RDF#71 Beef_Liver: BLFZ (2001,2002), Total Samples=624, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=624 LODRES=0.0046	RDF#72 Pork_Meat: KMFR (2005), Total Samples=352, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=352 LODRES=0.0008
RDF#73 Pork_Fat: KAPK,KAPY (2005), Total Samples=352, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=352 LODRES=0.0015	RDF#74 Milk: MKOT,MKRE (2011), Total Samples=743, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=743 LODRES=0.0030	RDF#75 Chicken_Meat: PRFR,PTFR (2006), Total Samples=1310, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=1310 LODRES=0.0045
RDF#76 Chicken_Liver: PLFZ (2000,2001), Total Samples=634, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=634 LODRES=0.0125	RDF#77 Egg: EGEJ,EGEL,EGEM,EGEX (2010,2011), Total Samples=742, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=742 LODRES=0.0050	RDF#78 Catfish: FCFR,FCFZ (2008,2009,2010), Total Samples=1479, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=1479 LODRES=0.0005
RDF#79 Asparagus: ASFR (2008,2009,2010), Total Samples=1488, Total Detects=0 MaxPCT=0.100	RDF#80 Asparagus_Canned: AACA (2003), Total Samples=354, Total Detects=0 MaxPCT=0.100 TOTALZ=319	RDF#81 Banana: BNFR (2012), Total Samples=559, Total Detects=0 MaxPCT=1.000 TOTALZ=0

TOTALZ=1339 TOTALLOD=149 LODRES=0.0083	TOTALLOD=35 LODRES=0.0035	TOTALLOD=559 LODRES=0.0058
RDF#82 Cranberry : CAFR (2006), Total Samples=316, Total Detects=1 MaxPCT=1.000 TOTALZ=0 TOTALLOD=315 LODRES=0.0017 0.009	RDF#83 Grape_Fresh: GRFR (2009,2010), Total Samples=1489, Total Detects=0 MaxPCT=0.025 TOTALZ=1452 TOTALLOD=37 LODRES=0.0032	RDF#84 Grape_Juice: GJCO,GJRE (2008), Total Samples=745, Total Detects=4 MaxPCT=0.025 TOTALZ=726 TOTALLOD=15 LODRES=0.0010 0.00145 0.00105 0.00105 0.00095
RDF#85 Grape_Raisin: RAOT (2006,2007), Total Samples=744, Total Detects=0 MaxPCT=0.025 TOTALZ=725 TOTALLOD=19 LODRES=0.0066	RDF#86 Honey: HYRE (2007,2008), Total Samples=744, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=744 LODRES=0.0020	RDF#87 Mango: MAFR (2010), Total Samples=372, Total Detects=1 MaxPCT=1.000 TOTALZ=0 TOTALLOD=371 LODRES=0.0100 0.018
RDF#88 Mushroom: MUFR (2011,2012), Total Samples=930, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=930 LODRES=0.0020	RDF#89 Papaya: YAFR (2011,2012), Total Samples=750, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=750 LODRES=0.0050	RDF#90 PeanutButter:PBCA,PBGJ,PB NP,PBOT,PBPC (2006), Total Samples=739, Total Detects=1 MaxPCT=0.025 TOTALZ=721 TOTALLOD=17 LODRES=0.0100 0.022
RDF#91 Pineapple: PNFR (2000,2001,2002), Total Samples=1454, Total Detects=0 MaxPCT=1.000 TOTALZ=0 TOTALLOD=1454 LODRES=0.0174	RDF#92 Strawberry_Fresh: STFR (2008,2009), Total Samples=1485, Total Detects=345 MaxPCT=0.550 TOTALZ=668 TOTALLOD=472 LODRES=0.0022	RDF#93 Strawberry_Frozen: SZFZ (1998,1999,2000), Total Samples=155, Total Detects=38 MaxPCT=0.550 TOTALZ=70 TOTALLOD=47 LODRES=0.0060

	0.944	0.102
	0.795	0.096
	0.612	0.075
	0.548	0.06
	0.534	0.044
	0.474	0.041
	0.472	0.035
	0.448	0.035
	0.4092	
	0.4	Additional data...
	Additional data....	
RDF#94	RDF#95	RDF#96
Milk_CreamButter:	Lettuce_Fresh_Head: LTHD	Lettuce_Fresh_Leaf: LTLF
BUOT,CMRE,BURE (2012),	(2010,2011), Total	(2010,2011), Total
Total Samples=792, Total	Samples=669, Total	Samples=782, Total
Detects=0	Detects=0	Detects=0
MaxPCT=1.000	'MaxPCT=0.150	MaxPCT=0.150
TOTALZ=0	TOTALZ=569	TOTALZ=665
TOTALLOD=792	TOTALLOD=100	TOTALLOD=117
LODRES=0.0030	LODRES=0.0020	LODRES=0.0020
RDF#97	RDF#98	RDF#99
Broccoli100: BRFR	Celery100: CEFR	Spinach_Fresh100: SPFR
(2006,2007,2008), Total	(2007,2008), Total	(2008,2009), Total
Samples=1475, Total	Samples=1480, Total	Samples=1488, Total
Detects=3	Detects=300	Detects=2
MaxPCT=100	MaxPCT=100	MaxPCT=100
TOTALZ=0	TOTALZ=0	TOTALZ=0
TOTALLOD=1472	TOTALLOD=1180	TOTALLOD=1486
LODRES=0.0040	LODRES=0.0029	LODRES=0.0043
0.0335	0.7415	0.05405
0.0115	0.612	0.0308
0.0065	0.502	
	0.4915	
	0.4215	
	0.421	
	Additional data...	
RDF#100	RDF#101	RDF#102
Caneberry: BBFR,BZFZ	Brussel Sprouts: Cabbage	Avocado: AVFR (2012), Total
(2007,2008), Total	CGFR (2010,2011), Total	Samples=372, Total
Samples=1477, Total	Samples=1485, Total	Detects=0
Detects=73	Detects=0	MaxPCT=0.050

MaxPCT=0.70 TOTALZ=443 TOTALLOD=961 LODRES=0.0029 0.33 0.322 0.3038 0.206 0.187 0.184 0.162 0.1515 0.1515 0.142 0.136 Additional data...	MaxPCT= 0.20 TOTALZ=1188 TOTALLOD=297 LODRES=0.0605	TOTALZ=353 TOTALLOD=19 LODRES=0.0120
RDF#103 Pumpkin: SSFR (2012), Total Samples=186, Total Detects=0 MaxPCT=0.050 TOTALZ=174 TOTALLOD=9 LODRES=0.0048	RDF#104 Lemon: OGFR (2009,2010), Total Samples=1488, Total Detects=0 MaxPCT=0.025 TOTALZ=1451 TOTALLOD=37 LODRES=0.0089	RDF#105 Lemon_Juice: OJCO,OJFZ,OJRE (2010,2011,2012), Total Samples=1106, Total Detects=0 MaxPCT=0.0250 TOTALZ=1078 TOTALLOD=28 LODRES=0.0020
RDF#106 Chestnut 100%CT TOTALZ=0 TOTALNZ=4 0.844 1.174 0.673 0.621	RD#107 Tangerine_Juice: OJCO,OJFZ,OJRE (2010,2011,2012), Total Samples=1106, Total Detects=0 MaxPCT=0.250 TOTALZ=829 TOTALLOD=277 LODRES=0.0020	RDF#108 Dates 10%CT TOTALZ=29 TOTALNZ=3 8.866 7.924 5.63
RDF#109 Guava 100%CT TOTALZ=0 TOTALNZ=20	RDF#110 Fig 10%CT Fig 10%CT TOTALZ=106 TOTALNZ=12	RDF#111 Macadamia nut 100%CT TOTALZ=0 TOTALNZ=4

0.64		0.575
0.65	0.639	0.575
0.71	0.747	0.575
0.79	0.575	0.575
0.61	0.786	
0.62	0.828	
0.65	1.09	
0.67	0.668	
0.63	0.867	
0.65	0.633	
0.575	0.912	
0.575	0.917	
2.29	1.503	
2.52		
3.43		
4.26		
1.125		
1.17		
1.19		
2.11		
RDF#112 Apricot: Peach_Fresh: PCFR (2007,2008,2012), Total Samples=1191, Total Detects=6 MaxPCT=0.025 TOTALZ=1161 TOTALLOD=24 LODRES=0.0032 0.1915 0.013 0.0085 0.0085 0.0085 0.0085	RDF#113 Okra 100%CT TOTALZ=0 TOTALNZ=6 1.48 3.28 1.15 1.15 1.15 1.15	RDF#114 Passionfruit 100%CT TOTALZ=0 TOTALNZ=7 0.575 0.575 0.575 0.575 0.575 0.606 0.621
RDF#115 Walnut 15%CT TOTALZ=57 TOTALNZ=10 0.575 0.575 0.575 0.575	RDF#116 Pecan 5%CT TOTALZ=190 TOTALNZ=10 0.575 0.575 0.575 0.575	RDF#117 Grapefruit_Juice: OJCO,OJFZ,OJRE (2010,2011,2012), Total Samples=1106, Total Detects=0 MaxPCT=0.150 TOTALZ=940 TOTALLOD=166

0.575 0.575 0.575 0.575 0.575 0.575	0.575 0.575 0.575 0.575 0.575 0.575	LODRES=0.0020
RDF#118 Apricot Canned- Peach_Canned: CCCA,PCCA (2003,2004), Total Samples=1485, Total Detects=0 MaxPCT=0.025 TOTALZ=1448 TOTALLOD=37 LODRES=0.0110	'Malathion, Created by SAS Program: CreateRDF_021214, 12FEB14 'Subdirectory: C:\CEB_backup\PDP\SA S\Chemicals\Malathion, RDF Filename=tangerine_Juic e.rdf 'Residue=CONCEN, RPF=RPF, Brigetable=BT_Recent, PFactor=PF1, PCT=PCT_Max, LOD Rule=LOD3 'PDP Data: OJCO,OJFZ,OJRE (2010,2011,2012), Total Samples=1106, Total Detects=0, Total LODs=221, Total Zeros=885 'MaxPCT=0.250, Avg Residue (Detects)=., Avg Residue (TOTALS)=0.0004, Avg HLOD (NonDetects)=0.0020 TOTALZ=829 TOTALLOD=277 LODRES=0.0020	BLENDED Bean_Kidney: KBCA (2008,2009), Total Samples=372, Total Detects=0 MaxPCT=0.025 TOTALZ=363 TOTALLOD=9 LODRES=0.0020
BLENDED	BLENDED	BLENDED

Bean_Black: ABCA (2010), Total Samples=367, Total Detects=0 MaxPCT=0.025 TOTALZ=358 TOTALLOD=9 LODRES=0.0020	Bean_Pinto: NBCA (2009), Total Samples=372, Total Detects=0 MaxPCT=0.025 TOTALZ=363 TOTALLOD=9 LODRES=0.0020	Tomato_Paste: TPCA,TPGJ (2009), Total Samples=742, Total Detects=0 MaxPCT=0.050 TOTALZ=0 TOTALLOD=742 LODRES=0.0365

Attachment 3: Field trials for chestnuts, cotton, dates, figs, guava, hops, macadamia nuts, mints, passion fruit, and walnuts:

Chestnut- RDF#106 (MRID 44478401, D243536, 06/05/1998, M. Xue)
Apply malathion 57 EC formulation at the rate of 5 lb ai/A at intervals of at least 7 days, up to a maximum of 20 lb ai/A per year, with a 2 day preharvest interval.

chestnuts	Parent	oxon	22x	Total
	0.25	0.027	0.594	0.844
	0.58	0.027	0.594	1.174
	0.079	0.027	0.594	0.673
	0.027	0.027	0.594	0.621

Cottonseed oil- Blended (MRID 43585301; D213105, 11/05/1998, M. Xue)
Cottonseed oil is a blended processed commodity; therefore, it was appropriate to use a point estimate in the assessment. Apparent residues of malathion and malaoxon were nondetectable in/on one untreated sample of cottonseed (<0.05 ppm each), and in one sample each of hulls (<0.05 ppm), meal (<0.01 ppm), crude oil (<0.01 ppm), and bleached and deodorized oil (<0.01 ppm) processed from untreated cottonseed. Apparent residues of malathion were detectable in one refined oil sample (0.01 ppm) processed from untreated cottonseed; apparent residues of malaoxon were nondetectable (<0.01 ppm) in that sample. The cottonseed oil point estimates is 0.11 ppm (1/2 LOQ 0.005* TAF22x) and for the acute and steady state assessments. Processing factors obtained from processing studies (W.Smith, D255365, 5/10/99) were used for cottonseed oil (0.65x).

Dates- RDF #108 (MRID 43269401; D217170, 09/02/1997, K. Dockter)
The proposed use requires a label amendment to accommodate the 7th application on **date trees**, i.e., 40 lbs EP/A 7 days. pre-harvest.

dates	Parent	oxon	22x	Total
	1.43	0.338	7.436	8.866
	3.26	0.212	4.664	7.924
	2.33	0.15	3.3	5.63

Figs- RDF#110 (MRID 44061201; 09/29/1998, DP Barcode Nos. D228271, M.Xue)
The combined residues of malathion and malaoxon ranged from <0.10 to <0.41 ppm in/on fresh fig harvested five days following the last of one to three foliar applications, with a 5-day retreatment interval, using the EC formulation at 2.5 lb ai/A/application.

figs	Parent	oxon	22x	Total
	0.089	0.025	0.55	0.639
	0.197	0.025	0.55	0.747
	0.025	0.025	0.55	0.575
	0.236	0.025	0.55	0.786
	0.278	0.025	0.55	0.828
	0.54	0.025	0.55	1.09
	0.118	0.025	0.55	0.668
	0.317	0.025	0.55	0.867
	0.083	0.025	0.55	0.633
	0.362	0.025	0.55	0.912
	0.367	0.025	0.55	0.917
	0.953	0.025	0.55	1.503

Guava- RDF# 109 (MRID 44391501 DP Barcodes D239267, Jan 27, 1998, W. Smith)
The combined residues of malathion and malaoxon ranged from <0.14 to 0.48 ppm in/on guava harvested two days following the last of 11 or 13 foliar applications, with a 3- to 19-day retreatment interval of a representative 5 lb/gal EC formulation at 1.25 lb ai/A/application (approximately 1x the proposed maximum single and seasonal application rates) using ground equipment.

guva	Parent	oxon	22x	Total
	0.09	0.025	0.55	0.64
	0.1	0.025	0.55	0.65
	0.16	0.025	0.55	0.71
	0.24	0.025	0.55	0.79
	0.06	0.025	0.55	0.61
	0.07	0.025	0.55	0.62
	0.1	0.025	0.55	0.65
	0.12	0.025	0.55	0.67
	0.08	0.025	0.55	0.63
	0.1	0.025	0.55	0.65
	0.025	0.025	0.55	0.575
	0.025	0.025	0.55	0.575
	0.09	0.1	2.2	2.29
	0.1	0.11	2.42	2.52
	0.13	0.15	3.3	3.43
	0.3	0.18	3.96	4.26
	0.025	0.05	1.1	1.125
	0.07	0.05	1.1	1.17
	0.09	0.05	1.1	1.19
	0.13	0.09	1.98	2.11

Macadamia nut- RDF#111 (MRID 44076801; DP Barcode No. D228271, M.Xue)
The combined residues of malathion and malaoxon were <0.10 ppm in/on macadamia nut harvested one day following the last of seven foliar applications, with a 5- to 9-day retreatment interval, using the EC formulation at 0.94 lb ai/A/application (1x the proposed maximum single and seasonal application rates) with ground equipment. The 5 lb/gal EC formulation registered to Platte Chemical Company (EPA Reg. No. 34704-108) is proposed for multiple foliar applications on macadamia nut at 0.94 lb ai/A/application with a 7-day retreatment interval, a preharvest interval of 1 day, and a maximum seasonal rate of 6.25 lb ai/A. The residues of malathion and malaoxon were below the limit of quantitation (<0.05 ppm each).

macadamia nuts	Parent	oxon	22x	Total
4 FT	0.025	0.025	0.55	0.575

Mint and its processed commodities- Blended (MRID 44124801; DP Barcode Nos. D228271, M.Xue)
The mint field trial data indicate that the combined residues of malathion and malaoxon in/on peppermint and spearmint did not exceed the established 8 ppm tolerances (presently expressed as malathion *per se*). The combined residues of malathion and malaoxon range from <0.43 to 1.43 ppm in/on peppermint and spearmint tops harvested seven days following the last of three

foliar applications, with a 7-day retreatment interval, using the EC formulation at 0.94 lb ai/A/application with ground equipment. The mint processing data indicate that the combined residues of malathion and malaoxon concentrated 12.7x in mint oil processed from mint tops bearing detectable residues following applications at 5x. The HAFT (combined residues) from mint field trials reflecting the maximum proposed use pattern is 1.1 ppm. Based on this HAFT and the observed concentration factor, the maximum expected combined residues are 13.97 ppm for mint oil.

mint	Parent	oxon	22x	Total
	0.8	0.025	0.55	1.35
	1.33	0.025	0.55	1.88
	0.445	0.025	0.55	0.995
	0.89	0.05	1.1	1.99
	1.16	0.1	2.2	3.36
			average	1.915

Passionfruit- RDF#114 (MRID No. 44472801, DP Barcode D243539, 06/16/1998; M. Xue) Three field trials were conducted in Florida (2) and Hawaii (1). No detectable residues of malaoxon were found in any of the treated samples from this study. Malathion residues found in treated samples ranged from < 0.05 (below the limit of quantitation) to 0.071 ppm at the application rate of 1.25 lb ai/A, treated 8 times, at 6 - 9 day intervals, up to a maximum of 10 lbs ai/A per year, and a PHI of 3 and 7 days.

