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BUREAU OF THE CENSUS

WM. J. HARRIS, DIRECTOR

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COTTON PRODUCTION

1913



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LETTER OF TRANSMITTAL.

DEPARTMENT OF COMMERCE,
BUREAU OF THE CENSUS,
Washington, D. C., May 15, 1914.

SIR:

I have the honor to transmit herewith Census Bulletin 125, which is a report on the production of cotton in 1913. The statistics were collected and compiled by this bureau under the supervision of William M. Steuart, chief statistician for manufactures, assisted by H. J. Zimmerman.

The report is presented in three divisions: (1) Annual production of cotton and linters in the United States, as returned by ginners and delinters, distributed by states and counties, from 1909 to 1913, inclusive, with statistics of production for previous years; (2) world's cotton production from 1909 to 1913, by countries; and (3) consumption, exports, imports, and stocks of cotton in the United States for specified periods, 1906 to 1914, inclusive.

During the season of 1913-14, as in previous years, 10 preliminary reports of cotton ginned to specified dates have been issued. The present report gives the aggregate of the figures included in the preliminary statements, and covers the fifteenth consecutive year for which statistics of cotton ginned have been collected and published by this bureau. Three reports of cotton seed crushed and linters produced were also collected as follows: To December 1, to January 1, and for the season.

In addition to the statistics of production, the bureau publishes each season a complementary report on the supply and distribution of cotton for the year ending August 31, and monthly reports of cotton consumed, imported, exported, and on hand, and of the number of active consuming cotton spindles. The statistics of imports show the countries of production, and those of exports the countries to which exported.

The service of the bureau in disseminating information concerning cotton has been extended during the past year and greater publicity is now being given to the reports of cotton ginned. In prior seasons the quantity of cotton ginned had been published by counties only twice during the year—as of December 13 and for the crop. During the past season information of this character has been given out for each report date, first for separate counties through the local agents of the bureau who have been instructed to furnish the totals to the local newspapers, and finally by summaries, showing comparative statistics by counties, which have been mailed to the newspapers of the respective states. Thus each locality and section is given information of particular interest to it.

In recent years there has been a marked increase in the quantity of linters obtained and a lowering in the average grade of this fiber, due to the closer delinting of the cotton seed. This condition has led to a demand that this product be excluded from the totals of cotton produced and accordingly statistics of lint cotton and of linters are now shown separately.

Very respectfully,



Director of the Census.

HON. WILLIAM C. REDFIELD,
Secretary of Commerce.

COTTON PRODUCTION IN THE UNITED STATES.

A comparative summary is given in Table 1 of the production of cotton and linters in the United States from 1899 to 1913, inclusive, as ascertained from the reports of ginners and delinters.

These statistics are given in running bales, and in equivalent 500-pound bales, and show separately the number of upland square, upland round, sea-island, and linter bales.

TABLE 1.—COMPARATIVE SUMMARY—COTTON AND LINTER PRODUCTION: CROPS OF 1899 TO 1913.