Passionfru	Parent	oxon	22x	Total
	0.025	0.025	0.55	0.575
	0.025	0.025	0.55	0.575
	0.025	0.025	0.55	0.575
	0.025	0.025	0.55	0.575
	0.025	0.025	0.55	0.575
	0.056	0.025	0.55	0.606
	0.071	0.025	0.55	0.621

Walnut- RDF#115 (MRID 44383301; DP Barcodes D239267, 01/27/1998, W. Smith) The combined residues of malathion and malaoxon were nondetectable (<0.10 ppm) in/on walnuts harvested seven day following the last of 3 foliar applications, with a 7- to 12-day retreatment interval of a representative 5 lb/gal EC formulation at 2.25-2.5 lb ai/A/application (1x the proposed maximum single and seasonal application rates) using ground equipment. Apparent residues of malathion and malaoxon were below the limit of quantitation (<0.05 ppm each) in/on 10 samples of untreated walnuts.

walnut/pe	Parent	oxon	22x	Total
	0.025	0.025	0.55	0.575

Attachment 4: Acute (Food Alone) Input File

```
Filename:
C:\Users\spiper\Documents\DEEM_version316\Malathion_2014\Malathion_Mosquitocide_FoodOnly_re
vised.R08
Chemical: Malathion
RfD(Chronic): 0 mg/kg bw/day  NOEL(Chronic): 0 mg/kg bw/day
RfD(Acute): .01 mg/kg bw/day  NOEL(Acute):  10 mg/kg bw/day
Date created/last modified: 10-27-2015/09:52:11        Program ver. 3.16, 03-08-d
Comment: Malathion Acute Endpoints with 10x for EPI
--------------------------------------------------------------------------------
RDL indices and parameters for Monte Carlo Analysis:
Index Dist Parameter #1        Param #2  Param #3  Comment
  #   Code
----- ---- ------------        --------  --------  -------
   1   6    Beet_garden.rdf
   2   6    Carrot.rdf
   3   6    Potato_wPeel_Uncooked.rdf
   4   6    Potato_wopeel_Frozen_Baked.rdf
   5   6    Potato_Sweet.rdf
   6   6    Potato_Sweet_BF.rdf
   7   6    Onion_Bulb.rdf
   8   6    Onion_Green.rdf
   9   6    Spinach_Fresh.rdf
  10   6    Spinach_Frozen.rdf
  11   6    Spinach_Canned.rdf
  12   6    Celery.rdf
  13   6    Broccoli.rdf
  14   6    Cabbage.rdf
  15   6    Cauliflower.rdf
  16   6    Collards.rdf
  17   6    Kale.rdf
  18   6    Soybean_Grain.rdf
  19   6    Bean_Green_Fresh.rdf
  20   6    Bean_Green_Frozen.rdf
  21   6    Bean_Green_Canned.rdf
  22   6    Bean_Green_BF.rdf
  23   6    Pea_Snap.rdf
  24   6    Pea_Sweet_Frozen.rdf
  25   6    Pea_Sweet_Canned.rdf
  26   6    Eggplant.rdf
  27   6    Pepper_Bell.rdf
  28   6    Pepper_Nonbell.rdf
  29   6    Tomato_Cherry.rdf
  30   6    Tomato_Fresh.rdf
  31   6    Tomato_Paste.rdf
  32   6    Tomato_Canned.rdf
  33   6    Cantaloupe.rdf
  34   6    Watermelon.rdf
  35   6    Cucumber.rdf
  36   6    Squash_Summer.rdf
  37   6    Squash_Winter_Fresh.rdf
  38   6    Squash_Winter_Frozen.rdf
  39   6    Grapefruit.rdf
  40   6    Orange.rdf
  41   6    Orange_Juice.rdf
  42   6    Tangerine.rdf
  43   6    Apple_Fresh.rdf
  44   6    Apple_Juice.rdf
  45   6    Apple_Sauce.rdf
  46   6    Pear.rdf
  47   6    Pear_Canned.rdf
  48   6    Pear_BF.rdf
  49   6    Pear_Juice.rdf
  50   6    Cherry.rdf
  51   6    Nectarine.rdf
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52   6   Peach_Fresh.rdf
53   6   Peach_Canned.rdf
54   6   Plum.rdf
55   6   Plum_Prune.rdf
56   6   Blueberry_Fresh.rdf
57   6   Almond.rdf
58   6   Barley_Grain.rdf
59   6   Corn_Grain.rdf
60   6   Corn_Syrup.rdf
61   6   Corn_Sweet_Fresh.rdf
62   6   Corn_Sweet_Frozen_Cooked.rdf
63   6   Corn_Sweet_Canned.rdf
64   6   Oat_Grain.rdf
65   6   Rice_White.rdf
66   6   Wheat_Grain.rdf
67   6   Wheat_Flour.rdf
68   6   Cilantro_Fresh.rdf
69   6   Beef_Meat.rdf
70   6   Beef_Fat.rdf
71   6   Beef_Liver.rdf
72   6   Pork_Meat.rdf
73   6   Pork_Fat.rdf
74   6   Milk.rdf
75   6   Chicken_Meat.rdf
76   6   Chicken_Liver.rdf
77   6   Egg.rdf
78   6   Catfish.rdf
79   6   Asparagus.rdf
80   6   Asparagus_Canned.rdf
81   6   Banana.rdf
82   6   Cranberry.rdf
83   6   Grape_Fresh.rdf
84   6   Grape_Juice.rdf
85   6   Grape_Raisin.rdf
86   6   Honey.rdf
87   6   Mango.rdf
88   6   Mushroom.rdf
89   6   Papaya.rdf
90   6   PeanutButter.rdf
91   6   Pineapple.rdf
92   6   Strawberry_Fresh.rdf
93   6   Strawberry_Frozen.rdf
94   6   Milk_CreamButter.rdf
95   6   Lettuce_Fresh_Head.rdf
96   6   Lettuce_Fresh_Leaf.rdf
97   6   Broccoli100.rdf
98   6   Celery100.rdf
99   6   Spinach_Fresh100.rdf
100  6   Caneberry.rdf
101  6   BrusselSprout.rdf
102  6   Avocado.rdf
103  6   Pumpkin.rdf
104  6   Lemon.rdf
105  6   Lemon_Juice.rdf
106  6   ChestnutFT.rdf
107  6   Tangerine_Juice.rdf
108  6   DateFT.rdf
109  6   GuavatFT.rdf
110  6   FigFT.rdf
111  6   MacadamianutFT.rdf
112  6   Apricot_Canned.rdf
113  6   OkraFT.rdf
114  6   PassionfruitFT.rdf
115  6   WalnutFT.rdf
116  6   PecanFT.rdf
117  6   Grapefruit_Juice.rdf
```

118   6   Apricot.rdf

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj.Factors #1	Adj.Factors #2	RDL Pntr	Comment
0101050000	1AB	Beet, garden, roots	1.000000	1.000	1.000	1	Beet_g
		Full comment: Beet_garden.rdf					
0101050001	1AB	Beet, garden, roots-babyfood	1.000000	1.000	1.000	1	Beet_g
		Full comment: Beet_garden.rdf					
0101052000	1A	Beet, sugar	0.004500	1.000	1.000		Beet_g
		Full comment: Beet_garden.rdf					
0101052001	1A	Beet, sugar-babyfood	0.004500	1.000	1.000		Beet_g
		Full comment: Beet_garden.rdf					
0101053000	1A	Beet, sugar, molasses	0.004500	1.000	1.000		Beet_g
		Full comment: Beet_garden.rdf					
0101053001	1A	Beet, sugar, molasses-babyfood	0.004500	1.000	1.000		Beet_g
		Full comment: Beet_garden.rdf					
0101067000	1AB	Burdock	0.002300	1.000	1.000		Potato
0101078000	1AB	Carrot	1.000000	1.000	1.000	2	Carrot
		Full comment: Carrot.rdf					
0101078001	1AB	Carrot-babyfood	1.000000	1.000	1.000	2	Carrot
		Full comment: Carrot.rdf					
0101079000	1AB	Carrot, juice	1.000000	1.000	1.000	2	Carrot
		Full comment: Carrot.rdf					
0101084000	1AB	Celeriac	0.004500	1.000	1.000		Garden
		Full comment: Garden beet					
0101100000	1AB	Chicory, roots	0.002000	1.000	1.000		Carrot
0101168000	1AB	Ginseng, dried	0.002000	1.000	1.000		Carrot
0101190000	1AB	Horseradish	0.002000	1.000	1.000		Carrot
0101250000	1AB	Parsley, turnip rooted	0.002000	1.000	1.000		Carrot
0101251000	1AB	Parsnip	0.002000	1.000	1.000		Carrot
0101251001	1AB	Parsnip-babyfood	0.002000	1.000	1.000		Carrot
0101314000	1AB	Radish, roots	0.004500	1.000	1.000		Beet_g
		Full comment: Beet_garden.rdf					
0101316000	1AB	Radish, Oriental, roots	0.004500	1.000	1.000		Beet_g
		Full comment: Beet_garden.rdf					
0101327000	1AB	Rutabaga	0.004500	1.000	1.000		Beet_g
		Full comment: Beet_garden.rdf					
0101331000	1AB	Salsify, roots	0.002000	1.000	1.000		Carrot
0101388000	1AB	Turnip, roots	0.004500	1.000	1.000		Beet_g
		Full comment: Beet_garden.rdf					
0103015000	1CD	Arrowroot, flour	0.002300	1.000	1.000		Potato
0103015001	1CD	Arrowroot, flour-babyfood	0.002300	1.000	1.000		Potato
0103017000	1CD	Artichoke, Jerusalem	0.002300	1.000	1.000		Potato
0103082000	1CD	Cassava	0.002300	1.000	1.000		Potato
0103082001	1CD	Cassava-babyfood	0.002300	1.000	1.000		Potato
0103139000	1CD	Dasheen, corm	0.002300	1.000	1.000		Potato
0103166000	1CD	Ginger	0.002300	1.000	1.000		Potato
0103166001	1CD	Ginger-babyfood	0.002300	1.000	1.000		Potato
0103167000	1CD	Ginger, dried	0.002300	1.000	1.000		Potato
0103296000	1C	Potato, chips	0.002300	1.000	1.000		Potato
		Full comment: Potato_woPeel_Uncooked.rdf					
0103297000	1C	Potato, dry (granules/ flakes)					
		211-Cooked; Fresh or N/S; Baked	0.002300	6.250	1.000		Potato
		Full comment: Potato_woPeel_Uncooked.rdf					
		212-Cooked; Fresh or N/S; Boiled	0.002300	6.250	1.000		Potato
		Full comment: Potato_woPeel_Uncooked.rdf					
		213-Cooked; Fresh or N/S; Fried	0.002300	6.250	1.000		Potato
		Full comment: Potato_woPeel_Uncooked.rdf					
		221-Cooked; Frozen; Baked	0.002300	6.250	1.000		Potato
		Full comment: Potato_woPeel_Uncooked.rdf					
		230-Cooked; Dried; Cook Meth N/S	0.002300	6.250	1.000		Potato

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                    Full comment: Potato_woPeel_Uncooked.rdf
                          232-Cooked; Dried; Boiled      0.002300   6.250  1.000           Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
0103297001 1C       Potato, dry (granules/ flakes)-b    0.002300   6.250  1.000           Potato
        Full comment: Potato_woPeel_Uncooked.rdf
0103298000 1C       Potato, flour                       0.002300   1.000  1.000
0103298001 1C       Potato, flour-babyfood              0.002300   1.000  1.000
0103299000 1C       Potato, tuber, w/peel
                          110-Uncooked; Fresh or N/S; Cook Meth N/S
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          210-Cooked; Fresh or N/S; Cook Meth N/S
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          211-Cooked; Fresh or N/S; Baked
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          212-Cooked; Fresh or N/S; Boiled
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          213-Cooked; Fresh or N/S; Fried
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
0103299001 1C       Potato, tuber, w/peel-babyfood      1.000000   1.000  1.000     3     Potato
        Full comment: Potato_woPeel_Uncooked.rdf
0103300000 1C       Potato, tuber, w/o peel
                          110-Uncooked; Fresh or N/S; Cook Meth N/S
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          210-Cooked; Fresh or N/S; Cook Meth N/S
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          211-Cooked; Fresh or N/S; Baked
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          212-Cooked; Fresh or N/S; Boiled
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          213-Cooked; Fresh or N/S; Fried
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          221-Cooked; Frozen; Baked      1.000000   1.000  1.000     4     Potato
                    Full comment: Potato_woPeelfrozen_Uncooked.rdf
                          223-Cooked; Frozen; Fried      1.000000   1.000  1.000     4     Potato
                    Full comment: Potato_woPeelfrozen_Uncooked.rdf
                          232-Cooked; Dried; Boiled      1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          233-Cooked; Dried; Fried       1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          240-Cooked; Canned; Cook Meth N/S
                                                        1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          242-Cooked; Canned; Boiled     1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
                          252-Cooked; Cured etc; Boiled  1.000000   1.000  1.000     3     Potato
                    Full comment: Potato_woPeel_Uncooked.rdf
0103300001 1C       Potato, tuber, w/o peel-babyfood    1.000000   1.000  1.000     3     Potato
        Full comment: Potato_woPeel_Uncooked.rdf
0103366000 1CD      Sweet potato
                          210-Cooked; Fresh or N/S; Cook Meth N/S
                                                        1.000000   1.000  1.000     5     Potato
                    Full comment: Potato_Sweet.rdf
                          211-Cooked; Fresh or N/S; Baked
                                                        1.000000   1.000  1.000     5     Potato
                    Full comment: Potato_Sweet.rdf
                          212-Cooked; Fresh or N/S; Boiled
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                                        1.000000  1.000  1.000    5  Potato
            Full comment: Potato_Sweet.rdf
                   213-Cooked; Fresh or N/S; Fried
                                        1.000000  1.000  1.000    5  Potato
            Full comment: Potato_Sweet.rdf
                   215-Cooked; Fresh or N/S; Boiled/baked
                                        1.000000  1.000  1.000    5  Potato
            Full comment: Potato_Sweet.rdf
                   240-Cooked; Canned; Cook Meth N/S
                                        1.000000  1.000  1.000    5  Potato
            Full comment: Potato_Sweet.rdf
                   242-Cooked; Canned; Boiled   1.000000  1.000  1.000    5  Potato
            Full comment: Potato_Sweet.rdf
0103366001 1CD  Sweet potato-babyfood
                   211-Cooked; Fresh or N/S; Baked
                                        1.000000  1.000  1.000    6  Potato
            Full comment: Potato_Sweet_BF.rdf
                   240-Cooked; Canned; Cook Meth N/S
                                        1.000000  1.000  1.000    6  Potato
            Full comment: Potato_Sweet_BF.rdf
0103371000 1CD  Tanier, corm             0.005600  1.000  1.000       Sweet
     Full comment: Sweet potato
0103387000 1CD  Turmeric                 0.002300  1.000  1.000       Potato
0103406000 1CD  Yam, true                1.000000  1.000  1.000    5  potato
     Full comment: potato_sweet.rdf
0103407000 1CD  Yam bean                 1.000000  1.000  1.000    5  potato
     Full comment: potato_sweet.rdf
0200051000 2    Beet, garden, tops       1.000000  1.000  1.000    1  garden
     Full comment: gardenbeet_tops
0200101000 2    Chicory, tops            1.000000  1.000  1.000    1  garden
     Full comment: gardenbeet_tops
0200140000 2    Dasheen, leaves          1.000000  1.000  1.000    1  garden
     Full comment: gardenbeet_tops
0200315000 2    Radish, tops             1.000000  1.000  1.000    1  garden
     Full comment: gardenbeet_tops
0200317000 2    Radish, Oriental, tops   1.000000  1.000  1.000    1  garden
     Full comment: gardenbeet_tops
0200332000 2    Salsify, tops            1.000000  1.000  1.000    1  garden
     Full comment: gardenbeet_tops
0301165000 3A   Garlic, bulb             1.000000  1.000  1.000    7  Onion_
     Full comment: Onion_Bulb.rdf
0301165001 3A   Garlic, bulb-babyfood    1.000000  1.000  1.000    7  Onion_
     Full comment: Onion_Bulb.rdf
0301237000 3A   Onion, bulb              1.000000  1.000  1.000    7  Onion_
     Full comment: Onion_Bulb.rdf
0301237001 3A   Onion, bulb-babyfood     1.000000  1.000  1.000    7  Onion_
     Full comment: Onion_Bulb.rdf
0301238000 3A   Onion, bulb, dried       0.003600  9.000  1.000       Onion_
     Full comment: Onion_Bulb.rdf
0301238001 3A   Onion, bulb, dried-babyfood  0.003600  9.000  1.000       Onion_
     Full comment: Onion_Bulb.rdf
0301338000 3A   Shallot, bulb            1.000000  1.000  1.000    7  Onion_
     Full comment: Onion_Bulb.rdf
0302103000 3B   Chive, fresh leaves      1.000000  1.000  1.000    8  Onion_
     Full comment: Onion_Green.rdf
0302198000 3B   Leek                     1.000000  1.000  1.000    8  Onion_
     Full comment: Onion_Green.rdf
0302239000 3B   Onion, green             1.000000  1.000  1.000    8  Onion_
     Full comment: Onion_Green.rdf
0302338500 3B   Shallot, fresh leaves    1.000000  1.000  1.000    7  Onion_
     Full comment: Onion_Bulb.rdf
0401005000 4A   Amaranth, leafy          1.000000  1.000  1.000   99  spinac
     Full comment: spinach100.rdf
0401018000 4A   Arugula                  1.000000  1.000  1.000   99  spinac
     Full comment: spinach100.rdf
0401104000 4A   Chrysanthemum, garland   1.000000  1.000  1.000   99  spinac
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        Full comment: spinach100.rdf
0401133000 4A   Cress, garden                   1.000000  1.000  1.000  99  spinac
        Full comment: spinach100.rdf
0401134000 4A   Cress, upland                   1.000000  1.000  1.000  99  spinac
        Full comment: spinach100.rdf
0401138000 4A   Dandelion, leaves               1.000000  1.000  1.000  99  spinac
        Full comment: spinach100.rdf
0401150000 4A   Endive                          1.000000  1.000  1.000  99  spinac
        Full comment: spinach100.rdf
0401204000 4A   Lettuce, head                   1.000000  1.000  1.000  95  Lettuc
        Full comment: Lettuce_Head_Fresh.rdf
0401205000 4A   Lettuce, leaf                   1.000000  1.000  1.000  96  Lettuc
        Full comment: Lettuce_Leaf_Fresh.rdf
0401248000 4A   Parsley, leaves                 1.000000  1.000  1.000  99  spinac
        Full comment: spinach100.rdf
0401313000 4A   Radicchio                       0.002000  1.000  1.000      Lettuc
        Full comment: Lettuce Head
0401355000 4A   Spinach
                110-Uncooked; Fresh or N/S; Cook Meth N/S
                                                1.000000  1.000  1.000   9  Spinac
        Full comment: Spinach_Fresh.rdf
                210-Cooked; Fresh or N/S; Cook Meth N/S
                                                1.000000  1.000  1.000   9  Spinac
        Full comment: Spinach_Fresh.rdf
                211-Cooked; Fresh or N/S; Baked
                                                1.000000  1.000  1.000   9  Spinac
        Full comment: Spinach_Fresh.rdf
                212-Cooked; Fresh or N/S; Boiled
                                                1.000000  1.000  1.000   9  Spinac
        Full comment: Spinach_Fresh.rdf
                213-Cooked; Fresh or N/S; Fried
                                                1.000000  1.000  1.000   9  Spinac
        Full comment: Spinach_Fresh.rdf
                215-Cooked; Fresh or N/S; Boiled/baked
                                                1.000000  1.000  1.000   9  Spinac
        Full comment: Spinach_Fresh.rdf
                220-Cooked; Frozen; Cook Meth N/S
                                                1.000000  1.000  1.000  10  Spinac
        Full comment: Spinach_Frozen.rdf
                221-Cooked; Frozen; Baked       1.000000  1.000  1.000  10  Spinac
        Full comment: Spinach_Frozen.rdf
                222-Cooked; Frozen; Boiled      1.000000  1.000  1.000  10  Spinac
        Full comment: Spinach_Frozen.rdf
                232-Cooked; Dried; Boiled       1.000000  1.000  1.000  11  Spinac
        Full comment: Spinach_Canned.rdf
                240-Cooked; Canned; Cook Meth N/S
                                                1.000000  1.000  1.000  11  Spinac
        Full comment: Spinach_Canned.rdf
                242-Cooked; Canned; Boiled      1.000000  1.000  1.000  11  Spinac
        Full comment: Spinach_Canned.rdf
0401355001 4A   Spinach-babyfood                1.000000  1.000  1.000  11  Spinac
        Full comment: Spinach_Canned.rdf
0402076000 4B   Cardoon                         1.000000  1.000  1.000  98  celery
        Full comment: celery100.rdf
0402085000 4B   Celery                          1.000000  1.000  1.000  12  Celery
        Full comment: Celery.rdf
0402085001 4B   Celery-babyfood                 1.000000  1.000  1.000  12  Celery
        Full comment: Celery.rdf
0402086000 4B   Celery, juice                   1.000000  1.000  1.000  12  Celery
        Full comment: Celery.rdf
0402087000 4B   Celtuce                         1.000000  1.000  1.000  98  celery
        Full comment: celery100.rdf
0402152000 4B   Fennel, Florence                1.000000  1.000  1.000  98  celery
        Full comment: celery100.rdf
0402322000 4B   Rhubarb                         1.000000  1.000  1.000  98  celery
        Full comment: celery100.rdf
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0402367000 4B   Swiss chard               1.000000  1.000  1.000   98  celery
     Full comment: celery100.rdf
0501061000 5A   Broccoli                  1.000000  1.000  1.000   13  Brocco
     Full comment: Broccoli.rdf
0501061001 5A   Broccoli-babyfood         1.000000  1.000  1.000   13  Brocco
     Full comment: Broccoli.rdf
0501062000 5A   Broccoli, Chinese         1.000000  1.000  1.000   97  brocco
     Full comment: broccoli100.rdf
0501064000 5A   Brussels sprouts          1.000000  1.000  1.000  101  cabbag
     Full comment: cabbage
0501069000 5A   Cabbage                   1.000000  1.000  1.000   14  Cabbag
     Full comment: Cabbage.rdf
0501071000 5A   Cabbage, Chinese, napa    0.060500  1.000  1.000       cabbag
     Full comment: cabbage
0501072000 5A   Cabbage, Chinese, mustard 1.000000  1.000  1.000   97  brocco
     Full comment: broccoli100.rdf
0501083000 5A   Cauliflower               1.000000  1.000  1.000   15  Caulif
     Full comment: Cauliflower.rdf
0501196000 5A   Kohlrabi                  0.060500  1.000  1.000       cabbag
     Full comment: cabbage
0502063000 5B   Broccoli raab             1.000000  1.000  1.000   17  kale.r
     Full comment: kale.rdf
0502070000 5B   Cabbage, Chinese, bok choy 1.000000 1.000  1.000   17  kale.r
     Full comment: kale.rdf
0502117000 5B   Collards                  1.000000  1.000  1.000   16  Collar
     Full comment: Collards.rdf
0502194000 5B   Kale                      1.000000  1.000  1.000   17  Kale.r
     Full comment: Kale.rdf
0502229000 5B   Mustard greens            1.000000  1.000  1.000   17  Kale.r
     Full comment: Kale.rdf
0502318000 5B   Rape greens               1.000000  1.000  1.000   17  Kale.r
     Full comment: Kale.rdf
0502389000 5B   Turnip, greens            1.000000  1.000  1.000   17  Kale.r
     Full comment: Kale.rdf
0600347000 6    Soybean, seed             1.000000  1.000  1.000   18  Soybea
     Full comment: Soybean.rdf
0600349000 6    Soybean, soy milk         1.000000  1.000  1.000   18  Soybea
     Full comment: Soybean.rdf
0600349001 6    Soybean, soy milk-babyfood or in  1.000000  1.000  1.000  18  Soybea
     Full comment: Soybean.rdf
0600350000 6    Soybean, oil              1.000000  1.000  1.000   18  Soybea
     Full comment: Soybean.rdf
0600350001 6    Soybean, oil-babyfood     1.000000  1.000  1.000   18  Soybea
     Full comment: Soybean.rdf
0601043000 6A   Bean, snap, succulent
          110-Uncooked; Fresh or N/S; Cook Meth N/S
                                          1.000000  1.000  1.000   19  Bean_G
          Full comment: Bean_Green_Fresh.rdf
              210-Cooked; Fresh or N/S; Cook Meth N/S
                                          1.000000  1.000  1.000   19  Bean_G
          Full comment: Bean_Green_Fresh.rdf
                211-Cooked; Fresh or N/S; Baked
                                          1.000000  1.000  1.000   19  Bean_G
          Full comment: Bean_Green_Fresh.rdf
                212-Cooked; Fresh or N/S; Boiled
                                          1.000000  1.000  1.000   19  Bean_G
          Full comment: Bean_Green_Fresh.rdf
                213-Cooked; Fresh or N/S; Fried
                                          1.000000  1.000  1.000   19  Bean_G
          Full comment: Bean_Green_Fresh.rdf
                215-Cooked; Fresh or N/S; Boiled/baked
                                          1.000000  1.000  1.000   19  Bean_G
          Full comment: Bean_Green_Fresh.rdf
                220-Cooked; Frozen; Cook Meth N/S
                                          1.000000  1.000  1.000   20  Bean_G
          Full comment: Bean_Green_Frozen.rdf
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                  221-Cooked; Frozen; Baked       1.000000  1.000  1.000  20  Bean_G
           Full comment: Bean_Green_Frozen.rdf
                  222-Cooked; Frozen; Boiled      1.000000  1.000  1.000  20  Bean_G
           Full comment: Bean_Green_Frozen.rdf
                  232-Cooked; Dried; Boiled       1.000000  1.000  1.000  19  Bean_G
           Full comment: Bean_Green_Fresh.rdf
                  240-Cooked; Canned; Cook Meth N/S
                                                  1.000000  1.000  1.000  21  Bean_G
           Full comment: Bean_Green_Canned.rdf
                  242-Cooked; Canned; Boiled      1.000000  1.000  1.000  21  Bean_G
           Full comment: Bean_Green_Canned.rdf
0601043001 6A  Bean, snap, succulent-babyfood    1.000000  1.000  1.000  22  Bean_G
      Full comment: Bean_Green_BF.rdf
0601257000 6A  Pea, edible podded, succulent      1.000000  1.000  1.000  23  Pea_Sn
      Full comment: Pea_Snap.rdf
0601349500 6AB Soybean, vegetable                 1.000000  1.000  1.000  18  Soybea
      Full comment: Soybean.rdf
0602031000 6B  Bean, broad, succulent             1.000000  1.000  1.000  19  Bean_G
      Full comment: Bean_Green_Fresh.rdf
0602033000 6B  Bean, cowpea, succulent            1.000000  1.000  1.000  23  Pea_Sn
      Full comment: Pea_Snap.rdf
0602037000 6B  Bean, lima, succulent
                  210-Cooked; Fresh or N/S; Cook Meth N/S
                                                  1.000000  1.000  1.000  19  Bean_G
           Full comment: Bean_Green_Fresh.rdf
                  212-Cooked; Fresh or N/S; Boiled
                                                  1.000000  1.000  1.000  19  Bean_G
           Full comment: Bean_Green_Fresh.rdf
                  213-Cooked; Fresh or N/S; Fried
                                                  1.000000  1.000  1.000  19  Bean_G
           Full comment: Bean_Green_Fresh.rdf
                  220-Cooked; Frozen; Cook Meth N/S
                                                  1.000000  1.000  1.000  19  Bean_G
           Full comment: Bean_Green_Fresh.rdf
                  221-Cooked; Frozen; Baked       1.000000  1.000  1.000  20  Bean_G
           Full comment: Bean_Green_Frozen.rdf
                  222-Cooked; Frozen; Boiled      1.000000  1.000  1.000  20  Bean_G
           Full comment: Bean_Green_Frozen.rdf
                  240-Cooked; Canned; Cook Meth N/S
                                                  1.000000  1.000  1.000  21  Bean_G
           Full comment: Bean_Green_Canned.rdf
                  242-Cooked; Canned; Boiled      1.000000  1.000  1.000  21  Bean_G
           Full comment: Bean_Green_Canned.rdf
0602255000 6B  Pea, succulent
                  110-Uncooked; Fresh or N/S; Cook Meth N/S
                                                  1.000000  1.000  1.000  23  Pea_Sn
           Full comment: Pea_Snap.rdf
                  210-Cooked; Fresh or N/S; Cook Meth N/S
                                                  1.000000  1.000  1.000  23  Pea_Sn
           Full comment: Pea_Snap.rdf
                  211-Cooked; Fresh or N/S; Baked
                                                  1.000000  1.000  1.000  23  Pea_Sn
           Full comment: Pea_Snap.rdf
                  212-Cooked; Fresh or N/S; Boiled
                                                  1.000000  1.000  1.000  23  Pea_Sn
           Full comment: Pea_Snap.rdf
                  213-Cooked; Fresh or N/S; Fried
                                                  1.000000  1.000  1.000  23  Pea_Sn
           Full comment: Pea_Snap.rdf
                  221-Cooked; Frozen; Baked       1.000000  1.000  1.000  24  Pea_Sw
           Full comment: Pea_Sweet_Frozen.rdf
                  222-Cooked; Frozen; Boiled      1.000000  1.000  1.000  24  Pea_Sw
           Full comment: Pea_Sweet_Frozen.rdf
                  232-Cooked; Dried; Boiled       1.000000  1.000  1.000  24  Pea_Sw
           Full comment: Pea_Sweet_Frozen.rdf
                  240-Cooked; Canned; Cook Meth N/S
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	1.000000	1.000	1.000	25	Pea_Sw

Full comment: Pea_Sweet_Canned.rdf
242-Cooked; Canned; Boiled

| | 1.000000 | 1.000 | 1.000 | 25 | Pea_Sw |

Full comment: Pea_Sweet_Canned.rdf

0602255001 6B   Pea, succulent-babyfood   1.000000 1.000 1.000 25 Pea_Sw
  Full comment: Pea_Sweet_Canned.rdf
0602259000 6B   Pea, pigeon, succulent   1.000000 1.000 1.000 25 Pea_Sw
  Full comment: Pea_Sweet_Canned.rdf
0603030000 6C   Bean, black, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603032000 6C   Bean, broad, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603034000 6C   Bean, cowpea, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603035000 6C   Bean, great northern, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603036000 6C   Bean, kidney, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603038000 6C   Bean, lima, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603039000 6C   Bean, mung, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603040000 6C   Bean, navy, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603041000 6C   Bean, pink, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603042000 6C   Bean, pinto, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603098000 6C   Chickpea, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603098001 6C   Chickpea, seed-babyfood   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603099000 6C   Chickpea, flour   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603182000 6C   Guar, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603182001 6C   Guar, seed-babyfood   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603203000 6C   Lentil, seed   0.002000 1.000 1.000   Black
  Full comment: Black Bean
0603256000 6C   Pea, dry   0.003200 1.000 1.000   pea dr
  Full comment: pea dry bean
0603256001 6C   Pea, dry-babyfood   0.003200 1.000 1.000   pea dr
  Full comment: pea dry bean
0603258000 6C   Pea, pigeon, seed   0.003200 1.000 1.000   pea dr
  Full comment: pea dry bean
0603348000 6C   Soybean, flour   1.000000 1.000 1.000 18 Soybea
  Full comment: Soybean.rdf
0603348001 6C   Soybean, flour-babyfood   1.000000 1.000 1.000 18 Soybea
  Full comment: Soybean.rdf
0801374000 8A   Tomatillo   1.000000 1.000 1.000 29 Tomato
  Full comment: Tomato cherry. rdf
0801375000 8A   Tomato
                110-Uncooked; Fresh or N/S; Cook Meth N/S
                                                       1.000000 1.000 1.000 30 Tomato
  Full comment: Tomato_Fresh.rdf
                150-Uncooked; Cured etc; Cook Meth N/S
                                                       1.000000 1.000 1.000 30 Tomato
  Full comment: Tomato_Fresh.rdf
                210-Cooked; Fresh or N/S; Cook Meth N/S
                                                       1.000000 1.000 1.000 30 Tomato
  Full comment: Tomato_Fresh.rdf
                211-Cooked; Fresh or N/S; Baked
                                                       1.000000 1.000 1.000 30 Tomato
  Full comment: Tomato_Fresh.rdf
                212-Cooked; Fresh or N/S; Boiled