GROWTH YEAR.	COTTON (EXCLUSIVE OF LINTERS).						LINTERS.	
	Running bales, counting round as half bales.	Equivalent 500-pound bales.	Running bales.				Running bales.	Equivalent 500-pound bales.
			Total.	Upland.		Sea-island.		
				Square.	Round.			
1913.....	13,982,811	14,156,486	14,032,792	13,855,267	99,962	77,563	631,153	638,881
1912.....	13,488,539	13,703,421	13,529,303	13,373,998	81,528	73,777	602,324	609,594
1911.....	15,553,073	15,692,701	15,603,850	15,383,003	101,554	119,293	556,276	557,575
1910.....	11,568,334	11,608,616	11,624,777	11,421,522	112,887	90,368	397,628	397,072
1909.....	10,072,731	10,004,949	10,148,076	9,902,595	150,690	94,791	313,478	310,433
1908.....	13,086,005	13,241,799	13,207,157	12,870,994	242,305	93,858	346,126	345,507
1907.....	11,057,822	11,107,179	11,157,096	10,871,652	198,549	86,895	268,060	268,282
1906.....	12,983,201	13,273,809	13,117,310	12,791,541	268,219	57,550	322,064	321,689
1905.....	10,495,105	10,575,017	10,635,023	10,242,648	279,836	112,539	230,497	229,539
1904.....	13,451,337	13,438,012	13,599,412	13,198,944	296,151	104,317	245,973	241,942
1903.....	9,819,969	9,851,129	10,205,073	9,359,472	770,208	75,393	195,752	194,486
1902.....	10,588,250	10,630,945	11,078,882	9,992,665	981,264	104,953	196,223	196,223
1901.....	9,582,520	9,509,745	9,954,945	9,132,215	744,851	77,879	166,026	166,026
1900.....	10,102,102	10,123,027	10,486,148	9,629,762	768,092	88,294	143,500	143,500
1899.....	9,393,242	9,345,391	9,645,974	9,043,231	505,464	97,279	114,544	114,544

The quantity of cotton reported for the crop of 1913, counting round as half bales and excluding linters, is 13,982,811 running bales. With the exception of that of 1911 this is the largest crop the United States has ever produced. Expressed in gross 500-pound bales, the crop amounted to 14,156,486 bales, being 1,536,215 bales, or 9.8 per cent less than that of 1911, but exceeding that of 1912 by 453,065 bales, or 3.3 per cent; that of 1909, the smallest crop in recent years, by 4,151,537 bales, or 41.5 per cent; and that of 1904, the fourth largest crop, by 718,474 bales, or 5.3 per cent. The average annual production of cotton for the first five-year period shown in the table (1899-1903) was 9,892,047 bales; for the second (1904-1908) 12,327,163 bales; and for the last (1909-1913) 13,033,235 bales. The increase in the average annual production during the last period over the second was 706,072 bales, or 5.7 per cent, and over the first, 3,141,188 bales, or 31.8 per cent.

Practically the entire production of cotton in the United States is upland, which includes a number of long-staple varieties, only about one-half of 1 per cent of the total cotton production in 1913 being of the sea-island variety. Although the production of sea-island cotton during the period covered by the table shows variations from 57,550 running bales in 1906 to 119,293 in 1911, there has been no general tendency toward an increase or a decrease in the production of this variety.

The production of linters shows a marked increase during the period covered by the table—from 114,544 bales in 1899 to 638,881 bales in 1913. This gain is due, in part, to the increase in the production of cotton and hence of cotton seed available for delinting, and, in part, to the marked development since 1899 of the cottonseed-products industry, resulting in an increase in the proportion of the total seed supply reginned. The closer delinting of the seed for the better separation of the meat from the hulls, however, is re-

sponsible for a large part of the increase, as many mills now obtain in excess of 100 pounds of linters per ton of seed treated, whereas formerly few obtained as much as 50 pounds. Detailed information regarding cotton seed crushed and linters obtained is presented on pages 30 to 32.

PRODUCTION BY STATES.

Table 2 shows, by states, the quantity of cotton grown in the years 1909 to 1913, inclusive, the percentage of the total crop represented by the crop of each state, the rank of each state according to quantity produced, and the production of linters. The production of cotton for earlier years is shown in Tables 14 and 15.

The cotton crop of 1913, as compared with that of 1912, shows a gain in each of the states, presented separately in Table 2, with the exceptions of North Carolina, Oklahoma, Texas, and Virginia. The production in Alabama, Georgia, South Carolina, and Tennessee was the largest ever reported for these states, except for 1911. Arkansas made its record crop in 1913 and Louisiana showed the largest amount ginned from a single crop since 1908. While the crop in Texas was nearly 1,000,000 bales short of the record crop of 1912, it was exceeded by that and only two others—those of 1906 and 1911. Great variations are shown in the crops of this state in the different years. In 1906 the production was 4,174,206 bales, while the following year it amounted to only 2,300,179 bales. The production then rose to 3,814,485 bales in 1908, to 4,256,427 bales in 1911, and to 4,880,210 bales in 1912. The state produced 25.2 per cent of the total crop of the country in 1909, 26.3 per cent in 1910, 27.1 per cent in 1911, 35.6 per cent in 1912, and 27.9 per cent in 1913.