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                                              1.000000  1.000  1.000  32  Tomato
        Full comment: Tomato_Canned.rdf
              213-Cooked; Fresh or N/S; Fried
                                              1.000000  1.000  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              214-Cooked; Fresh or N/S; Fried/baked
                                              1.000000  1.000  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              215-Cooked; Fresh or N/S; Boiled/baked
                                              1.000000  1.000  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              221-Cooked; Frozen; Baked       1.000000  1.000  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              222-Cooked; Frozen; Boiled      1.000000  1.000  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              232-Cooked; Dried; Boiled       0.010000  1.000  1.000
              240-Cooked; Canned; Cook Meth N/S
                                              1.000000  1.000  1.000  32  Tomato
        Full comment: Tomato_Canned.rdf
              242-Cooked; Canned; Boiled      1.000000  1.000  1.000  32  Tomato
        Full comment: Tomato_Canned.rdf
              252-Cooked; Cured etc; Boiled   1.000000  1.000  1.000  32  Tomato
        Full comment: Tomato_Canned.rdf
0801375001 8A   Tomato-babyfood              1.000000  1.000  1.000  32  Tomato
    Full comment: Tomato_Canned.rdf
0801376000 8A   Tomato, paste               1.000000  1.000  1.000  31  Tomato
    Full comment: Tomato_Paste.rdf
0801376001 8A   Tomato, paste-babyfood      1.000000  1.000  1.000  31  Tomato
    Full comment: Tomato_Paste.rdf
0801377000 8A   Tomato, puree
              110-Uncooked; Fresh or N/S; Cook Meth N/S
                                              1.000000  3.300  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              210-Cooked; Fresh or N/S; Cook Meth N/S
                                              1.000000  3.300  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              211-Cooked; Fresh or N/S; Baked
                                              1.000000  3.300  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              212-Cooked; Fresh or N/S; Boiled
                                              1.000000  3.300  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              213-Cooked; Fresh or N/S; Fried
                                              1.000000  3.300  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              215-Cooked; Fresh or N/S; Boiled/baked
                                              1.000000  3.300  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              221-Cooked; Frozen; Baked       1.000000  3.300  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              232-Cooked; Dried; Boiled       1.000000  3.300  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
              240-Cooked; Canned; Cook Meth N/S
                                              1.000000  3.300  1.000  32  Tomato
        Full comment: Tomato_Canned.rdf
              241-Cooked; Canned; Baked       1.000000  3.300  1.000  32  Tomato
        Full comment: Tomato_Canned.rdf
              242-Cooked; Canned; Boiled      1.000000  3.300  1.000  32  Tomato
        Full comment: Tomato_Canned.rdf
              252-Cooked; Cured etc; Boiled   1.000000  3.300  1.000  30  Tomato
        Full comment: Tomato_Fresh.rdf
0801377001 8A   Tomato, puree-babyfood       1.000000  3.300  1.000  30  Tomato
    Full comment: Tomato_Fresh.rdf
0801378000 8A   Tomato, dried
              130-Uncooked; Dried; Cook Meth N/S
                                              0.010000 14.300  1.000      tomato
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                  Full comment: tomato_dried
                        211-Cooked; Fresh or N/S; Baked
                                                 0.010000 14.300  1.000           tomato
                  Full comment: tomato_dried
                        212-Cooked; Fresh or N/S; Boiled
                                                 0.010000 14.300  1.000           tomato
                  Full comment: tomato_dried
                        230-Cooked; Dried; Cook Meth N/S
                                                 0.010000 14.300  1.000           tomato
                  Full comment: tomato_dried
                        231-Cooked; Dried; Baked 0.010000 14.300  1.000           tomato
                  Full comment: tomato_dried
                        232-Cooked; Dried; Boiled 0.010000 14.300  1.000          tomato
                  Full comment: tomato_dried
0801378001 8A    Tomato, dried-babyfood          0.010000 14.300  1.000           tomato
       Full comment: tomato_dried
0801379000 8A    Tomato, juice
                        110-Uncooked; Fresh or N/S; Cook Meth N/S
                                                 1.000000  1.500  1.000    30   Tomato
                  Full comment: Tomato_Fresh.rdf
                        210-Cooked; Fresh or N/S; Cook Meth N/S
                                                 1.000000  1.500  1.000    30   Tomato
                  Full comment: Tomato_Fresh.rdf
                        211-Cooked; Fresh or N/S; Baked
                                                 1.000000  1.500  1.000    30   Tomato
                  Full comment: Tomato_Fresh.rdf
                        212-Cooked; Fresh or N/S; Boiled
                                                 1.000000  1.500  1.000    30   Tomato
                  Full comment: Tomato_Fresh.rdf
                        240-Cooked; Canned; Cook Meth N/S
                                                 1.000000  1.500  1.000    32   Tomato
                  Full comment: Tomato_Canned.rdf
                        242-Cooked; Canned; Boiled 1.000000 1.500  1.000    32   Tomato
                  Full comment: Tomato_Canned.rdf
0801380000 8A    Tomato, Tree                    1.000000  1.000  1.000    29   Tomato
       Full comment: Tomato cherry. rdf
0802148000 8BC   Eggplant                        1.000000  1.000  1.000    26   Eggpla
       Full comment: Eggplant.rdf
0802234000 8BC   Okra                            1.000000  1.000  1.000    26   Eggpla
       Full comment: Eggplant.rdf
0802270000 8B    Pepper, bell                    1.000000  1.000  1.000    27   Pepper
       Full comment: Pepper_Bell.rdf
0802270001 8B    Pepper, bell-babyfood           1.000000  1.000  1.000    27   Pepper
       Full comment: Pepper_Bell.rdf
0802271000 8B    Pepper, bell, dried             0.005000  1.000  1.000         Pepper
       Full comment: Pepper_Bell.rdf
0802271001 8B    Pepper, bell, dried-babyfood    0.005000  1.000  1.000         Pepper
       Full comment: Pepper_Bell.rdf
0802272000 8BC   Pepper, nonbell                 1.000000  1.000  1.000    28   Pepper
       Full comment: Pepper_Nonbell.rdf
0802272001 8BC   Pepper, nonbell-babyfood        1.000000  1.000  1.000    28   Pepper
       Full comment: Pepper_Nonbell.rdf
0802273000 8BC   Pepper, nonbell, dried          0.002000  1.000  1.000         Pepper
       Full comment: Pepper_Nonbell.rdf
0901075000 9A    Cantaloupe                      1.000000  1.000  1.000    33   Cantal
       Full comment: Cantaloupe.rdf
0901187000 9A    Honeydew melon                  1.000000  1.000  1.000    33   Cantal
       Full comment: Cantaloupe.rdf
0901399000 9A    Watermelon                      1.000000  1.000  1.000    34   Waterm
       Full comment: Watermelon.rdf
0901400000 9A    Watermelon, juice               1.000000  1.000  1.000    34   Waterm
       Full comment: Watermelon.rdf
0902021000 9B    Balsam pear                     0.002600  1.000  1.000         Cucumb
       Full comment: Cucumber.rdf
0902088000 9B    Chayote, fruit                  0.004800  1.000  1.000         Summer
       Full comment: Summer squash
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0902102000 9B   Chinese waxgourd              0.002600  1.000  1.000       Cucumb
     Full comment: Cucumber
0902135000 9B   Cucumber                      1.000000  1.000  1.000    35 Cucumb
     Full comment: Cucumber.rdf
0902308000 9B   Pumpkin                       1.000000  1.000  1.000   103 pumpki
     Full comment: pumpkin.rdf
0902309000 9B   Pumpkin, seed                 1.000000  1.000  1.000   103 pumpki
     Full comment: pumpkin.rdf
0902356000 9B   Squash, summer                1.000000  1.000  1.000    36 Squash
     Full comment: Squash_Summer.rdf
0902356001 9B   Squash, summer-babyfood       1.000000  1.000  1.000    36 Squash
     Full comment: Squash_Summer.rdf
0902357000 9B   Squash, winter
                210-Cooked; Fresh or N/S; Cook Meth N/S
                                              1.000000  1.000  1.000    37 Squash
          Full comment: Squash_Winter_Fresh.rdf
                211-Cooked; Fresh or N/S; Baked
                                              1.000000  1.000  1.000    37 Squash
          Full comment: Squash_Winter_Fresh.rdf
                212-Cooked; Fresh or N/S; Boiled
                                              1.000000  1.000  1.000    37 Squash
          Full comment: Squash_Winter_Fresh.rdf
                215-Cooked; Fresh or N/S; Boiled/baked
                                              1.000000  1.000  1.000    37 Squash
          Full comment: Squash_Winter_Fresh.rdf
                222-Cooked; Frozen; Boiled    1.000000  1.000  1.000    38 Squash
          Full comment: Squash_Winter_Frozen.rdf
                242-Cooked; Canned; Boiled    1.000000  1.000  1.000    38 Squash
          Full comment: Squash_Winter_Frozen.rdf
0902357001 9B   Squash, winter-babyfood       1.000000  1.000  1.000    38 Squash
     Full comment: Squash_Winter_Frozen.rdf
1001106000 10A  Citron                        0.008900  1.000  1.000       Orange
1001107000 10A  Citrus hybrids                0.008900  1.000  1.000       Orange
1001108000 10A  Citrus, oil                   0.008900  1.000  1.000       Orange
1001240000 10A  Orange                        1.000000  1.000  1.000    40 Orange
     Full comment: Orange.rdf
1001241000 10A  Orange, juice                 1.000000  1.000  1.000    41 Orange
     Full comment: Orange_Juice.rdf
1001241001 10A  Orange, juice-babyfood        1.000000  1.000  1.000    41 Orange
     Full comment: Orange_Juice.rdf
1001242000 10A  Orange, peel                  1.000000  1.000  1.000    40 Orange
     Full comment: Orange.rdf
1001369000 10A  Tangerine                     1.000000  1.000  1.000    42 Tanger
     Full comment: Tangerine.rdf
1001370000 10A  Tangerine, juice              1.000000  1.000  1.000   107 Tanger
     Full comment: Tangerinejuice.rdf
1002197000 10B  Kumquat                       0.008900  1.000  1.000       orange
1002199000 10B  Lemon                         1.000000  1.000  1.000   104 Lemon.
     Full comment: Lemon.rdf
1002200000 10B  Lemon, juice                  1.000000  1.000  1.000   105 Lemon_
     Full comment: Lemon_Juice.rdf
1002200001 10B  Lemon, juice-babyfood         1.000000  1.000  1.000   105 Lemon_
     Full comment: Lemon_Juice.rdf
1002201000 10B  Lemon, peel                   1.000000  1.000  1.000    40 Orange
     Full comment: Orange.rdf
1002206000 10B  Lime                          1.000000  1.000  1.000    40 Orange
     Full comment: Orange.rdf
1002207000 10B  Lime, juice                   1.000000  1.000  1.000    41 Orange
     Full comment: Orange_Juice.rdf
1002207001 10B  Lime, juice-babyfood          1.000000  1.000  1.000    41 Orange
     Full comment: Orange_Juice.rdf
1003180000 10C  Grapefruit                    1.000000  1.000  1.000    39 Grapef
     Full comment: Grapefruit.rdf
1003181000 10C  Grapefruit, juice             1.000000  1.000  1.000   117 Grapef
     Full comment: Grapefruit_juice.rdf
1003307000 10C  Pummelo                       0.008900  1.000  1.000       Orange
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1100007000 11   Apple, fruit with peel         1.000000  1.000  1.000  43  Apple_
   Full comment: Apple_Fresh.rdf
1100008000 11   Apple, peeled fruit            1.000000  1.000  1.000  43  Apple_
   Full comment: Apple_Fresh.rdf
1100008001 11   Apple, peeled fruit-babyfood   1.000000  1.000  1.000  43  Apple_
   Full comment: Apple_Fresh.rdf
1100009000 11   Apple, dried                   0.000100  8.000  1.000      Apple_
   Full comment: Apple_Fresh.rdf
1100009001 11   Apple, dried-babyfood          0.000100  8.000  1.000      Apple_
   Full comment: Apple_Fresh.rdf
1100010000 11   Apple, juice                   1.000000  1.000  1.000  44  Apple_
   Full comment: Apple_Juice.rdf
1100010001 11   Apple, juice-babyfood          1.000000  1.000  1.000  44  Apple_
   Full comment: Apple_Juice.rdf
1100011000 11   Apple, sauce                   1.000000  1.000  1.000  45  Apple_
   Full comment: Apple_Sauce.rdf
1100011001 11   Apple, sauce-babyfood          1.000000  1.000  1.000  45  Apple_
   Full comment: Apple_Sauce.rdf
1100129000 11   Crabapple                      0.003100  1.000  1.000      Apple
1100173500 11   Goji berry                     1.000000  1.000  1.000  29  Tomato
   Full comment: Tomato cherry
1100210000 11   Loquat                         0.002000  1.000  1.000      Pear
1100266000 11   Pear
                110-Uncooked; Fresh or N/S; Cook Meth N/S
                                               1.000000  1.000  1.000  46  Pear.r
         Full comment: Pear.rdf
                210-Cooked; Fresh or N/S; Cook Meth N/S
                                               1.000000  1.000  1.000  46  Pear.r
         Full comment: Pear.rdf
                211-Cooked; Fresh or N/S; Baked
                                               1.000000  1.000  1.000  46  Pear.r
         Full comment: Pear.rdf
                240-Cooked; Canned; Cook Meth N/S
                                               1.000000  1.000  1.000  47  Pear_C
         Full comment: Pear_Canned.rdf
1100266001 11   Pear-babyfood                  1.000000  1.000  1.000  48  Pear_B
   Full comment: Pear_BF.rdf
1100267000 11   Pear, dried                    0.002000  6.250  1.000      Pear.r
   Full comment: Pear.rdf
1100268000 11   Pear, juice                    1.000000  1.000  1.000  47  Pear_J
   Full comment: Pear_Juice.rdf
1100268001 11   Pear, juice-babyfood           1.000000  1.000  1.000  49  Pear_J
   Full comment: Pear_Juice.rdf
1100310000 11   Quince                         0.002000  1.000  1.000      Pear
1201090000 12A  Cherry                         1.000000  1.000  1.000  50  Cherry
   Full comment: Cherry.rdf
1201090001 12A  Cherry-babyfood                1.000000  1.000  1.000  50  Cherry
   Full comment: Cherry.rdf
1201091000 12A  Cherry, juice                  1.000000  1.500  1.000  50  Cherry
   Full comment: Cherry.rdf
1201091001 12A  Cherry, juice-babyfood         1.000000  1.500  1.000  50  Cherry
   Full comment: Cherry.rdf
1202012000 12B  Apricot
                110-Uncooked; Fresh or N/S; Cook Meth N/S
                                               1.000000  1.000  1.000 118  Peach1
         Full comment: Peach100.rdf
                211-Cooked; Fresh or N/S; Baked
                                               1.000000  1.000  1.000 118  Peach1
         Full comment: Peach100.rdf
                220-Cooked; Frozen; Cook Meth N/S
                                               1.000000  1.000  1.000 118  Peach1
         Full comment: Peach100.rdf
                221-Cooked; Frozen; Baked      1.000000  1.000  1.000 118  Peach1
         Full comment: Peach100.rdf
                232-Cooked; Dried; Boiled      1.000000  1.000  1.000 118  Peach1
         Full comment: Peach100.rdf
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                        240-Cooked; Canned; Cook Meth N/S
                                           1.000000   1.000  1.000 112   peach_
                Full comment: peach_canned
1202012001 12B  Apricot-babyfood           1.000000   1.000  1.000 112   Peach_
     Full comment: Peach_Canned
1202013000 12B  Apricot, dried             0.010000   6.000  1.000         Peach1
     Full comment: Peach100.rdf
1202014000 12B  Apricot, juice
                    110-Uncooked; Fresh or N/S; Cook Meth N/S
                                           1.000000   1.000  1.000 118   Peach1
          Full comment: Peach100.rdf
                    120-Uncooked; Frozen; Cook Meth N/S
                                           1.000000   1.000  1.000 118   Peach1
          Full comment: Peach100.rdf
                    130-Uncooked; Dried; Cook Meth N/S
                                           1.000000   1.000  1.000 112   Peach1
          Full comment: Peach100.rdf
                    240-Cooked; Canned; Cook Meth N/S
                                           1.000000   1.000  1.000 112   Peach_
          Full comment: Peach_Canned
1202014001 12B  Apricot, juice-babyfood    1.000000   1.000  1.000 112   Peach_
     Full comment: Peach_Canned
1202230000 12B  Nectarine                  1.000000   1.000  1.000  51   Nectar
     Full comment: Nectarine.rdf
1202260000 12B  Peach
                    110-Uncooked; Fresh or N/S; Cook Meth N/S
                                           1.000000   1.000  1.000  52   Peach_
          Full comment: Peach_Fresh.rdf
                    120-Uncooked; Frozen; Cook Meth N/S
                                           1.000000   1.000  1.000  52   Peach_
          Full comment: Peach_Fresh.rdf
                    130-Uncooked; Dried; Cook Meth N/S
                                           1.000000   1.000  1.000  52   Peach_
          Full comment: Peach_Fresh.rdf
                    210-Cooked; Fresh or N/S; Cook Meth N/S
                                           1.000000   1.000  1.000  52   Peach_
          Full comment: Peach_Fresh.rdf
                    211-Cooked; Fresh or N/S; Baked
                                           1.000000   1.000  1.000  52   Peach_
          Full comment: Peach_Fresh.rdf
                    213-Cooked; Fresh or N/S; Fried
                                           1.000000   1.000  1.000  52   Peach_
          Full comment: Peach_Fresh.rdf
                    223-Cooked; Frozen; Fried  1.000000  1.000  1.000  52   Peach_
          Full comment: Peach_Fresh.rdf
                    230-Cooked; Dried; Cook Meth N/S
                                           1.000000   1.000  1.000  52   Peach_
          Full comment: Peach_Fresh.rdf
                    240-Cooked; Canned; Cook Meth N/S
                                           1.000000   1.000  1.000  53   Peach_
          Full comment: Peach_Canned.rdf
1202260001 12B  Peach-babyfood             1.000000   1.000  1.000  53   Peach_
     Full comment: Peach_Canned.rdf
1202261000 12B  Peach, dried               0.003400   7.000  1.000         Peach_
     Full comment: Peach_Fresh.rdf
1202261001 12B  Peach, dried-babyfood      0.003400   7.000  1.000         Peach_
     Full comment: Peach_Fresh.rdf
1202262000 12B  Peach, juice               1.000000   1.000  1.000  53   Peach_
     Full comment: Peach_Canned.rdf
1202262001 12B  Peach, juice-babyfood      1.000000   1.000  1.000  53   Peach_
     Full comment: Peach_Canned.rdf
1203285000 12C  Plum                       1.000000   1.000  1.000  54   Plum.r
     Full comment: Plum.rdf
1203285001 12C  Plum-babyfood              1.000000   1.000  1.000  54   Plum.r
     Full comment: Plum.rdf
1203286000 12C  Plum, prune, fresh         1.000000   1.000  1.000  54   Plum.r
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                Full comment: Plum.rdf
1203286001 12C  Plum, prune, fresh-babyfood      1.000000  1.000  1.000   54  Plum.r
                Full comment: Plum.rdf
1203287000 12C  Plum, prune, dried               0.002200  5.000  1.000       Plum.r
                Full comment: Plum.rdf
1203287001 12C  Plum, prune, dried-babyfood      0.002200  5.000  1.000       Plum.r
                Full comment: Plum.rdf
1203288000 12C  Plum, prune, juice               1.000000  1.400  1.000   54  Plum.r
                Full comment: Plum.rdf
1203288001 12C  Plum, prune, juice-babyfood      1.000000  1.400  1.000   54  Plum.r
                Full comment: Plum.rdf
1301055000 13A  Blackberry                       1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1301056000 13A  Blackberry, juice                1.000000  1.100  1.000  100  canebe
                Full comment: caneberry.rdf
1301056001 13A  Blackberry, juice-babyfood       1.000000  1.100  1.000  100  canebe
                Full comment: caneberry.rdf
1301058000 13A  Boysenberry                      1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1301208000 13A  Loganberry                       1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1301320000 13A  Raspberry                        1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1301320001 13A  Raspberry-babyfood               1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1301321000 13A  Raspberry, juice                 1.000000  1.100  1.000  100  canebe
                Full comment: caneberry.rdf
1301321001 13A  Raspberry, juice-babyfood        1.000000  1.100  1.000  100  canebe
                Full comment: caneberry.rdf
1302057000 13B  Blueberry                        1.000000  1.000  1.000   56  Bluebe
                Full comment: Blueberry_Fresh.rdf
1302057001 13B  Blueberry-babyfood               1.000000  1.000  1.000   56  Bluebe
                Full comment: Blueberry_Fresh.rdf
1302136000 13B  Currant                          1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1302137000 13B  Currant, dried                   1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1302149000 13B  Elderberry                       1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1302174000 13B  Gooseberry                       1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1302191000 13B  Huckleberry                      1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1303227000 13C  Mulberry                         1.000000  1.000  1.000  100  canebe
                Full comment: caneberry.rdf
1304175000 13D  Grape                            1.000000  1.000  1.000   83  Grape_
                Full comment: Grape_Fresh.rdf
1304176000 13D  Grape, juice                     1.000000  1.000  1.000   84  Grape_
                Full comment: Grape_Juice.rdf
1304176001 13D  Grape, juice-babyfood            1.000000  1.000  1.000   84  Grape_
                Full comment: Grape_Juice.rdf
1304179000 13D  Grape, wine and sherry           1.000000  1.000  1.000   84  Grape_
                Full comment: Grape_Juice.rdf
1304195000 13D  Kiwifruit, fuzzy                 0.003200  1.000  1.000       Grape
1307130000 13G  Cranberry                        1.000000  1.000  1.000   82  Cranbe
                Full comment: Cranberry.rdf
1307130001 13G  Cranberry-babyfood               1.000000  1.000  1.000   82  Cranbe
                Full comment: Cranberry.rdf
1307131000 13G  Cranberry, dried                 1.000000  1.000  1.000   82  Cranbe
                Full comment: Cranberry.rdf
1307132000 13G  Cranberry, juice                 1.000000  1.100  1.000   82  Cranbe
                Full comment: Cranberry.rdf
1307132001 13G  Cranberry, juice-babyfood        1.000000  1.100  1.000   82  Cranbe
                Full comment: Cranberry.rdf
1307359000 13G  Strawberry
                110-Uncooked; Fresh or N/S; Cook Meth N/S
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	1.000000	1.000	1.000	92	Strawb

Full comment: Strawberry_Fresh.rdf
    120-Uncooked; Frozen; Cook Meth N/S

1.000000	1.000	1.000	92	Strawb

Full comment: Strawberry_Fresh.rdf
    211-Cooked; Fresh or N/S; Baked

1.000000	1.000	1.000	92	Strawb

Full comment: Strawberry_Fresh.rdf
    223-Cooked; Frozen; Fried 1.000000 1.000 1.000 93 Strawb
Full comment: Strawberry_Frozen.rdf
    230-Cooked; Dried; Cook Meth N/S

1.000000	1.000	1.000	92	Strawb

Full comment: Strawberry_Fresh.rdf
    240-Cooked; Canned; Cook Meth N/S

1.000000	1.000	1.000	92	Strawb

    Full comment: Strawberry_Fresh.rdf

1307359001 13G	Strawberry-babyfood	1.000000	1.000	1.000	93	Strawb

Full comment: Strawberry_Frozen.rdf

1307360000 13G	Strawberry, juice	1.000000	1.000	1.000	92	Strawb

Full comment: Strawberry_Fresh.rdf

1307360001 13G	Strawberry, juice-babyfood	1.000000	1.000	1.000	92	Strawb

Full comment: Strawberry_Fresh.rdf

| 1400003000 14 | Almond | 1.000000 | 1.000 | 1.000 | 57 | Almond |

Full comment: Almond.rdf

| 1400003001 14 | Almond-babyfood | 1.000000 | 1.000 | 1.000 | 57 | Almond |

Full comment: Almond.rdf

| 1400004000 14 | Almond, oil | 1.000000 | 1.000 | 1.000 | 57 | Almond |

Full comment: Almond.rdf

| 1400004001 14 | Almond, oil-babyfood | 1.000000 | 1.000 | 1.000 | 57 | Almond |

Full comment: Almond.rdf

| 1400059000 14 | Brazil nut | 1.000000 | 1.000 | 1.000 | 57 | Almond |

Full comment: Almond.rdf

| 1400068000 14 | Butternut | 1.000000 | 1.000 | 1.000 | 111 | pecanF |

Full comment: pecanFT.rdf

| 1400081000 14 | Cashew | 1.000000 | 1.000 | 1.000 | 111 | pecanF |

Full comment: pecanFT.rdf

| 1400092000 14 | Chestnut | 1.000000 | 1.000 | 1.000 | 106 | Chestn |

Full comment: ChestnutFT.rdf

| 1400155000 14 | Hazelnut | 1.000000 | 1.000 | 1.000 | 111 | pecanF |

Full comment: pecanFT.rdf

| 1400156000 14 | Hazelnut, oil | 1.000000 | 1.000 | 1.000 | 111 | pecanF |

Full comment: pecanFT.rdf

| 1400185000 14 | Hickory nut | 1.000000 | 1.000 | 1.000 | 111 | pecanF |

Full comment: pecanFT.rdf

| 1400213000 14 | Macadamia nut | 1.000000 | 1.000 | 1.000 | 111 | macada |

Full comment: macadamianutFT.rdf

| 1400269000 14 | Pecan | 1.000000 | 1.000 | 1.000 | 116 | pecanF |

Full comment: pecanFT.rdf

1400278000 14	Pine nut	1.000000	1.000	1.000	57	almond
1400282000 14	Pistachio	1.000000	1.000	1.000	57	almond
1400391000 14	Walnut	1.000000	1.000	1.000	115	walnut

Full comment: walnutFT.rdf

| 1500025000 15 | Barley, pearled barley | 1.000000 | 1.000 | 1.000 | 58 | Barley |

Full comment: Barley_Grain.rdf

| 1500025001 15 | Barley, pearled barley-babyfood | 1.000000 | 1.000 | 1.000 | 58 | Barley |

Full comment: Barley_Grain.rdf

| 1500026000 15 | Barley, flour | 1.000000 | 1.000 | 1.000 | 58 | Barley |

Full comment: Barley_Grain.rdf

| 1500026001 15 | Barley, flour-babyfood | 1.000000 | 1.000 | 1.000 | 58 | Barley |

Full comment: Barley_Grain.rdf

| 1500027000 15 | Barley, bran | 1.000000 | 1.000 | 1.000 | 58 | Barley |

Full comment: Barley_Grain.rdf

1500065000 15	Buckwheat	1.000000	1.000	1.000	57	almond
1500066000 15	Buckwheat, flour	1.000000	1.000	1.000	57	almond
1500120000 15	Corn, field, flour	1.000000	1.000	1.000	59	Corn_G