A large part of the increase in production of cotton in recent years has been due to that in Georgia and South Carolina. The production of cotton in Georgia in 1913, while showing an increase of more than half a million bales, as compared with the previous year, was still 452,026 bales short of the record crop of 1911. The crop of 1913, however, was, in this state, greater than that of 1906 by 724,029 bales, or 45.5 per cent, and in South Carolina by 501,633 bales, or 57.3 per cent.

The production of cotton in Louisiana decreased steadily from 1906 to 1910, though since then there has been some increase. In 1906 the production of the state amounted to 987,779 bales, while in 1910 the amount was only 245,648 bales. This rapid decline was due largely to the ravages of the boll weevil and

to the consequent diversion of cotton lands to the cultivation of sugar cane, rice, and other crops. There has been a tendency to return to the cultivation of cotton in some sections of the state, and it is expected that there will be a further increase in the production.

The Imperial Valley, in the southern part of California, is well suited to the cultivation of cotton. This section has a very rich soil, a warm climate, a long season, and, situated as it is on a lower level than the Colorado River, the further advantage of being easily susceptible to irrigation. The yield is high and the staple has length, strength, and uniformity, characteristics which are very desirable, and due, in part, to the absence of periods of drought or of excessive rains. The high cost of labor for picking cotton, however, is a drawback, while the suitability of the land for other crops undoubtedly restricts, to some extent, this culture.

Cotton has been grown in this locality on a commercial basis for only a few years. There were 5,986 bales ginned in 1910, 9,790 in 1911, 8,215 in 1912, and 22,838 in 1913. It has been reported that the acreage planted to cotton in 1914 would show a large increase over that in 1913, while the probable production is variously estimated from 50,000 to 100,000 bales.

The statistics for California include some cotton grown in Mexico (Lower California) and brought into this country to be ginned. The same conditions of soil and climate are found in the Mexican portion of the Imperial Valley as in the American, while the cost of picking is less because of the availability of Chinese labor. According to official reports, the quantity of unginned cotton imported into the customs district of southern California during the seven months ending March 31, 1914, was 10,814,808 pounds. All of this was cotton from Mexico. When ginned, it was equivalent to about 7,500 bales of lint cotton.

There were 2,299 bales reported as ginned in Arizona from the crop of 1913. The larger part of this cotton has the same characteristics as that grown in Egypt, having been propagated from seed brought from that country. The cotton is grown on irrigated land and the average yield is high. The area to be devoted to this staple in 1914 shows a large increase over that of 1913, the amount being variously estimated from 12,000 to 15,000 acres. The suitability of the land for growing other and possibly more remunerative crops, however, will tend to restrict cotton cultivation in this state.

"BOLLY COTTON."

At the close of each season more or less cotton is damaged by frost, and the bolls do not open fully. Formerly this cotton was considered worthless and no attempts were made to save it. The high price of cotton in recent years, however, has resulted in the devising of machinery for handling unopened bolls. These machines thrash out the seed cotton, after which it is passed to the gins, where it is treated in the same way as hand-picked seed cotton. The quantity of this cotton, usually called "bollies," is increasing, as many establishments, particularly in the western part of the cotton belt, are installing the necessary machinery for treating it. Its value, of course, depends upon its quality.

Believing that data of the quantity of "bollies" included in the totals for the crop of 1913 would be of interest and value, the bureau instructed its local agents to secure from ginners and others during the final canvass information as to this cotton. By reason of the fact that a comparatively small number of the gineries are equipped to handle this cotton and that, as a rule, the ginners purchase it from the growers before it is ginned, it was believed that most establishments would be able to give definite information as to the amount handled.

However, because of the difficulty and expense of getting cotton picked late in the season, many growers deem it preferable at the last picking to snap the opened and partially opened bolls with the unopened ones and send all through the same machinery. While the grade, and consequently the price, of a portion of this mixed cotton is lowered, the loss on this account is practically balanced by the margin of expense saved in the easier method of gathering. This cotton is sometimes classed as "bollies," although there does not appear to be uniformity in this respect. Accordingly, some of the agents included snapped cotton with "bollies," while others did not, and the results obtained are therefore not as satisfactory as might be desired and fail to reveal the exact quantity saved that formerly would have been altogether lost. They do give, however, a good idea of the quantity of cotton classed as "bollies," which helped to make up the total for the crop of 1913. From the data received it appears that there are about 1,200 gineries equipped for treating this cotton, and that the total amount was approximately 325,000 bales. Texas and Oklahoma produce nearly all of this cotton, as the winds prevailing in these states dry out the cotton in the unopened frost-bitten bolls, whereas, in some sections where the rainfall is greater, the bolls rot and the cotton can not be recovered.

CONDITIONS AFFECTING THE CROP OF 1913.

The cotton crop of 1913 began with an increased area planted, the revised estimate of the Department of Agriculture, published May 22, 1914, being 37,458,000

acres, as against its estimate of 34,766,000 acres for the crop of 1912. The crop, as a whole, got a late start, but good stands were obtained in practically the entire cotton belt other than the Atlantic Coast states, where much replanting was necessary—probably 25 per cent of their total cotton acreage. During May and June favorable weather conditions prevailed in all sections, offsetting, to a degree, the lateness of the crop and permitting the very late replanted cotton to get a good start. Favorable conditions continued, for the most part, in the Atlantic states and the greater portion of the middle Gulf states, enabling the plants in these sections to mature and fruit, and converting the early discouraging prospects into an excellent harvest. On the other hand, what promised to be a large yield in the area west of the Mississippi was reduced by prolonged drouth and excessive heat to a poor yield, considering that a large percentage of the increased acreage was in this section. The effects of the drouth and heat were especially severe in Oklahoma and only slightly less so in western Arkansas and the northern and western portions of the cotton-growing area of Texas.

An unusually early frost about October 21, and another and more extensive one a week later, killed the plants throughout a large part of the cotton belt and prevented further development of immature bolls. Good weather generally facilitated the harvesting of the crop, although in a few localities, particularly in eastern Texas and in Louisiana, excessive rains somewhat retarded picking and wrought much damage. The high price of the staple prevailing throughout the season encouraged rapid movement of cotton to the gineries.

COTTON INSECT PESTS IN 1913.

The cotton crop of 1913, in general, was less seriously affected by insect pests than the previous one, although certain large sections suffered more severely than ever before. With the exception of certain sections in northern Texas, where there was some recession in the territory invaded by the weevil, there was an advance all along the line, as compared with 1912. The limits of the territory infested are shown on the map on page 34. It is probable that both Georgia and Tennessee will be invaded by this pest in 1914.

Owing to the general dissemination of information by Federal and state departments of agriculture, the destructiveness of the boll weevil is being greatly reduced. By seed selection, plant improvement, and better methods of cultivation and fertilization, the development of the cotton plant may be so advanced before the activities of the weevil begin as to reduce very materially the damage that may be done by it.

The pink boll worm has caused great damage to Egyptian cotton within very recent years. This pest was imported into Egypt from India and appears to be very injurious to all varieties of cotton. Owing to the discovery of live pink boll worms in recent

importations of cotton seed intended for planting and raw cotton intended for spinning, the Department of Agriculture is now considering measures for the safeguarding of the culture in this country from its ravages. A number of methods have been proposed, among them being an embargo on the importation of Egyptian cotton and cotton seed; restriction of the use of Egyptian cotton to certain localities; and the destruction by burning of all picker waste in establishments where Egyptian cotton is used. Stringent regulations in the use of Egyptian cotton in this country will undoubtedly be made, while action to prevent admission of the pest will be thorough. A quarantine against the importation of cotton seed from Egypt and from Hawaii, where the pink boll worm is also found, has been established. This quarantine applies also to cotton seed produced in certain portions of Mexico and in some other countries infested by cotton pests of various kinds.