Full comment: Corn_Grain.rdf

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1500120001 15   Corn, field, flour-babyfood        1.000000  1.000  1.000  59  Corn_G
     Full comment: Corn_Grain.rdf
1500121000 15   Corn, field, meal                  1.000000  1.000  1.000  59  Corn_G
     Full comment: Corn_Grain.rdf
1500121001 15   Corn, field, meal-babyfood         1.000000  1.000  1.000  59  Corn_G
     Full comment: Corn_Grain.rdf
1500122000 15   Corn, field, bran                  1.000000  1.000  1.000  59  Corn_G
     Full comment: Corn_Grain.rdf
1500123000 15   Corn, field, starch                1.000000  1.000  1.000  59  Corn_G
     Full comment: Corn_Grain.rdf
1500123001 15   Corn, field, starch-babyfood       1.000000  1.000  1.000  59  Corn_G
     Full comment: Corn_Grain.rdf
1500124000 15   Corn, field, syrup                 1.000000  1.000  1.000  60  Corn_S
     Full comment: Corn_Syrup.rdf
1500124001 15   Corn, field, syrup-babyfood        1.000000  1.000  1.000  60  Corn_S
     Full comment: Corn_Syrup.rdf
1500125000 15   Corn, field, oil                   1.000000  1.000  1.000  59  Corn_G
     Full comment: Corn_Grain.rdf
1500125001 15   Corn, field, oil-babyfood          1.000000  1.000  1.000  59  Corn_G
     Full comment: Corn_Grain.rdf
1500126000 15   Corn, pop                          1.000000  1.000  1.000  59  Corn_G
     Full comment: Corn_Grain.rdf
1500127000 15   Corn, sweet
                110-Uncooked; Fresh or N/S; Cook Meth N/S
                                                   1.000000  1.000  1.000  61  Corn_S
          Full comment: Corn_Sweet_Fresh.rdf
                140-Uncooked; Canned; Cook Meth N/S
                                                   1.000000  1.000  1.000  63  Corn_S
          Full comment: Corn_Sweet_Canned.rdf
                210-Cooked; Fresh or N/S; Cook Meth N/S
                                                   1.000000  1.000  1.000  61  Corn_S
          Full comment: Corn_Sweet_Fresh.rdf
                211-Cooked; Fresh or N/S; Baked
                                                   1.000000  1.000  1.000  61  Corn_S
          Full comment: Corn_Sweet_Fresh.rdf
                212-Cooked; Fresh or N/S; Boiled
                                                   1.000000  1.000  1.000  61  Corn_S
          Full comment: Corn_Sweet_Fresh.rdf
                213-Cooked; Fresh or N/S; Fried
                                                   1.000000  1.000  1.000  61  Corn_S
          Full comment: Corn_Sweet_Fresh.rdf
                220-Cooked; Frozen; Cook Meth N/S
                                                   1.000000  1.000  1.000  62  Corn_S
          Full comment: Corn_Sweet_Frozen_Cooked.rdf
                221-Cooked; Frozen; Baked          1.000000  1.000  1.000  62  Corn_S
          Full comment: Corn_Sweet_Frozen_Cooked.rdf
                222-Cooked; Frozen; Boiled         1.000000  1.000  1.000  62  Corn_S
          Full comment: Corn_Sweet_Frozen_Cooked.rdf
                232-Cooked; Dried; Boiled          1.000000  1.000  1.000  62  Corn_S
          Full comment: Corn_Sweet_Frozen_Cooked.rdf
                240-Cooked; Canned; Cook Meth N/S
                                                   1.000000  1.000  1.000  63  Corn_S
          Full comment: Corn_Sweet_Canned.rdf
                242-Cooked; Canned; Boiled         1.000000  1.000  1.000  63  Corn_S
          Full comment: Corn_Sweet_Canned.rdf
                243-Cooked; Canned; Fried          1.000000  1.000  1.000  63  Corn_S
          Full comment: Corn_Sweet_Canned.rdf
1500127001 15   Corn, sweet-babyfood               1.000000  1.000  1.000  63  Corn_S
     Full comment: Corn_Sweet_Canned.rdf
1500226000 15   Millet, grain                      1.000000  1.000  1.000  66  Wheat
1500231000 15   Oat, bran                          1.000000  1.000  1.000  64  Oat_Gr
     Full comment: Oat_Grain.rdf
1500232000 15   Oat, flour                         1.000000  1.000  1.000  64  Oat_Gr
     Full comment: Oat_Grain.rdf
1500232001 15   Oat, flour-babyfood                1.000000  1.000  1.000  64  Oat_Gr
     Full comment: Oat_Grain.rdf
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1500233000 15   Oat, groats/rolled oats            1.000000  1.000  1.000  64  Oat_Gr
      Full comment: Oat_Grain.rdf
1500233001 15   Oat, groats/rolled oats-babyfood   1.000000  1.000  1.000  64  Oat_Gr
      Full comment: Oat_Grain.rdf
1500323000 15   Rice, white                        1.000000  1.000  1.000  65  Rice_W
      Full comment: Rice_White.rdf
1500323001 15   Rice, white-babyfood               1.000000  1.000  1.000  65  Rice_W
      Full comment: Rice_White.rdf
1500324000 15   Rice, brown                        1.000000  1.000  1.000  65  Rice_W
      Full comment: Rice_White.rdf
1500324001 15   Rice, brown-babyfood               1.000000  1.000  1.000  65  Rice_W
      Full comment: Rice_White.rdf
1500325000 15   Rice, flour                        1.000000  1.000  1.000  65  Rice_W
      Full comment: Rice_White.rdf
1500325001 15   Rice, flour-babyfood               1.000000  1.000  1.000  65  Rice_W
      Full comment: Rice_White.rdf
1500326000 15   Rice, bran                         1.000000  1.000  1.000  65  Rice_W
      Full comment: Rice_White.rdf
1500326001 15   Rice, bran-babyfood                1.000000  1.000  1.000  65  Rice_W
      Full comment: Rice_White.rdf
1500328000 15   Rye, grain                         1.000000  1.000  1.000  66  Wheat_
      Full comment: Wheat_Grain.rdf
1500329000 15   Rye, flour                         1.000000  1.000  1.000  67  Wheat_
      Full comment: Wheat_Flour.rdf
1500344000 15   Sorghum, grain                     1.000000  1.000  1.000  66  Wheat_
      Full comment: Wheat_Grain.rdf
1500345000 15   Sorghum, syrup                     1.000000  1.000  1.000  66  Wheat_
      Full comment: Wheat_Grain.rdf
1500381000 15   Triticale, flour                   1.000000  1.000  1.000  67  Wheat_
      Full comment: Wheat_Flour.rdf
1500381001 15   Triticale, flour-babyfood          1.000000  1.000  1.000  67  Wheat_
      Full comment: Wheat_Flour.rdf
1500401000 15   Wheat, grain                       1.000000  1.000  1.000  66  Wheat_
      Full comment: Wheat_Grain.rdf
1500401001 15   Wheat, grain-babyfood              1.000000  1.000  1.000  67  Wheat_
      Full comment: Wheat_Flour.rdf
1500402000 15   Wheat, flour                       1.000000  1.000  1.000  67  Wheat_
      Full comment: Wheat_Flour.rdf
1500402001 15   Wheat, flour-babyfood              1.000000  1.000  1.000  67  Wheat_
      Full comment: Wheat_Flour.rdf
1500403000 15   Wheat, germ                        1.000000  1.000  1.000  66  Wheat_
      Full comment: Wheat_Grain.rdf
1500404000 15   Wheat, bran                        1.000000  1.000  1.000  66  Wheat_
      Full comment: Wheat_Grain.rdf
1500405000 15   Wild rice                          1.000000  1.000  1.000  65  Rice_W
      Full comment: Rice_White.rdf
1800002000 18   Alfalfa, seed                      0.002000  1.000  1.000      black
      Full comment: black bean
1901028000 19A  Basil, fresh leaves                1.000000  1.000  1.000  68  Cilant
      Full comment: Cilantro.rdf
1901028001 19A  Basil, fresh leaves-babyfood       1.000000  1.000  1.000  68  Cilant
      Full comment: Cilantro.rdf
1901029000 19A  Basil, dried leaves                1.000000  1.000  1.000  68  Cilant
      Full comment: Cilantro.rdf
1901029001 19A  Basil, dried leaves-babyfood       1.000000  1.000  1.000  68  Cilant
      Full comment: Cilantro.rdf
1901102500 19A  Chive, dried leaves                1.000000  1.000  1.000  68  Cilant
      Full comment: Cilantro.rdf
1901118000 19A  Cilantro, leaves                   1.000000  1.000  1.000  68  Cilant
      Full comment: Cilantro.rdf
1901118001 19A  Cilantro, leaves-babyfood          1.000000  1.000  1.000  68  Cilant
      Full comment: Cilantro.rdf
1901144000 19A  Dillweed                           1.000000  1.000  1.000  68  Cilant
      Full comment: Cilantro.rdf
1901184000 19A  Herbs, other                       1.000000  1.000  1.000  68  Cilant
      Full comment: Cilantro.rdf
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1901184001 19A  Herbs, other-babyfood         1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1901202000 19A  Lemongrass                    1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1901220000 19A  Marjoram                      1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1901220001 19A  Marjoram-babyfood             1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1901249000 19A  Parsley, dried leaves         1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1901249001 19A  Parsley, dried leaves-babyfood  1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1901334000 19A  Savory                        1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1902105000 19B  Cinnamon                      1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1902105001 19B  Cinnamon-babyfood             1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1902119000 19B  Coriander, seed               1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1902119001 19B  Coriander, seed-babyfood      1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1902143000 19B  Dill, seed                    1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1902274000 19B  Pepper, black and white       1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1902274001 19B  Pepper, black and white-babyfood  1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1902354000 19B  Spices, other                 1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
1902354001 19B  Spices, other-babyfood        1.000000  1.000  1.000  68  Cilant
    Full comment: Cilantro.rdf
2001163000 20A  Flax seed, oil                0.110000  0.650  0.100      Cotton
    Full comment: CottonseedFT.rdf
2001319000 20A  Rapeseed, oil                 0.110000  0.650  0.100      Cotton
    Full comment: CottonseedFT.rdf
2001319001 20A  Rapeseed, oil-babyfood        0.110000  0.650  0.100      Cotton
    Full comment: CottonseedFT.rdf
2001336000 20A  Sesame, seed                  0.002000  0.650  0.100      dry be
    Full comment: dry bean pdp
2001336001 20A  Sesame, seed-babyfood         0.002000  0.650  0.100      dry be
    Full comment: dry bean pdp
2001337000 20A  Sesame, oil                   0.110000  0.650  0.100      Cotton
    Full comment: CottonseedFT.rdf
2001337001 20A  Sesame, oil-babyfood          0.110000  0.650  0.100      Cotton
    Full comment: CottonseedFT.rdf
2002330000 20B  Safflower, oil                0.110000  0.650  0.100      Cotton
    Full comment: CottonseedFT.rdf
2002330001 20B  Safflower, oil-babyfood       0.110000  0.650  0.100      Cotton
    Full comment: CottonseedFT.rdf
2002364000 20B  Sunflower, seed               0.002000  0.650  0.025      dry be
    Full comment: dry bean pdp
2002365000 20B  Sunflower, oil                0.110000  0.650  0.025      Cotton
    Full comment: CottonseedFT.rdf
2002365001 20B  Sunflower, oil-babyfood       0.110000  0.650  0.025      Cotton
    Full comment: CottonseedFT.rdf
2003114001 20C  Coconut, oil-babyfood         0.110000  0.650  0.100      Cotton
    Full comment: CottonseedFT.rdf
2003128000 20C  Cottonseed, oil               0.110000  0.650  0.200      Cotton
    Full comment: CottonseedFT.rdf
2003128001 20C  Cottonseed, oil-babyfood      0.110000  0.650  0.200      Cotton
    Full comment: CottonseedFT.rdf
2100228000 21   Mushroom                      1.000000  1.000  1.000  88  Mushro
    Full comment: Mushroom.rdf
3100044000 31   Beef, meat                    1.000000  1.000  1.000  69  Beef_m
    Full comment: Beef_meat.rdf
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3100044001 31   Beef, meat-babyfood              1.000000  1.000  1.000  69  Beef_m
        Full comment: Beef_meat.rdf
3100045000 31   Beef, meat, dried                1.000000  1.920  1.000  69  Beef_m
        Full comment: Beef_meat.rdf
3100046000 31   Beef, meat byproducts            1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3100046001 31   Beef, meat byproducts-babyfood   1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3100047000 31   Beef, fat                        1.000000  1.000  1.000  70  Beef_f
        Full comment: Beef_fat.rdf
3100047001 31   Beef, fat-babyfood               1.000000  1.000  1.000  70  Beef_f
        Full comment: Beef_fat.rdf
3100048000 31   Beef, kidney                     1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3100049000 31   Beef, liver                      1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3100049001 31   Beef, liver-babyfood             1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3200169000 32   Goat, meat                       1.000000  1.000  1.000  69  Beef_m
        Full comment: Beef_meat.rdf
3200170000 32   Goat, meat byproducts            1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3200171000 32   Goat, fat                        1.000000  1.000  1.000  70  Beef_f
        Full comment: Beef_fat.rdf
3200172000 32   Goat, kidney                     1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3200173000 32   Goat, liver                      1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3300189000 33   Horse, meat                      1.000000  1.000  1.000  69  Beef_m
        Full comment: Beef_meat.rdf
3400290000 34   Pork, meat                       1.000000  1.000  1.000  72  Pork_m
        Full comment: Pork_meat.rdf
3400290001 34   Pork, meat-babyfood              1.000000  1.000  1.000  72  Pork_m
        Full comment: Pork_meat.rdf
3400291000 34   Pork, skin                       1.000000  1.000  1.000  73  Pork_f
        Full comment: Pork_fat.rdf
3400292000 34   Pork, meat byproducts            1.000000  1.000  1.000  73  Pork_f
        Full comment: Pork_fat.rdf
3400292001 34   Pork, meat byproducts-babyfood   1.000000  1.000  1.000  73  Pork_f
        Full comment: Pork_fat.rdf
3400293000 34   Pork, fat                        1.000000  1.000  1.000  73  Pork_f
        Full comment: Pork_fat.rdf
3400293001 34   Pork, fat-babyfood               1.000000  1.000  1.000  73  Pork_f
        Full comment: Pork_fat.rdf
3400294000 34   Pork, kidney                     1.000000  1.000  1.000  73  Pork_f
        Full comment: Pork_fat.rdf
3400295000 34   Pork, liver                      1.000000  1.000  1.000  73  Pork_f
        Full comment: Pork_fat.rdf
3500339000 35   Sheep, meat                      1.000000  1.000  1.000  69  Beef_m
        Full comment: Beef_meat.rdf
3500339001 35   Sheep, meat-babyfood             1.000000  1.000  1.000  69  Beef_m
        Full comment: Beef_meat.rdf
3500340000 35   Sheep, meat byproducts           1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3500341000 35   Sheep, fat                       1.000000  1.000  1.000  70  Beef_f
        Full comment: Beef_fat.rdf
3500341001 35   Sheep, fat-babyfood              1.000000  1.000  1.000  70  Beef_f
        Full comment: Beef_fat.rdf
3500342000 35   Sheep, kidney                    1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3500343000 35   Sheep, liver                     1.000000  1.000  1.000  71  Beef_l
        Full comment: Beef_liver.rdf
3600222000 36   Milk, fat                        1.000000  1.000  1.000  94  Milk_c
        Full comment: Milk_creambutter.rdf
3600222001 36   Milk, fat-baby food/infant formu 1.000000  1.000  1.000  94  Milk_c
        Full comment: Milk_creambutter.rdf
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3600223000 36   Milk, nonfat solids              1.000000  1.000  1.000  74  Milk.r
    Full comment: Milk.rdf
3600223001 36   Milk, nonfat solids-baby food/in 1.000000  1.000  1.000  74  Milk.r
    Full comment: Milk.rdf
3600224000 36   Milk, water                      1.000000  1.000  1.000  74  Milk.r
    Full comment: Milk.rdf
3600224001 36   Milk, water-babyfood/infant form 1.000000  1.000  1.000  74  Milk.r
    Full comment: Milk.rdf
3600225001 36   Milk, sugar (lactose)-baby food/ 1.000000  1.000  1.000  74  Milk.r
    Full comment: Milk.rdf
3800221000 38   Meat, game                       1.000000  1.000  1.000  69  Beef_m
    Full comment: Beef_meat.rdf
3900312000 39   Rabbit, meat                     1.000000  1.000  1.000  69  Beef_m
    Full comment: Beef_meat.rdf
4000093000 40   Chicken, meat                    1.000000  1.000  1.000  75  Chicke
    Full comment: Chicken_meat.rdf
4000093001 40   Chicken, meat-babyfood           1.000000  1.000  1.000  75  Chicke
    Full comment: Chicken_meat.rdf
4000094000 40   Chicken, liver                   1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
4000095000 40   Chicken, meat byproducts         1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
4000095001 40   Chicken, meat byproducts-babyfoo 1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
4000096000 40   Chicken, fat                     1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
4000096001 40   Chicken, fat-babyfood            1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
4000097000 40   Chicken, skin                    1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
4000097001 40   Chicken, skin-babyfood           1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
5000382000 50   Turkey, meat                     1.000000  1.000  1.000  75  Chicke
    Full comment: Chicken_meat.rdf
5000382001 50   Turkey, meat-babyfood            1.000000  1.000  1.000  75  Chicke
    Full comment: Chicken_meat.rdf
5000383000 50   Turkey, liver                    1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
5000383001 50   Turkey, liver-babyfood           1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
5000384000 50   Turkey, meat byproducts          1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
5000384001 50   Turkey, meat byproducts-babyfood 1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
5000385000 50   Turkey, fat                      1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
5000385001 50   Turkey, fat-babyfood             1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
5000386000 50   Turkey, skin                     1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
5000386001 50   Turkey, skin-babyfood            1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
6000301000 60   Poultry, other, meat             1.000000  1.000  1.000  75  Chicke
    Full comment: Chicken_meat.rdf
6000302000 60   Poultry, other, liver            1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
6000303000 60   Poultry, other, meat byproducts  1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
6000304000 60   Poultry, other, fat              1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
6000305000 60   Poultry, other, skin             1.000000  1.000  1.000  76  Chicke
    Full comment: Chicken_liver.rdf
7000145000 70   Egg, whole                       1.000000  1.000  1.000  77  Egg.rd
    Full comment: Egg.rdf
7000145001 70   Egg, whole-babyfood              1.000000  1.000  1.000  77  Egg.rd
    Full comment: Egg.rdf
```

```
7000146000 70    Egg, white                    1.000000  1.000  1.000   77  Egg.rd
     Full comment: Egg.rdf
7000146001 70    Egg, white (solids)-babyfood  1.000000  1.000  1.000   77  Egg.rd
     Full comment: Egg.rdf
7000147000 70    Egg, yolk                     1.000000  1.000  1.000   77  Egg.rd
     Full comment: Egg.rdf
7000147001 70    Egg, yolk-babyfood            1.000000  1.000  1.000   77  Egg.rd
     Full comment: Egg.rdf
8000157000 80    Fish-freshwater finfish       1.000000  1.000  1.000   78  Catfis
     Full comment: Catfish.rdf
8000158000 80    Fish-freshwater finfish, farm ra  1.000000  1.000  1.000   78  Catfis
     Full comment: Catfish.rdf
8000159000 80    Fish-saltwater finfish, tuna  1.000000  1.000  1.000   78  Catfis
     Full comment: Catfish.rdf
8000160000 80    Fish-saltwater finfish, other  1.000000  1.000  1.000   78  Catfis
     Full comment: Catfish.rdf
8000161000 80    Fish-shellfish, crustacean    1.000000  1.000  1.000   78  Catfis
     Full comment: Catfish.rdf
8000162000 80    Fish-shellfish, mollusc       1.000000  1.000  1.000   78  Catfis
     Full comment: Catfish.rdf
9500000500 O     Acai berry                    1.000000  1.000  1.000  109  GuavaF
     Full comment: GuavaFT
9500001000 O     Acerola                       1.000000  1.000  1.000  109  GuavaF
     Full comment: GuavaFT
9500001500 O     Agave                         0.008300  1.000  1.000       Aspara
     Full comment: Asparagus
9500006000 O     Amaranth, grain               1.000000  1.000  1.000   66  wheat
     Full comment: wheat grain
9500016000 O     Artichoke, globe              1.000000  1.000  1.000   98  celery
     Full comment: celery100.rdf
9500019000 O     Asparagus
                 110-Uncooked; Fresh or N/S; Cook Meth N/S
                                               1.000000  1.000  1.000   79  Aspara
     Full comment: Asparagus.rdf
                 212-Cooked; Fresh or N/S; Boiled
                                               1.000000  1.000  1.000   79  Aspara
     Full comment: Asparagus.rdf
                 213-Cooked; Fresh or N/S; Fried
                                               1.000000  1.000  1.000   79  Aspara
     Full comment: Asparagus.rdf
                 222-Cooked; Frozen; Boiled    1.000000  1.000  1.000   79  Aspara
     Full comment: Asparagus.rdf
                 242-Cooked; Canned; Boiled    1.000000  1.000  1.000   80  Aspara
     Full comment: Asparagus_Canned.rdf
9500019500 O     Atemoya                       1.000000  1.000  1.000   87  mango
9500020000 O     Avocado                       1.000000  1.000  1.000  102  Avocad
     Full comment: Avocado.rdf
9500022000 O     Bamboo, shoots                1.000000  1.000  1.000   98  celery
9500023000 O     Banana                        1.000000  1.000  1.000   81  banana
9500023001 O     Banana-babyfood               1.000000  1.000  1.000   81  banana
9500024000 O     Banana, dried                 0.005800  3.900  1.000       banana
9500024001 O     Banana, dried-babyfood        0.005800  3.900  1.000       banana
9500054000 O     Belgium endive                1.000000  1.000  1.000   99  spinac
     Full comment: spinach
9500060000 O     Breadfruit                    1.000000  1.000  1.000   87  mango
9500073000 O     Cactus                        0.008300  1.000  1.000       aspara
     Full comment: asparagus
9500074000 O     Canistel                      0.012000  1.000  1.000       avocad
     Full comment: avocado
9500077000 O     Carob                         1.000000  1.000  1.000  110  figFT
9500089000 O     Cherimoya                     1.000000  1.000  1.000   87  mango
9500109000 O     Cocoa bean, chocolate         0.002000  1.000  1.000       dry be
     Full comment: dry bean
9500110000 O     Cocoa bean, powder            0.002000  1.000  1.000       dry be
     Full comment: dry bean
9500111000 O     Coconut, meat                 1.000000  1.000  1.000  111  macada
```

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                  Full comment: macadamia nut
9500111001 O      Coconut, meat-babyfood              1.000000  1.000  1.000  111  macada
                  Full comment: macadamia nut
9500112000 O      Coconut, dried                      0.050000  2.100  1.000       macada
                  Full comment: macadamia nut
9500113000 O      Coconut, milk                       1.000000  1.000  1.000   74  milk
9500114000 O      Coconut, oil                        0.110000  0.650  1.000       Cotton
                  Full comment: CottonseedFT.rdf
9500115000 O      Coffee, roasted bean                0.002000  1.000  1.000       bean d
                  Full comment: bean dry
9500116000 O      Coffee, instant                     0.002000  1.000  1.000       bean d
                  Full comment: bean dry
9500141000 O      Date                                1.000000  1.000  1.000  108  dateFT
                  Full comment: dateFT.rdf
9500151000 O      Feijoa                              1.000000  1.000  1.000  109  guava
9500153000 O      Fig                                 1.000000  1.000  1.000  110  figFT.
                  Full comment: figFT.rdf
9500154000 O      Fig, dried                          0.847000  1.000  1.000       figFT.
                  Full comment: figFT.rdf
9500177000 O      Grape, leaves                       1.000000  1.000  1.000   83  Grape_
                  Full comment: Grape_Fresh.rdf
9500178000 O      Grape, raisin                       1.000000  1.000  1.000   85  grape
                  Full comment: grape raisin
9500183000 O      Guava                               1.000000  1.000  1.000  109  guavaF
                  Full comment: guavaFT.rdf
9500183001 O      Guava-babyfood                      1.000000  1.000  1.000  109  guavaF
                  Full comment: guavaFT.rdf
9500186000 O      Honey                               1.000000  1.000  1.000   86  Honey.
                  Full comment: Honey.rdf
9500186001 O      Honey-babyfood                      1.000000  1.000  1.000   86  Honey.
                  Full comment: Honey.rdf
9500188000 O      Hop                                 1.000000  1.000  1.000       tolera
                  Full comment: tolerance
9500193000 O      Jackfruit                           1.000000  1.000  1.000   87  mango
9500209000 O      Longan                              1.000000  1.000  1.000   87  mango
9500211000 O      Lychee                              1.000000  1.000  1.000   87  mango
9500212000 O      Lychee, dried                       0.010000  1.850  1.000       mango
9500214000 O      Mamey apple                         1.000000  1.000  1.000   87  mango
9500215000 O      Mango                               1.000000  1.000  1.000   87  Mango.
                  Full comment: Mango.rdf
9500215001 O      Mango-babyfood                      1.000000  1.000  1.000   87  Mango.
                  Full comment: Mango.rdf
9500216000 O      Mango, dried                        0.010000  1.000  1.000       Mango.
                  Full comment: Mango.rdf
9500217000 O      Mango, juice                        1.000000  1.000  1.000   87  Mango.
                  Full comment: Mango.rdf
9500217001 O      Mango, juice-babyfood               1.000000  1.000  1.000   87  Mango.
                  Full comment: Mango.rdf
9500218000 O      Maple, sugar                        0.004500  1.000  1.000       sugarb
                  Full comment: sugarbeet
9500219000 O      Maple syrup                         0.004500  1.000  1.000       sugarb
                  Full comment: sugarbeet
9500235000 O      Olive                               1.000000  1.000  1.000   87  Mango
9500236000 O      Olive, oil                          0.110000  0.650  1.000       Cotton
                  Full comment: CottonseedFT.rdf
9500243000 O      Palm heart, leaves                  0.008300  1.000  1.000       aspara
                  Full comment: asparagus
9500244000 O      Palm, oil                           0.110000  0.650  1.000       Cotton
                  Full comment: CottonseedFT.rdf
9500244001 O      Palm, oil-babyfood                  0.110000  0.650  1.000       Cotton
                  Full comment: CottonseedFT.rdf
9500245000 O      Papaya                              1.000000  1.000  1.000   89  Papaya
                  Full comment: Papaya.rdf
9500245001 O      Papaya-babyfood                     1.000000  1.000  1.000   89  Papaya
                  Full comment: Papaya.rdf
9500246000 O      Papaya, dried                       0.005000  1.000  1.000       Papaya
```