For the following statement concerning the status of the boll weevil and other insect pests which affect cotton in the United States, this office is indebted to the Bureau of Entomology of the Department of Agriculture:

The boll weevil.—The cotton boll weevil began the season in somewhat larger numbers than in 1912 and became exceedingly numerous and destructive in south Texas, southern and eastern Louisiana, and southern Mississippi. By reason of the climatic conditions of the winter of 1912-13, much of the territory on the central Black Prairie of Texas became free. The weevils were unable to make heavy inroads on this territory during the season of 1913 because of the intense heat. The dispersion began, as usual, in August, but was checked at an unusually early date by freezes which occurred from October 28 to 30 and from November 9 to 11. These freezes destroyed almost every vestige of food for the weevils and effectively stopped weevil development except in the coastal regions.

The territory invaded for the first time in 1913 included 22,800 square miles, but losses of territory in the north central part of Texas reduce this to a net increase in infested territory of 17,500 square miles. The total area now infested is 296,300 square miles.

One of the most interesting developments from the boll weevil situation was the discovery of a western race of this species breeding on a wild cotton in the mountain canyons of southeastern Arizona, which is capable of breeding in cultivated cotton. It occurs on its native food plant within a short distance of some of the new and growing irrigated cotton sections, and is, therefore, a menace to western cotton. This discovery was followed by experiments which have proven the ability of the boll weevil to sustain life and breed in the buds of one or two other plants nearly related to cotton. This adaptability of the insect may become a complicating factor in the future control of the species.

The cotton caterpillar.—The outbreak of the cotton caterpillar occurred a little later than in 1912 but the worms became generally distributed throughout the Southern states and were also present in the cotton plantings of Arizona. Considerable damage was done in south Texas.

Other injurious cotton insects.—There was a serious outbreak of the cotton boll worm in southeastern North Carolina. The red spider was not as injurious as in preceding years.

COTTON AND LINTERS REMAINING TO BE GINNED.

The special agents were required, at the March canvass, to obtain from each ginner a statement as to the number of bales of cotton remaining to be

ginned and from each cottonseed-oil mill the number of bales of linters to be obtained by reginning cotton seed after the date of the canvass. These amounts, which are included in the total production for the crop, are shown separately, by states, in Table 3, for the crops of 1911, 1912, and 1913.

TABLE 3.—Cotton to be ginned and linters to be obtained after the March canvass, by states: 1911 to 1913.

STATE.	COTTON AND LINTERS TO BE GINNED AFTER THE MARCH CANVASS (RUNNING BALES, COUNTING ROUND AS HALF BALES).					
	Cotton, crop of—			Linters, crop of—		
	1913	1912	1911	1913	1912	1911
United States.....	29,267	51,894	157,078	56,803	74,882	82,068
Alabama.....	504	1,192	4,878	4,702	2,507	7,299
Arkansas.....	5,809	3,553	23,080	3,594	4,107	4,431
Florida.....	15	44	163	66	-----	108
Georgia.....	1,684	1,555	16,517	13,943	6,802	14,354
Louisiana.....	668	191	1,778	2,057	2,794	2,356
Mississippi.....	4,002	11,001	17,512	8,172	5,443	5,389
North Carolina.....	7,758	8,072	27,943	5,779	4,056	7,419
Oklahoma.....	362	6,167	9,179	586	7,626	3,863
South Carolina.....	3,382	1,872	28,500	5,500	3,359	7,675
Tennessee.....	933	1,791	10,887	4,274	1,537	4,896
Texas.....	2,365	20,688	10,410	7,062	35,193	21,370
All other states.....	1,785	788	6,251	1,068	558	2,908

The quantity of cotton from the crop of 1913, which the ginner stated would be ginned after the date of the March canvass, was 29,267 bales. This is the smallest amount reported for any year covered by the table and reflects the early ginning of the crop. The quantity of linters remaining to be obtained by the oil mills, 56,803 bales, is also smaller than for the earlier years shown in the table.

PERIODICAL COTTON REPORTS.

During the season of 1914-15, as heretofore, practically semimonthly reports of cotton ginned will be issued. The dates to which the statistics of these reports will relate and the dates on which they are expected to be published are presented in the following schedule:

Ginning reports to be issued during the season of 1914-15.

REPORT NUMBER.	Date to which report relates (close of business).	Date of publication (10 a. m.).
1.....	August 31.....	September 8.
2.....	September 24.....	October 2.
3.....	October 17.....	October 26.
4.....	October 31.....	November 9.
5.....	November 13.....	November 21.
6.....	November 30.....	December 8.
7.....	December 12.....	December 21.
8.....	December 31.....	January 9.
9.....	January 15.....	January 23.
10.....	February 28.....	March 20.

The statistics in these reports show conditions at the close of business on the days to which the reports relate. For every report the canvassing agents are given approximately one week in which to visit the ginneries and secure the returns. Summaries showing the number of bales ginned to a specified date are telegraphed to the bureau on the last day of the canvass. On the following morning these summaries are added and the results given to the public at 10 o'clock.

At the time of telegraphing the summaries the agents are required to mail the individual returns of the gineries which they have collected and used in preparing these summaries. This method affords a valuable check on the statistics of the report, as the returns are examined and added in the bureau and necessary revisions made in the figures of the published preliminary reports.

Three reports of cotton seed crushed and linters produced will be collected during the season showing quantities to December 1, January 1, and for the crop. These reports will be forwarded to the bureau by mail and the results will be published about the 16th of the month.

There will also be monthly reports of cotton consumed, imported, exported, and on hand, and of active consuming cotton spindles. Each of these will relate to a calendar month and will be published about the 14th of the succeeding month. The data for these reports are gathered in the cotton-growing states by the local agents of the bureau who collect the ginning reports. In all other states the data are secured by correspondence, and, when necessary, by special agents detailed from the bureau.

DISTRIBUTION OF REPORTS.

Within a few hours after the information has been made public all preliminary reports are printed on preaddressed cards and mailed to all ginners, manufacturers, warehousemen, and cottonseed-oil manufacturers, and to all other persons who have requested them. This method of using preaddressed post cards

permits of a more rapid distribution than would otherwise be possible. During the past season an extension of this publicity service was made in that newspapers are now furnished with county totals of cotton ginned, thus providing interesting and valuable information to those most directly concerned. In addition, postmasters are provided with large cards showing the quantity of cotton ginned to each report date and instructed to post them in conspicuous places.

COTTON GINNED TO SPECIFIED DATES.

The collection of statistics of cotton ginned to specified dates was designed to place in the possession of all concerned reliable data as to the rapidity with which the cotton crop is being harvested and ginned. Statistics compiled by this method have, after a series of years, an incidental but very considerable value by reason of the deductions possible to a careful comparison of current reports with those of previous years. The collection of data of this character was inaugurated in 1902. Three reports were made for that crop, six each for the crops of 1903 and 1904, and ten for each crop since. Table 4 shows the quantity of cotton ginned to specified dates from the crops of 1902 to 1913, inclusive, and the percentage of the crop ginned to each report date. As it is not practicable, before the close of the season, to express in equivalent 500-pound bales statistics of the quantity of cotton ginned, the amounts in Table 4 are in running bales, counting round as half bales and excluding linters, and the total amounts for the seasons as thus obtained are used as the bases for the percentages shown in the table.