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               Full comment: Papaya.rdf
9500247000 O      Papaya, juice                        1.000000  1.000  1.000  89  Papaya
               Full comment: Papaya.rdf
9500252000 O      Passionfruit                         1.000000  1.000  1.000 114  passio
               Full comment: passionfruitFT.rdf
9500252001 O      Passionfruit-babyfood                1.000000  1.000  1.000 114  passio
               Full comment: passionfruitFT.rdf
9500253000 O      Passionfruit, juice                  1.000000  1.000  1.000 114  passio
               Full comment: passionfruitFT.rdf
9500253001 O      Passionfruit, juice-babyfood         1.000000  1.000  1.000 114  passio
               Full comment: passionfruitFT.rdf
9500254000 O      Pawpaw                               1.000000  1.000  1.000 109  Guava
9500263000 O      Peanut                               1.000000  1.000  1.000  90  Peanut
               Full comment: Peanutbutter.rdf
9500264000 O      Peanut, butter                       1.000000  1.000  1.000  90  Peanut
               Full comment: Peanutbutter.rdf
9500265000 O      Peanut, oil                          1.000000  1.000  1.000  90  Peanut
               Full comment: Peanutbutter.rdf
9500275000 O      Peppermint                           1.915000  1.000  1.000      mintFT
               Full comment: mintFT.rdf
9500276000 O      Peppermint, oil                     13.970000  1.000  1.000      mintFT
               Full comment: mintFT.rdf
9500277000 O      Persimmon                            1.000000  1.000  1.000  87  Mango
9500279000 O      Pineapple                            1.000000  1.000  1.000  91  Pineap
               Full comment: Pineapple.rdf
9500279001 O      Pineapple-babyfood                   1.000000  1.000  1.000  91  Pineap
               Full comment: Pineapple.rdf
9500280000 O      Pineapple, dried                     0.017400  5.000  1.000      Pineap
               Full comment: Pineapple.rdf
9500281000 O      Pineapple, juice                     1.000000  1.000  1.000  91  Pineap
               Full comment: Pineapple.rdf
9500281001 O      Pineapple, juice-babyfood            1.000000  1.000  1.000  91  Pineap
               Full comment: Pineapple.rdf
9500283000 O      Plantain                             1.000000  1.000  1.000  81  Banana
9500284000 O      Plantain, dried                      0.005800  3.900  1.000
9500289000 O      Pomegranate                          1.000000  1.000  1.000  87  Mango
9500306000 O      Psyllium, seed                       1.000000  1.000  1.000  65  Rice
9500311000 O      Quinoa, grain                        1.000000  1.000  1.000  66  wheat_
               Full comment: wheat_grain
9500333000 O      Sapote, Mamey                        1.000000  1.000  1.000  87  mango
9500335000 O      Seaweed                              1.000000  1.000  1.000  17  seawee
               Full comment: seaweed
9500335001 O      Seaweed-babyfood                     1.000000  1.000  1.000  17  seawee
               Full comment: seaweed
9500346000 O      Soursop                              1.000000  1.000  1.000  87  mango
9500351000 O      Spanish lime                         1.000000  1.000  1.000  87  mango
9500352000 O      Spearmint                            1.915000  1.000  1.000      mintFT
               Full comment: mintFT.rdf
9500353000 O      Spearmint, oil                      13.970000  1.000  1.000      mintFT
               Full comment: mintFT.rdf
9500358000 O      Starfruit                            1.000000  1.000  1.000 109  guava
9500361000 O      Sugar apple                          1.000000  1.000  1.000  87  mango
9500362000 O      Sugarcane, sugar                     0.004500  1.000  1.000      sugarb
               Full comment: sugarbeet
9500362001 O      Sugarcane, sugar-babyfood            0.004500  1.000  1.000      sugarb
               Full comment: sugarbeet
9500363000 O      Sugarcane, molasses                  0.004500  1.000  1.000      sugarb
               Full comment: sugarbeet
9500363001 O      Sugarcane, molasses-babyfood         0.004500  1.000  1.000      sugarb
               Full comment: sugarbeet
9500368000 O      Tamarind                             1.000000  1.000  1.000  87  mango
9500372000 O      Tea, dried                           1.000000  1.000  1.000      hops
9500373000 O      Tea, instant                         1.000000  1.000  1.000      hops
9500373500 O      Teff, flour                          1.000000  1.000  1.000  67  wheat
               Full comment: wheat flour
9500390000 O      Vinegar                              0.002000  1.000  1.000      apple
```

```
     Full comment: apple juice
9500397000 O    Water chestnut                 0.002300  1.000  1.000     potato
9500398000 O    Watercress                     1.000000  1.000  1.000  99 spinac
     Full comment: spinach
```

Attachment 5: Acute (Food Alone) Results File

```
US EPA                                             Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION             NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodOnly_revised.R08
    Adjustment factor #2 used.
Analysis Date: 10-27-2015/10:03:00   Residue file dated: 10-27-2015/09:52:11
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
==============================================================================


Summary calculations--per capita:
```

--- 95th Percentile----			--- 99th Percentile----			---99.9th Percentile----		
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.000328	3.28	30502	0.000683	6.83	14635	0.002701	27.01	3702
All Infants:								
0.000437	4.37	22876	0.000679	6.79	14733	0.003694	36.94	2707
Children 1-2:								
0.000661	6.61	15127	0.001520	15.20	6576	0.007434	74.34	1345
Children 3-5:								
0.000527	5.27	18992	0.001170	11.70	8543	0.004276	42.76	2338
Children 6-12:								
0.000344	3.44	29060	0.000815	8.15	12263	0.004107	41.07	2435
Youth 13-19:								
0.000203	2.03	49268	0.000455	4.55	21992	0.002361	23.61	4235
Adults 20-49:								
0.000274	2.74	36515	0.000588	5.88	16997	0.002899	28.99	3449
Adults 50-99:								
0.000252	0.25	39696	0.000597	0.60	16756	0.001642	1.64	6088
Female 13-49:								
0.000211	2.11	47344	0.000473	4.73	21160	0.003144	31.44	3180

Attachment 6: Acute Critical Exposure Contribution Analysis (Food and Drinking Water)

```
US EPA
DEEM-FCID Acute Critical Exposure Contribution Analysis (Ver. 3.18, 03-08-d)
NHANES 2003-2008 2-Day
Residue file =
C:\Users\spiper\Documents\DEEM_version316\Malathion_2014\Malathion_Mosquitocide_FoodFLCabba
ge.R08
Date and time of analysis: 11-05-2015 10:11:56
Daily totals for food and foodform consumption used.
Adjustment factor #2 used.
Minimum exposure contribution = 10%
MC Iterations = 1000   Seed = 10   RNG = MS VB
CEC records generated for first 90 iterations.
Exposures divided by body weight

Subpopulations:
    1   Total US Population
    2   All Infants
    3   Children 1-2
```

```
===============================================================================
Total US Population
Low percentile for CEC records: 99    Exposure (mg/day) =    0.003846
High percentile for CEC records: 99.9 Exposure (mg/day) =    0.009245
Number of actual records in this interval: 42279


Critical foods with foodforms for this population (as derived from these records):
  N=number of appearances in all records (including duplicates)
  %=percent of total exposure for all records (including duplicates)

Food          FF      N      Percent   Food Name
----------    ---    -----   -------   --------------
8601000000    110    31812   51.44%    Water, direct, all sources-Uncooked; Fresh or N/S;
Cook Meth N/S
8602000000    130    7507    13.41%    Water, indirect, all sources-Uncooked; Dried; Cook
Meth N/S
8602000000    232    12254   9.62%     Water, indirect, all sources-Cooked; Dried; Boiled
8602000000    230    4272    3.81%     Water, indirect, all sources-Cooked; Dried; Cook Meth
N/S


===============================================================================
All Infants
Low percentile for CEC records: 99    Exposure (mg/day) =    0.011723
High percentile for CEC records: 99.9 Exposure (mg/day) =    0.024921
Number of actual records in this interval: 2222


Critical foods with foodforms for this population (as derived from these records):
  N=number of appearances in all records (including duplicates)
  %=percent of total exposure for all records (including duplicates)

Food          FF      N      Percent   Food Name
----------    ---    -----   -------   --------------
8602000000    130    1797    73.06%    Water, indirect, all sources-Uncooked; Dried; Cook
Meth N/S
8602000000    240    207     7.35%     Water, indirect, all sources-Cooked; Canned; Cook
Meth N/S
8602000000    230    184     6.85%     Water, indirect, all sources-Cooked; Dried; Cook Meth
N/S
8601000000    110    502     5.51%     Water, direct, all sources-Uncooked; Fresh or N/S;
Cook Meth N/S
8602000000    110    140     1.39%     Water, indirect, all sources-Uncooked; Fresh or N/S;
Cook Meth N/S
===============================================================================
Children 1-2
Low percentile for CEC records: 99    Exposure (mg/day) =    0.006168
High percentile for CEC records: 99.9 Exposure (mg/day) =    0.014506
Number of actual records in this interval: 2393


Critical foods with foodforms for this population (as derived from these records):
  N=number of appearances in all records (including duplicates)
  %=percent of total exposure for all records (including duplicates)

Food          FF      N      Percent   Food Name
----------    ---    -----   -------   --------------
8601000000    110    1888    53.82%    Water, direct, all sources-Uncooked; Fresh or N/S;
Cook Meth N/S
9500183000    240    190     8.10%     Guava-Cooked; Canned; Cook Meth N/S
8602000000    130    325     6.49%     Water, indirect, all sources-Uncooked; Dried; Cook
Meth N/S
8602000000    110    352     5.27%     Water, indirect, all sources-Uncooked; Fresh or N/S;
```

Attachment 7: Acute FL Cabbage (Drinking Water Alone) Input and Results File

```
US EPA                                                  Ver. 3.18, 03-08-d
DEEM-FCID Acute analysis for MALATHION
Residue file name:
C:\Users\spiper\Documents\DEEM_version316\Malathion_2014\Malathion_DWonly_FLCabbage.r08
Analysis Date 07-28-2015          Residue file dated: 07-22-2015/09:25:17
Reference dose: aRfD = 0.01 mg/kg bw/day   NOEL = 10 mg/kg bw/day
Comment: Add 10x for acute EPI
------------------------------------------------------------------------
RDL indices and parameters for Monte Carlo Analysis:
Index Dist Parameter #1           Param #2    Param #3    Comment
  #   Code
----- ---- -----------           ----------- ----------- ----------
  1    6   FLCabbageDW_22x.rdf

 EPA        Crop Food Name                     Def Res   Adj.Factors  RDL  Comment
 Code       Grp                                (ppm)     #1     #2    Pntr
---------- ---- --------------------------     --------- ------ ------ --- -------
8601000000 86A  Water, direct, all sources     1.000000  1.000  1.000   1
8602000000 86B  Water, indirect, all sources   1.000000  1.000  1.000   1

US EPA                                                  Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION          NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_FLCabbage.r08    Adjustment factor #2 NOT used.
Analysis Date: 07-28-2015/10:07:00    Residue file dated: 07-22-2015/09:25:17
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Add 10x for acute EPI"
========================================================================

Summary calculations--per capita:
```

	95th Percentile			99th Percentile			99.9th Percentile	
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.001225	12.25	8165	0.003587	35.87	2788	0.008730	87.30	1145
All Infants:								
0.002846	28.46	3513	0.011435	114.35	874	0.024218	242.18	412
Children 1-2:								
0.001707	17.07	5856	0.005367	53.67	1863	0.013005	130.05	768
Children 3-5:								
0.001485	14.85	6735	0.004445	44.45	2249	0.010358	103.58	965
Children 6-12:								
0.001049	10.49	9531	0.003271	32.71	3057	0.008155	81.55	1226
Youth 13-19:								
0.000842	8.42	11870	0.002802	28.02	3568	0.007127	71.27	1403
Adults 20-49:								
0.001254	12.54	7975	0.003600	36.00	2777	0.008011	80.11	1248
Adults 50-99:								
0.001277	1.28	7830	0.003357	3.36	2978	0.007284	7.28	1372
Female 13-49:								
0.001237	12.37	8086	0.003634	36.34	2752	0.008083	80.83	1237

Attachment 8: Acute FL Strawberry (Drinking Water Alone) Input and Results File

```
US EPA                                                  Ver. 3.18, 03-08-d
DEEM-FCID Acute analysis for MALATHION
Residue file name:
C:\Users\spiper\Documents\DEEM_version316\Malathion_2014\Malathion_DWonly_FLStrawberry.r08
Analysis Date 07-28-2015          Residue file dated: 07-22-2015/09:37:34
Reference dose: aRfD = 0.01 mg/kg bw/day   NOEL = 10 mg/kg bw/day
```

```
Comment: Acute-10x EPI
-----------------------------------------------------------------------
RDL indices and parameters for Monte Carlo Analysis:
Index Dist Parameter #1              Param #2     Param #3     Comment
  #   Code
----- ---- ------------             ----------- ----------- ----------

  1    6   FLStrawberry_22x_DW.rdf


   EPA        Crop Food Name                      Def Res    Adj.Factors  RDL  Comment
   Code       Grp                                 (ppm)       #1    #2    Pntr
---------- ---- ------------------------------  ---------- ------ ------ --- -------
8601000000 86A  Water, direct, all sources       1.000000   1.000  1.000   1
8602000000 86B  Water, indirect, all sources     1.000000   1.000  1.000   1


   US EPA                                             Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION              NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_FLStrawberry.r08   Adjustment factor #2 NOT used.
Analysis Date: 07-28-2015/10:12:39    Residue file dated: 07-22-2015/09:37:34
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Acute-10x EPI"
=======================================================================


Summary calculations--per capita:

---    95th Percentile----   ---   99th Percentile----   ---99.9th Percentile----
  Exposure  % aPAD    MOE    Exposure  % aPAD    MOE    Exposure  % aPAD    MOE
---------- ------- --------  ---------- ------- --------  ---------- ------- --------
Total US Population:
  0.001045   10.45    9565   0.003955    39.55    2528   0.012424  124.24     804
All Infants:
  0.002205   22.05    4534   0.012093   120.93     826   0.034855  348.55     286
Children 1-2:
  0.001458   14.58    6857   0.005851    58.51    1709   0.018610  186.10     537
Children 3-5:
  0.001267   12.67    7890   0.004906    49.06    2038   0.015025  150.25     665
Children 6-12:
  0.000891    8.91   11222   0.003562    35.62    2807   0.011318  113.18     883
Youth 13-19:
  0.000714    7.14   14003   0.003020    30.20    3311   0.009700   97.00    1030
Adults 20-49:
  0.001064   10.64    9396   0.003971    39.71    2518   0.011785  117.85     848
Adults 50-99:
  0.001101    1.10    9080   0.003789     3.79    2639   0.010994   10.99     909
Female 13-49:
  0.001044   10.44    9575   0.003995    39.95    2503   0.011879  118.79     841
```

Attachment 9: Acute MS Cotton (Drinking Water Alone) Input and Results File

```
US EPA                                             Ver. 3.18, 03-08-d
DEEM-FCID Acute analysis for MALATHION
Residue file name:
C:\Users\spiper\Documents\DEEM_version316\Malathion_2014\Malathion_DWonly_MScotton.r08
Analysis Date 07-28-2015            Residue file dated: 07-22-2015/09:46:57
Reference dose: aRfD = 0.01 mg/kg bw/day   NOEL = 10 mg/kg bw/day
Comment: Acute-10x EPI
-----------------------------------------------------------------------
RDL indices and parameters for Monte Carlo Analysis:
Index Dist Parameter #1              Param #2     Param #3     Comment
  #   Code
----- ---- ------------             ----------- ----------- ----------

  1    6   MS_cotton_22x.rdf


   EPA        Crop Food Name                      Def Res    Adj.Factors  RDL  Comment
   Code       Grp                                 (ppm)       #1    #2    Pntr
```

```
---------- ---- ------------------------------ ---------- ------ ------ --- -------
8601000000 86A  Water, direct, all sources     1.000000   1.000  1.000   1
8602000000 86B  Water, indirect, all sources   1.000000   1.000  1.000   1
```

```
US EPA                                         Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION         NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_MScotton.r08    Adjustment factor #2 NOT used.
Analysis Date: 07-28-2015/10:20:03   Residue file dated: 07-22-2015/09:46:57
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Acute-10x EPI"
========================================================================
```

Summary calculations--per capita:

--- 95th Percentile----			--- 99th Percentile----			---99.9th Percentile----		
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.000175	1.75	57172	0.001491	14.91	6706	0.005774	57.74	1731
All Infants:								
0.000157	1.57	63717	0.004377	43.77	2284	0.015996	159.96	625
Children 1-2:								
0.000231	2.31	43306	0.002167	21.67	4614	0.008550	85.50	1169
Children 3-5:								
0.000202	2.02	49443	0.001835	18.35	5450	0.006874	68.74	1454
Children 6-12:								
0.000137	1.37	72868	0.001317	13.17	7594	0.005190	51.90	1926
Youth 13-19:								
0.000105	1.05	95642	0.001100	11.00	9090	0.004453	44.53	2245
Adults 20-49:								
0.000178	1.78	56156	0.001514	15.14	6604	0.005569	55.69	1795
Adults 50-99:								
0.000206	0.21	48510	0.001462	1.46	6840	0.005307	5.31	1884
Female 13-49:								
0.000171	1.71	58602	0.001518	15.18	6585	0.005631	56.31	1775

Attachment 10: Acute WA Cherry (Drinking Water Alone) Input and Results File

```
US EPA                                         Ver. 3.18, 03-08-d
DEEM-FCID Acute analysis for MALATHION
Residue file name:
C:\Users\spiper\Documents\DEEM_version316\Malathion_2014\Malathion_DWonly_WAcherry.r08
Analysis Date 07-28-2015         Residue file dated: 07-22-2015/09:55:48
Reference dose: aRfD = 0.01 mg/kg bw/day  NOEL = 10 mg/kg bw/day
Comment: Acute-10x EPI
--------------------------------------------------------------------
RDL indices and parameters for Monte Carlo Analysis:
Index Dist Parameter #1          Param #2    Param #3    Comment
  #   Code
----- ---- ------------          ----------- ----------- -----------
  1    6   WACherry_22x_DW.rdf
```

EPA Code	Crop Grp	Food Name	Def Res (ppm)	Adj.Factors #1	#2	RDL Pntr	Comment
8601000000	86A	Water, direct, all sources	1.000000	1.000	1.000	1	
8602000000	86B	Water, indirect, all sources	1.000000	1.000	1.000	1	

```
US EPA                                         Ver. 3.18, 03-08-d
```

```
DEEM-FCID ACUTE Analysis for MALATHION                NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_WAcherry.r08      Adjustment factor #2 NOT used.
Analysis Date: 07-28-2015/10:25:45   Residue file dated: 07-22-2015/09:55:48
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Acute-10x EPI"
==============================================================================


Summary calculations--per capita:
```

--- 95th Percentile----			--- 99th Percentile----			---99.9th Percentile----		
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.001176	11.76	8504	0.008235	82.35	1214	0.024069	240.69	415
All Infants:								
0.001354	13.54	7385	0.025718	257.18	388	0.068773	687.73	145
Children 1-2:								
0.001564	15.64	6395	0.012034	120.34	830	0.036267	362.67	275
Children 3-5:								
0.001374	13.74	7277	0.010202	102.02	980	0.028988	289.88	344
Children 6-12:								
0.000952	9.52	10505	0.007359	73.59	1358	0.022321	223.21	448
Youth 13-19:								
0.000715	7.15	13989	0.006154	61.54	1624	0.019494	194.94	512
Adults 20-49:								
0.001189	11.89	8407	0.008387	83.87	1192	0.022767	227.67	439
Adults 50-99:								
0.001372	1.37	7287	0.007995	8.00	1250	0.020711	20.71	482
Female 13-49:								
0.001144	11.44	8744	0.008389	83.89	1192	0.022989	229.89	434

Attachment 11: Acute WA Cherry ULV (Drinking Water Alone) Results File

```
US EPA                                                Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION                NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_WAcherryULV.r08    Adjustment factor #2 used.
Analysis Date: 08-17-2015/12:35:09   Residue file dated: 08-17-2015/12:28:18
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Acute-10x EPI"
==============================================================================


Summary calculations--per capita:
```

--- 95th Percentile----			--- 99th Percentile----			---99.9th Percentile----		
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.000004	0.04	>1000000	0.000011	0.11	943816	0.000024	0.24	417522
All Infants:								
0.000010	0.10	>1000000	0.000034	0.34	294227	0.000066	0.66	150393
Children 1-2:								
0.000006	0.06	>1000000	0.000016	0.16	626730	0.000036	0.36	278889
Children 3-5:								
0.000005	0.05	>1000000	0.000013	0.13	758013	0.000028	0.28	356630
Children 6-12:								
0.000003	0.03	>1000000	0.000010	0.10	>1000000	0.000023	0.23	444256
Youth 13-19:								
0.000003	0.03	>1000000	0.000008	0.08	>1000000	0.000019	0.19	513298

```
Adults 20-49:
  0.000004    0.04>1000000    0.000011    0.11  940591    0.000022    0.22  460031
Adults 50-99:
  0.000004    0.00>1000000    0.000010    0.01>1000000    0.000020    0.02  510055
Female 13-49:
  0.000004    0.04>1000000    0.000011    0.11  929241    0.000022    0.22  455992
```

Attachment 12: Acute MS Cotton ULV (Drinking Water Alone) Results File

```
US EPA                                              Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION              NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_MSCottonULV.r08      Adjustment factor #2 used.
Analysis Date: 08-17-2015/12:59:08   Residue file dated: 08-17-2015/12:51:03
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Acute-10x EPI"
=============================================================================

Summary calculations--per capita:

---   95th Percentile----   ---   99th Percentile----   ---99.9th Percentile----
 Exposure  % aPAD    MOE    Exposure  % aPAD    MOE     Exposure  % aPAD    MOE
---------- -------- --------  ---------- -------- --------  ---------- -------- --------
Total US Population:
  0.000001    0.01>1000000    0.000005    0.05>1000000    0.000016    0.16  620896
All Infants:
  0.000001    0.01>1000000    0.000015    0.15  663410    0.000046    0.46  215811
Children 1-2:
  0.000001    0.01>1000000    0.000007    0.07>1000000    0.000024    0.24  415696
Children 3-5:
  0.000001    0.01>1000000    0.000006    0.06>1000000    0.000020    0.20  510535
Children 6-12:
  0.000001    0.01>1000000    0.000004    0.04>1000000    0.000015    0.15  675426
Youth 13-19:
  0.000000    0.00>1000000    0.000004    0.04>1000000    0.000013    0.13  775592
Adults 20-49:
  0.000001    0.01>1000000    0.000005    0.05>1000000    0.000015    0.15  649723
Adults 50-99:
  0.000001    0.00>1000000    0.000005    0.00>1000000    0.000014    0.01  701939
Female 13-49:
  0.000001    0.01>1000000    0.000005    0.05>1000000    0.000016    0.16  642354
```

Attachment 13: Acute Food and FL Cabbage Results File

```
US EPA                                              Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION              NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodFLCabbage.R08
    Adjustment factor #2 used.
Analysis Date: 11-03-2015/08:57:17   Residue file dated: 11-03-2015/08:35:12
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
=============================================================================

Summary calculations--per capita:

---   95th Percentile----   ---   99th Percentile----   ---99.9th Percentile----
 Exposure  % aPAD    MOE    Exposure  % aPAD    MOE     Exposure  % aPAD    MOE
---------- -------- --------  ---------- -------- --------  ---------- -------- --------
Total US Population:
  0.001408   14.08    7103    0.003846   38.46    2599    0.009245   92.45    1081
```

```
All Infants:
  0.003182   31.82    3142   0.011723  117.23   853   0.024921  249.21   401
Children 1-2:
  0.002263   22.63    4418   0.006168   61.68  1621   0.014506  145.06   689
Children 3-5:
  0.001844   18.44    5422   0.004912   49.12  2035   0.010930  109.30   914
Children 6-12:
  0.001334   13.34    7496   0.003649   36.49  2740   0.008821   88.21  1133
Youth 13-19:
  0.000994    9.94   10058   0.002987   29.87  3347   0.007554   75.54  1323
Adults 20-49:
  0.001409   14.09    7099   0.003859   38.59  2591   0.008588   85.88  1164
Adults 50-99:
  0.001411    1.41    7086   0.003505    3.51  2852   0.007479    7.48  1337
Female 13-49:
  0.001375   13.75    7272   0.003896   38.96  2566   0.008668   86.68  1153
```

Attachment 14: Acute Food and FL Strawberry (Drinking Water) Results File

```
US EPA                                        Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION        NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodFLStrawberry.R08
    Adjustment factor #2 used.
Analysis Date: 11-03-2015/09:29:06   Residue file dated: 11-03-2015/09:02:02
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
=============================================================================

Summary calculations--per capita:

---   95th Percentile----   ---  99th Percentile----   ---99.9th Percentile----
 Exposure  % aPAD    MOE     Exposure   % aPAD    MOE    Exposure   % aPAD    MOE
---------- ------- --------  ---------- ------- --------  ---------- ------- --------
Total US Population:
  0.001253   12.53    7983   0.004239   42.39  2359   0.012887  128.87   775
All Infants:
  0.002570   25.70    3890   0.012457  124.57   802   0.036656  366.56   272
Children 1-2:
  0.002044   20.44    4892   0.006644   66.44  1505   0.019643  196.43   509
Children 3-5:
  0.001666   16.66    6003   0.005384   53.84  1857   0.015429  154.29   648
Children 6-12:
  0.001197   11.97    8356   0.003960   39.60  2525   0.011716  117.16   853
Youth 13-19:
  0.000881    8.81   11349   0.003205   32.05  3119   0.010406  104.06   961
Adults 20-49:
  0.001237   12.37    8083   0.004284   42.84  2334   0.012231  122.31   817
Adults 50-99:
  0.001254    1.25    7972   0.003919    3.92  2551   0.011079   11.08   902
Female 13-49:
  0.001199   11.99    8341   0.004301   43.01  2325   0.012407  124.07   805
```

Attachment 15: Acute Food and MS Cotton (Drinking Water) Results File

```
US EPA                                        Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION        NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodMSCotton.R08
    Adjustment factor #2 used.
Analysis Date: 11-03-2015/10:01:29   Residue file dated: 11-03-2015/09:32:22
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
```

```
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
================================================================================

Summary calculations--per capita:
```

---	95th Percentile	----	---	99th Percentile	----	---	99.9th Percentile	----
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.000524	5.24	19090	0.001835	18.35	5449	0.006853	68.53	1459
All Infants:								
0.000653	6.53	15319	0.004772	47.72	2095	0.017466	174.66	572
Children 1-2:								
0.001018	10.18	9818	0.003388	33.88	2951	0.010873	108.73	919
Children 3-5:								
0.000808	8.08	12381	0.002472	24.72	4045	0.008223	82.23	1216
Children 6-12:								
0.000547	5.47	18293	0.001930	19.30	5180	0.006625	66.25	1509
Youth 13-19:								
0.000349	3.49	28677	0.001395	13.95	7168	0.005195	51.95	1924
Adults 20-49:								
0.000476	4.76	21011	0.001808	18.08	5531	0.006904	69.04	1448
Adults 50-99:								
0.000491	0.49	20370	0.001672	1.67	5981	0.005590	5.59	1788
Female 13-49:								
0.000418	4.18	23914	0.001800	18.00	5555	0.006839	68.39	1462

Attachment 16: Acute Food and WA Cherry (Drinking Water) Results File

```
US EPA                                              Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION              NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodWACherry.R08
    Adjustment factor #2 used.
Analysis Date: 11-03-2015/10:41:01   Residue file dated: 11-03-2015/10:07:51
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
================================================================================

Summary calculations--per capita:
```

---	95th Percentile	----	---	99th Percentile	----	---	99.9th Percentile	----
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.001462	14.62	6840	0.008444	84.44	1184	0.024399	243.99	409
All Infants:								
0.001832	18.32	5459	0.025723	257.23	388	0.068903	689.03	145
Children 1-2:								
0.002393	23.93	4178	0.012608	126.08	793	0.037478	374.78	266
Children 3-5:								
0.001901	19.01	5260	0.010497	104.97	952	0.028678	286.78	348
Children 6-12:								
0.001394	13.94	7172	0.007678	76.78	1302	0.022784	227.84	438
Youth 13-19:								
0.000968	9.68	10328	0.006321	63.21	1582	0.019591	195.91	510
Adults 20-49:								
0.001437	14.37	6958	0.008573	85.73	1166	0.023019	230.19	434
Adults 50-99:								
0.001561	1.56	6404	0.008142	8.14	1228	0.021052	21.05	475
Female 13-49:								
0.001369	13.69	7305	0.008596	85.96	1163	0.023309	233.09	429

Attachment 17: Acute Food and WA Cherry ULV (Drinking Water) Results File

```
US EPA                                          Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION          NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodWACherryULV.R08
    Adjustment factor #2 used.
Analysis Date: 11-03-2015/11:20:11   Residue file dated: 11-03-2015/10:43:59
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
===========================================================================

Summary calculations--per capita:
```

--- 95th Percentile ----			--- 99th Percentile ----			---99.9th Percentile----		
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.000328	3.28	30455	0.000683	6.83	14634	0.002702	27.02	3700
All Infants:								
0.000440	4.40	22752	0.000683	6.83	14643	0.003697	36.97	2705
Children 1-2:								
0.000663	6.63	15082	0.001524	15.24	6560	0.007174	71.74	1393
Children 3-5:								
0.000529	5.29	18903	0.001174	11.74	8519	0.004292	42.92	2330
Children 6-12:								
0.000343	3.43	29118	0.000810	8.10	12344	0.004056	40.56	2465
Youth 13-19:								
0.000204	2.04	49049	0.000456	4.56	21925	0.002366	23.66	4226
Adults 20-49:								
0.000274	2.74	36435	0.000590	5.90	16961	0.002869	28.69	3485
Adults 50-99:								
0.000252	0.25	39637	0.000597	0.60	16754	0.001646	1.65	6075
Female 13-49:								
0.000212	2.12	47103	0.000475	4.75	21059	0.003074	30.74	3253

Attachment 18: Acute Food and MS Cotton ULV (Drinking Water) Results File

```
US EPA                                          Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION          NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodMSCottonULV.R08
    Adjustment factor #2 used.
Analysis Date: 11-03-2015/11:56:12   Residue file dated: 11-03-2015/11:23:18
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
RAC/FF intake summed over 24 hours
MC iterations = 1000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
===========================================================================

Summary calculations--per capita:
```

--- 95th Percentile ----			--- 99th Percentile ----			---99.9th Percentile----		
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.000328	3.28	30503	0.000683	6.83	14647	0.002699	26.99	3705
All Infants:								
0.000438	4.38	22834	0.000682	6.82	14673	0.003694	36.94	2707
Children 1-2:								
0.000662	6.62	15096	0.001523	15.23	6564	0.007171	71.71	1394

```
Children 3-5:
  0.000528    5.28   18931    0.001173   11.73    8523    0.004292   42.92   2329
Children 6-12:
  0.000343    3.43   29156    0.000809    8.09   12354    0.004054   40.54   2466
Youth 13-19:
  0.000204    2.04   49138    0.000456    4.56   21942    0.002363   23.63   4232
Adults 20-49:
  0.000274    2.74   36513    0.000589    5.89   16983    0.002870   28.70   3484
Adults 50-99:
  0.000252    0.25   39709    0.000597    0.60   16764    0.001644    1.64   6084
Female 13-49:
  0.000212    2.12   47241    0.000474    4.74   21100    0.003072   30.72   3254
```

Attachment 19: Steady State (Food Alone) Results File

Note: Used the same acute food alone file since the steady state has the same toxicological
endpoints [click the two-day average and added 2000 iterations]

```
US EPA                                           Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION           NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodOnly_revised.R08
   Adjustment factor #2 used.
Analysis Date: 11-03-2015/14:01:58    Residue file dated: 10-27-2015/09:52:11
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
========================================================================


Summary calculations--per capita:

---   95th Percentile----   ---   99th Percentile----   ---99.9th Percentile----
 Exposure  % aPAD    MOE    Exposure  % aPAD    MOE    Exposure  % aPAD    MOE
---------- -------  ------- ---------- -------  ------- ---------- -------  -------
Total US Population:
  0.000313    3.13   31942    0.000607    6.07   16475    0.002413   24.13   4144
All Infants:
  0.000430    4.30   23245    0.000676    6.76   14801    0.002251   22.51   4443
Children 1-2:
  0.000646    6.46   15484    0.001399   13.99    7149    0.004761   47.61   2100
Children 3-5:
  0.000497    4.97   20101    0.000936    9.36   10684    0.002872   28.72   3482
Children 6-12:
  0.000329    3.29   30381    0.000713    7.13   14034    0.003251   32.51   3076
Youth 13-19:
  0.000188    1.88   53144    0.000420    4.20   23786    0.001379   13.79   7253
Adults 20-49:
  0.000254    2.54   39319    0.000519    5.19   19265    0.002814   28.14   3553
Adults 50-99:
  0.000239    0.24   41760    0.000516    0.52   19379    0.001365    1.36   7326
Female 13-49:
  0.000199    1.99   50237    0.000428    4.28   23369    0.002646   26.46   3779
```

Attachment 20: Steady State FL Cabbage (Drinking Water Only) Input and Results File

```
US EPA                                           Ver. 3.18, 03-08-d
DEEM-FCID Acute analysis for
Residue file name:
C:\Users\spiper\Documents\DEEM_version316\Malathion_2014\Malathion_DWonly_FLCabbage_SS.r08
Analysis Date 07-30-2015          Residue file dated: 07-30-2015/15:03:11
```

```
Reference dose: aRfD = 0.01 mg/kg bw/day   NOEL = 10 mg/kg bw/day
Comment: Steady State and Add 10x for acute EPI
-------------------------------------------------------------------------------
RDL indices and parameters for Monte Carlo Analysis:
Index Dist Parameter #1          Param #2    Param #3    Comment
  #   Code
----- ---- -------------         ----------- ----------- ----------
  1    6   FLCabbage_22x_SS.rdf

  EPA        Crop Food Name                    Def Res    Adj.Factors  RDL  Comment
  Code       Grp                               (ppm)      #1     #2    Pntr
---------- ---- ----------------------------- ---------- ------ ------ --- -------
9500001000 O    Water, direct, all sources     0.000000   0.000  0.000
1800002000 18   Water, indirect, all sources   0.000000   0.000  0.000


US EPA                                         Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION         NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_FLCabbage_SS.r08   Adjustment factor #2 NOT used.
Analysis Date: 07-30-2015/15:05:44   Residue file dated: 07-30-2015/15:03:11
NOEL (Acute) = 10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Steady State and Add 10x for acute EPI"
===============================================================================

Summary calculations--per capita:
```

--- 95th Percentile ----			--- 99th Percentile ----			---99.9th Percentile----		
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.001286	12.86	7778	0.002890	28.90	3460	0.006018	60.18	1661
All Infants:								
0.003495	34.95	2861	0.009293	92.93	1076	0.016537	165.37	604
Children 1-2:								
0.001786	17.86	5598	0.004426	44.26	2259	0.008952	89.52	1117
Children 3-5:								
0.001589	15.89	6295	0.003485	34.85	2869	0.006912	69.12	1446
Children 6-12:								
0.001116	11.16	8958	0.002573	25.73	3886	0.005272	52.72	1896
Youth 13-19:								
0.000914	9.14	10943	0.002321	23.21	4308	0.004502	45.02	2221
Adults 20-49:								
0.001318	13.18	7586	0.002883	28.83	3468	0.005338	53.38	1873
Adults 50-99:								
0.001306	1.31	7655	0.002685	2.68	3724	0.004929	4.93	2028
Female 13-49:								
0.001310	13.10	7633	0.002964	29.64	3373	0.005277	52.77	1894

Attachment 21: Steady State FL Strawberry (Drinking Water Only) Results File

```
US EPA                                         Ver. 3.18, 03-08-d
DEEM-FCID Acute analysis for
Residue file name:
C:\Users\spiper\Documents\DEEM_version316\Malathion_2014\Malathion_DWonly_FLStrawberry_SS.r
08
Analysis Date 07-30-2015            Residue file dated: 07-30-2015/15:12:20
Reference dose: aRfD = 0.01 mg/kg bw/day   NOEL = 10 mg/kg bw/day
Comment: Steady State and Add 10x for acute EPI
-------------------------------------------------------------------------------
RDL indices and parameters for Monte Carlo Analysis:
Index Dist Parameter #1          Param #2    Param #3    Comment
```

```
   #    Code
----- ---- ------------          ------------ ----------- ----------
   1    6   FLStrawberry_22x_SS.rdf

  EPA       Crop Food Name                          Def Res    Adj.Factors   RDL  Comment
  Code      Grp                                     (ppm)      #1    #2      Pntr
---------- ---- --------------------------------- ---------- ------ ------ --- -------
9500001000 O    Water, direct, all sources          0.000000  0.000  0.000
1800002000 18   Water, indirect, all sources        0.000000  0.000  0.000
```

```
US EPA                                                   Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION                   NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_FLStrawberry_SS.r08
Adjustment factor #2 NOT used.
Analysis Date: 07-30-2015/15:14:52    Residue file dated: 07-30-2015/15:12:20
NOEL (Acute) = 10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Steady State and Add 10x for acute EPI"
=======================================================================
```

Summary calculations--per capita:

	95th Percentile			99th Percentile			99.9th Percentile	
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.001080	10.80	9259	0.002741	27.41	3648	0.006686	66.86	1495
All Infants:								
0.003025	30.25	3305	0.008462	84.62	1181	0.019562	195.62	511
Children 1-2:								
0.001554	15.54	6436	0.004073	40.73	2455	0.009984	99.84	1001
Children 3-5:								
0.001319	13.19	7582	0.003304	33.04	3026	0.007692	76.92	1299
Children 6-12:								
0.000947	9.47	10556	0.002427	24.27	4120	0.005918	59.18	1689
Youth 13-19:								
0.000798	7.98	12538	0.002121	21.21	4715	0.005116	51.16	1954
Adults 20-49:								
0.001092	10.92	9159	0.002714	27.14	3684	0.006217	62.17	1608
Adults 50-99:								
0.001073	1.07	9319	0.002573	2.57	3885	0.005819	5.82	1718
Female 13-49:								
0.001091	10.91	9163	0.002763	27.63	3618	0.006251	62.51	1599

Attachment 22: Steady State MS Cotton (Drinking Water Only) Results File

```
US EPA                                                   Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION                   NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_MSCotton_SS.r08   Adjustment factor #2 NOT used.
Analysis Date: 07-30-2015/13:49:22    Residue file dated: 07-22-2015/13:42:54
NOEL (Acute) = 10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Steady State and Add 10x for acute EPI"
=======================================================================
```

Summary calculations--per capita:

```
---    95th Percentile----    ---   99th Percentile----    ---99.9th Percentile----
```

Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.000367	3.67	27232	0.001247	12.47	8022	0.003601	36.01	2777
All Infants:								
0.000750	7.50	13341	0.003766	37.66	2655	0.011172	111.72	895
Children 1-2:								
0.000512	5.12	19539	0.001852	18.52	5400	0.005532	55.32	1807
Children 3-5:								
0.000449	4.49	22258	0.001499	14.99	6672	0.004224	42.24	2367
Children 6-12:								
0.000318	3.18	31428	0.001104	11.04	9055	0.003195	31.95	3130
Youth 13-19:								
0.000252	2.52	39737	0.000951	9.51	10512	0.002819	28.19	3546
Adults 20-49:								
0.000375	3.75	26638	0.001247	12.47	8022	0.003451	34.51	2897
Adults 50-99:								
0.000386	0.39	25933	0.001194	1.19	8373	0.003243	3.24	3083
Female 13-49:								
0.000366	3.66	27286	0.001257	12.57	7954	0.003511	35.11	2847

Attachment 23: Steady State WA Cherry (Drinking Water Only) Results File

```
US EPA                                          Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION          NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_WACherry_SS.r08   Adjustment factor #2 NOT used.
Analysis Date: 07-30-2015/13:59:11    Residue file dated: 07-22-2015/13:52:49
NOEL (Acute) = 10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Steady State and Add 10x for acute EPI"
==============================================================================


Summary calculations--per capita:
```

	95th Percentile			99th Percentile			99.9th Percentile	
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.001969	19.69	5078	0.006654	66.54	1502	0.016424	164.24	608
All Infants:								
0.003595	35.95	2782	0.021344	213.44	468	0.047901	479.01	208
Children 1-2:								
0.002779	27.79	3598	0.010008	100.08	999	0.024247	242.47	412
Children 3-5:								
0.002432	24.32	4112	0.008134	81.34	1229	0.019286	192.86	518
Children 6-12:								
0.001699	16.99	5886	0.005856	58.56	1707	0.014465	144.65	691
Youth 13-19:								
0.001337	13.37	7481	0.005129	51.29	1949	0.012253	122.53	816
Adults 20-49:								
0.002004	20.04	4990	0.006722	67.22	1487	0.015276	152.76	654
Adults 50-99:								
0.002105	2.11	4749	0.006353	6.35	1574	0.014293	14.29	699
Female 13-49:								
0.001944	19.44	5142	0.006859	68.59	1457	0.015266	152.66	655

Attachment 24: Steady State WA Cherry ULV (Drinking Water Only) Results File

```
US EPA                                          Ver. 3.18, 03-08-d
```

```
DEEM-FCID ACUTE Analysis for MALATHION                NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_WACherryULV_SS.r08    Adjustment factor #2 used.
Analysis Date: 08-20-2015/08:06:20    Residue file dated: 08-20-2015/07:59:48
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Steady State and Add 10x for acute EPI"
===============================================================================

Summary calculations--per capita:
```

---	95th Percentile	----	---	99th Percentile	----	---99.9th	Percentile	----
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.000004	0.04	>1000000	0.000009	0.09	>1000000	0.000018	0.18	559698
All Infants:								
0.000011	0.11	915397	0.000029	0.29	348332	0.000049	0.49	204026
Children 1-2:								
0.000006	0.06	>1000000	0.000014	0.14	732165	0.000027	0.27	372548
Children 3-5:								
0.000005	0.05	>1000000	0.000011	0.11	935569	0.000021	0.21	486444
Children 6-12:								
0.000003	0.03	>1000000	0.000008	0.08	>1000000	0.000016	0.16	636076
Youth 13-19:								
0.000003	0.03	>1000000	0.000007	0.07	>1000000	0.000013	0.13	752023
Adults 20-49:								
0.000004	0.04	>1000000	0.000009	0.09	>1000000	0.000016	0.16	637399
Adults 50-99:								
0.000004	0.00	>1000000	0.000008	0.01	>1000000	0.000015	0.01	686905
Female 13-49:								
0.000004	0.04	>1000000	0.000009	0.09	>1000000	0.000016	0.16	644227

Attachment 25: Steady State MS Cotton ULV (Drinking Water Only) Results File

```
US EPA                                                Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION                NHANES 2003-2008 2-Day
Residue file: Malathion_DWonly_MSCottonULV_SS.r08    Adjustment factor #2 used.
Analysis Date: 08-20-2015/08:17:32    Residue file dated: 08-20-2015/08:11:45
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Steady State and Add 10x for acute EPI"
===============================================================================

Summary calculations--per capita:
```

---	95th Percentile	----	---	99th Percentile	----	---99.9th	Percentile	----
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.000001	0.01	>1000000	0.000005	0.05	>1000000	0.000015	0.15	663364
All Infants:								
0.000001	0.01	>1000000	0.000015	0.15	678340	0.000044	0.44	227462
Children 1-2:								
0.000001	0.01	>1000000	0.000007	0.07	>1000000	0.000022	0.22	448220
Children 3-5:								
0.000001	0.01	>1000000	0.000006	0.06	>1000000	0.000018	0.18	560231
Children 6-12:								
0.000001	0.01	>1000000	0.000004	0.04	>1000000	0.000014	0.14	738771

```
Youth 13-19:
  0.000000     0.00>1000000    0.000004    0.04>1000000    0.000011    0.11   877453
Adults 20-49:
  0.000001     0.01>1000000    0.000005    0.05>1000000    0.000014    0.14   697180
Adults 50-99:
  0.000001     0.00>1000000    0.000005    0.00>1000000    0.000014    0.01   731761
Female 13-49:
  0.000001     0.01>1000000    0.000005    0.05>1000000    0.000014    0.14   693009
```

Attachment 26: Steady State Food and FL Cabbage Results File

```
US EPA                                              Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION              NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodFLCAbbage_SS.R08
    Adjustment factor #2 used.
Analysis Date: 11-03-2015/16:40:53    Residue file dated: 11-03-2015/15:27:06
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
=================================================================================

Summary calculations--per capita:

---   95th Percentile----   ---  99th Percentile----   ---99.9th Percentile----
 Exposure  % aPAD    MOE    Exposure  % aPAD    MOE    Exposure  % aPAD    MOE
---------- -------- -------- ---------- -------- -------- ---------- -------- --------
Total US Population:
  0.001442  14.42    6935    0.003114   31.14    3211    0.006439   64.39    1552
All Infants:
  0.003731  37.31    2679    0.009595   95.95    1042    0.016969  169.69     589
Children 1-2:
  0.002246  22.46    4453    0.004960   49.60    2016    0.009994   99.94    1000
Children 3-5:
  0.001903  19.03    5254    0.003856   38.56    2593    0.007294   72.94    1370
Children 6-12:
  0.001351  13.51    7401    0.002941   29.41    3400    0.005799   57.99    1724
Youth 13-19:
  0.001042  10.42    9596    0.002473   24.73    4043    0.004960   49.60    2016
Adults 20-49:
  0.001461  14.61    6844    0.003099   30.99    3226    0.005694   56.94    1756
Adults 50-99:
  0.001412   1.41    7081    0.002808    2.81    3560    0.005079    5.08    1968
Female 13-49:
  0.001437  14.37    6958    0.003167   31.67    3157    0.005710   57.10    1751
```

Attachment 27: Steady State Food and FL Strawberry Results File

```
US EPA                                              Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION              NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodFLStrawberry_SS.R08
    Adjustment factor #2 used.
Analysis Date: 11-04-2015/07:50:29    Residue file dated: 11-04-2015/06:44:46
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
=================================================================================

Summary calculations--per capita:
```

```
---   95th Percentile----   ---  99th Percentile----   ---99.9th Percentile----
 Exposure  % aPAD    MOE    Exposure  % aPAD    MOE    Exposure  % aPAD    MOE
---------- ------- --------  ---------- ------- --------  ---------- ------- --------
Total US Population:
  0.001254  12.54   7973     0.002990  29.90   3344     0.007101  71.01   1408
All Infants:
  0.003253  32.53   3074     0.008751  87.51   1142     0.020115  201.15   497
Children 1-2:
  0.002034  20.34   4916     0.004671  46.71   2140     0.011180  111.80   894
Children 3-5:
  0.001653  16.53   6050     0.003684  36.84   2714     0.008183  81.83   1222
Children 6-12:
  0.001192  11.92   8388     0.002816  28.16   3550     0.006443  64.43   1552
Youth 13-19:
  0.000930   9.30  10756     0.002287  22.87   4372     0.005695  56.95   1755
Adults 20-49:
  0.001241  12.41   8060     0.002960  29.60   3378     0.006612  66.12   1512
Adults 50-99:
  0.001199   1.20   8340     0.002706   2.71   3695     0.005908   5.91   1692
Female 13-49:
  0.001225  12.25   8161     0.002985  29.85   3349     0.006794  67.94   1471
```

Attachment 28: Steady State Food and MS Cotton Results File

```
US EPA                                            Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION            NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodMSCotton_SS.R08
   Adjustment factor #2 used.
Analysis Date: 11-04-2015/10:19:22   Residue file dated: 11-04-2015/09:14:23
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
==============================================================================


Summary calculations--per capita:

---   95th Percentile----   ---  99th Percentile----   ---99.9th Percentile----
 Exposure  % aPAD    MOE    Exposure  % aPAD    MOE    Exposure  % aPAD    MOE
---------- ------- --------  ---------- ------- --------  ---------- ------- --------
Total US Population:
  0.000586   5.86  17069     0.001552  15.52   6443     0.004272  42.72   2340
All Infants:
  0.001109  11.09   9019     0.004065  40.65   2459     0.011467  114.67   872
Children 1-2:
  0.001086  10.86   9205     0.002618  26.18   3819     0.007043  70.43   1419
Children 3-5:
  0.000860   8.60  11629     0.002043  20.43   4894     0.005044  50.44   1982
Children 6-12:
  0.000601   6.01  16643     0.001590  15.90   6290     0.004360  43.60   2293
Youth 13-19:
  0.000411   4.11  24306     0.001210  12.10   8261     0.003344  33.44   2990
Adults 20-49:
  0.000553   5.53  18094     0.001531  15.31   6532     0.004116  41.16   2429
Adults 50-99:
  0.000553   0.55  18091     0.001374   1.37   7279     0.003408   3.41   2933
Female 13-49:
  0.000515   5.15  19402     0.001527  15.27   6548     0.004181  41.81   2391
```

Attachment 29: Steady State Food and WA Cherry Results File

```
US EPA                                          Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION          NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodWACherry_SS.R08
    Adjustment factor #2 used.
Analysis Date: 11-04-2015/11:09:21   Residue file dated: 11-04-2015/10:23:15
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
==============================================================================
```

Summary calculations--per capita:

--- 95th Percentile----			--- 99th Percentile----			---99.9th Percentile----		
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.002147	21.47	4658	0.006825	68.25	1465	0.016610	166.10	602
All Infants:								
0.003910	39.10	2557	0.021553	215.53	463	0.047290	472.90	211
Children 1-2:								
0.003291	32.91	3038	0.010527	105.27	949	0.024835	248.35	402
Children 3-5:								
0.002765	27.65	3617	0.008419	84.19	1187	0.019446	194.46	514
Children 6-12:								
0.001986	19.86	5034	0.006118	61.18	1634	0.014652	146.52	682
Youth 13-19:								
0.001450	14.50	6896	0.005283	52.83	1892	0.012409	124.09	805
Adults 20-49:								
0.002180	21.80	4586	0.006866	68.66	1456	0.015436	154.36	647
Adults 50-99:								
0.002210	2.21	4524	0.006460	6.46	1548	0.014391	14.39	694
Female 13-49:								
0.002110	21.10	4739	0.007007	70.07	1427	0.015356	153.56	651

Attachment 30: Steady State Food and WA Cherry ULV Results File

```
US EPA                                          Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION          NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodWACherryULV_SS.R08
    Adjustment factor #2 used.
Analysis Date: 11-04-2015/12:13:33   Residue file dated: 11-04-2015/11:17:38
NOEL (Acute) =  10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
==============================================================================
```

Summary calculations--per capita:

--- 95th Percentile----			--- 99th Percentile----			---99.9th Percentile----		
Exposure	% aPAD	MOE	Exposure	% aPAD	MOE	Exposure	% aPAD	MOE
Total US Population:								
0.000314	3.14	31877	0.000608	6.08	16458	0.002406	24.06	4156
All Infants:								
0.000432	4.32	23132	0.000679	6.79	14735	0.002271	22.71	4403

```
Children 1-2:
  0.000647    6.47   15460   0.001400   14.00    7142   0.004826   48.26   2072
Children 3-5:
  0.000500    5.00   19983   0.000939    9.39   10648   0.002871   28.71   3483
Children 6-12:
  0.000329    3.29   30391   0.000720    7.20   13896   0.003250   32.50   3077
Youth 13-19:
  0.000189    1.89   52979   0.000420    4.20   23804   0.001405   14.05   7116
Adults 20-49:
  0.000255    2.55   39251   0.000517    5.17   19359   0.002760   27.60   3622
Adults 50-99:
  0.000240    0.24   41615   0.000516    0.52   19388   0.001361    1.36   7344
Female 13-49:
  0.000200    2.00   50036   0.000427    4.27   23429   0.002619   26.19   3817
```

Attachment 31: Steady State Food and MS Cotton ULV Results File

```
US EPA                                              Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for MALATHION              NHANES 2003-2008 2-Day
Residue file: Malathion_Mosquitocide_FoodMSCottonULV_SS.R08
   Adjustment factor #2 used.
Analysis Date: 11-05-2015/14:16:49    Residue file dated: 11-05-2015/13:08:13
NOEL (Acute) = 10.000000 mg/kg body-wt/day
Acute Pop Adjusted Dose (aPAD) varies with population; see individual reports
Two-Day Average Results Reported
RAC/FF intake summed over 24 hours
MC iterations = 2000; MC list in residue file; MC seed = 10; RNG = MS VB
Run Comment: "Malathion Acute Endpoints with 10x for EPI"
========================================================================

Summary calculations--per capita:

---   95th Percentile----   ---   99th Percentile----   ---99.9th Percentile----
 Exposure  % aPAD    MOE    Exposure  % aPAD    MOE     Exposure  % aPAD    MOE
---------- -------  -------- ---------- -------  -------- ---------- -------  --------
Total US Population:
  0.000313    3.13   31936   0.000607    6.07   16472   0.002407   24.07   4154
All Infants:
  0.000431    4.31   23193   0.000677    6.77   14776   0.002274   22.74   4397
Children 1-2:
  0.000646    6.46   15472   0.001399   13.99    7147   0.004829   48.29   2070
Children 3-5:
  0.000500    5.00   20017   0.000938    9.38   10659   0.002871   28.71   3482
Children 6-12:
  0.000329    3.29   30427   0.000719    7.19   13901   0.003254   32.54   3073
Youth 13-19:
  0.000188    1.88   53081   0.000420    4.20   23825   0.001404   14.04   7123
Adults 20-49:
  0.000254    2.54   39327   0.000516    5.16   19374   0.002761   27.61   3621
Adults 50-99:
  0.000240    0.24   41689   0.000515    0.52   19405   0.001363    1.36   7335
Female 13-49:
  0.000199    1.99   50212   0.000426    4.26   23459   0.002623   26.23   3812
```

Attachment 32: SLUA for Malathon

<div align="center">

Date: April 1, 2015
Screening Level Estimates of Agricultural Uses of Malathion (057701)
Sorted Alphabetically

</div>

Reporting Years: 2004-2013

	Crop	Annual Average Lbs. A.I.	Percent Crop Treated Annual Average	Maximum
1	Alfalfa	100,000	<2.5	<2.5
2	Apples	1,000	<1	<2.5
3	Apricots*	<500	<1	<2.5
4	Asparagus	1,000	5	10
5	Avocados	1,000	5	5
6	Barley	1,000	<2.5	5
7	Beans, Green	2,000	<1	<2.5
8	Blueberries	60,000	30	40
9	Broccoli	4,000	<2.5	5
10	Brussels Sprouts*	1,000	5	20
11	Cabbage	2,000	<2.5	5
12	Caneberries	30,000	30	70
13	Canola	<500	5	10
14	Cantaloupes	1,000	<2.5	5
15	Carrots	10,000	5	20
16	Cauliflower	1,000	<2.5	5
17	Celery	10,000	15	30
18	Cherries	50,000	10	25
19	Corn	10,000	<1	<2.5
20	Cotton	900,000	<2.5	20
21	Cucumbers	3,000	<2.5	5
22	Dry Beans/Peas	6,000	<1	<2.5
23	Eggplant	<500	<2.5	5
24	Figs*	1,000	5	10
25	Garlic	2,000	5	10
26	Grapefruit	7,000	5	15
27	Grapes	20,000	<2.5	<2.5
28	Lemons	1,000	<1	<2.5
29	Lettuce	40,000	5	15
30	Oats	<500	<1	<2.5
31	Onions	6,000	5	10
32	Oranges	70,000	5	20
33	Peaches	6,000	<2.5	5
34	Pears	5,000	<2.5	<2.5
35	Peas, Green	2,000	<2.5	<2.5
36	Pecans	20,000	<2.5	5

37	Peppers	1,000	<2.5	5
38	Potatoes	2,000	<1	<2.5
39	Pumpkins	1,000	<2.5	10
40	Rice	30,000	<2.5	<2.5
41	Sorghum	3,000	<1	<2.5
42	Soybeans+	50,000	<1	<2.5
43	Spinach	2,000	<2.5	5
44	Squash	4,000	<2.5	10
45	Strawberries	100,000	35	55
46	Sugar Beets	20,000	<2.5	<2.5
47	Sunflowers	1,000	<1	<2.5
48	Sweet Corn	3,000	<2.5	<2.5
49	Tangelos	<500	5	10
50	Tangerines	10,000	15	25
51	Tomatoes	20,000	<2.5	5
52	Walnuts	100,000	5	15
53	Watermelons	7,000	<2.5	5
54	Wheat	50,000	<1	<2.5

All numbers are rounded.

    <500: less than 500 pounds of active ingredients.

        <2.5: less than 2.5 percent of crop is treated.

        <1: less than 1 percent of crop is treated.

* Based on CA DPR data only (80% or more of U.S. acres grown are in California)

+: Soybeans not known to be listed on active end use product registrations or as Section 18 emergency exemptions when this report was run.

SLUA data sources include:

    USDA-NASS (United States Department of Agriculture's National Agricultural Statistics Service)

    Private Pesticide Market Research

    California DPR (Department of Pesticide Regulation)

These results reflect amalgamated data developed by the Agency and are releasable to the public.