TABLE 4.—COTTON GINNED TO SPECIFIED DATES AND THROUGHOUT THE SEASON, AND THE PER CENT OF THE TOTAL GINNED TO EACH DATE: 1902 TO 1913.

[Quantities are given in running bales, except that round bales are counted as half bales. Linters are not included.]

GROWTH YEAR.	COTTON GINNED TO—									Total ginned.
	Sept. 1.	Sept. 25.	Oct. 18.	Nov. 1.	Nov. 14.	Dec. 1.	Dec. 13.	Jan. 1.	Jan. 10.	
	QUANTITY (BALES).									
1913.....	799,099	3,246,655	6,973,513	8,830,306	10,444,529	12,088,412	12,927,428	13,347,721	13,582,036	13,982,811
1912.....	730,884	3,007,271	6,874,206	8,869,222	10,299,346	11,854,541	12,430,038	12,907,405	13,088,930	13,488,539
1911.....	771,297	3,670,594	7,758,621	9,970,905	11,313,236	12,810,807	13,770,727	14,317,002	14,515,790	15,553,073
1910.....	353,011	2,312,074	5,423,628	7,345,953	8,780,433	10,159,712	10,995,443	11,034,515	11,253,147	11,569,334
1909.....	388,242	2,568,150	5,530,967	7,017,849	8,112,199	8,876,886	9,358,085	9,647,327	9,787,592	10,072,731
1908.....	402,229	2,590,639	6,206,166	8,191,557	9,595,809	11,008,661	11,904,289	12,405,298	12,686,293	13,080,005
1907.....	200,273	1,532,602	4,420,253	6,128,562	7,300,665	8,343,396	9,284,070	9,951,505	10,339,551	11,057,822
1906.....	407,551	2,057,283	4,631,621	6,906,305	8,502,242	10,027,868	11,112,789	11,741,039	12,176,199	12,983,201
1905.....	476,655	2,355,716	4,990,566	6,457,595	7,501,130	8,689,663	9,297,810	9,725,426	9,989,634	10,465,105
1904.....	374,821	.....	6,417,894	.....	9,786,646	.....	11,971,477	.....	12,767,600	13,451,337
1903.....	17,302	.....	3,706,248	.....	6,815,162	.....	8,520,244	.....	9,485,537	9,819,969
1902.....	.....	.....	6,683,000	.....	.....	.....	8,905,505	.....	.....	10,588,250
	PER CENT OF TOTAL.									
1913.....	5.7	23.2	49.9	63.2	74.7	86.5	92.5	95.5	97.1	100.0
1912.....	5.4	22.3	51.0	65.8	76.4	87.9	92.2	95.7	97.0	100.0
1911.....	5.0	23.6	49.9	64.1	72.7	82.4	88.5	92.1	93.3	100.0
1910.....	3.1	20.0	46.9	63.5	75.9	87.7	92.5	95.8	97.3	100.0
1909.....	3.9	25.5	54.9	69.7	80.5	88.1	92.9	95.8	97.2	100.0
1908.....	3.1	19.8	48.1	62.6	73.3	84.1	91.0	95.3	96.8	100.0
1907.....	1.8	13.9	40.0	55.4	66.0	75.5	84.0	90.0	93.5	100.0
1906.....	3.1	15.8	38.0	53.2	65.9	77.2	85.6	90.4	93.8	100.0
1905.....	4.5	22.4	47.6	61.5	71.5	82.8	88.6	92.7	95.2	100.0
1904.....	2.8	.....	47.7	.....	72.8	.....	89.0	.....	94.9	100.0
1903.....	0.2	.....	37.7	.....	69.4	.....	86.8	.....	96.6	100.0
1902.....	.....	.....	53.7	.....	.....	.....	84.1	.....	.....	100.0

The quantity of cotton ginned from the crop of 1913 prior to September 1 was 799,099 bales, the largest amount for any year since the inauguration of these reports by the Census Bureau, exceeding that of 1911, the next largest, by 27,802 bales. Almost one-half of the total crop was ginned prior to October 18. By November 14 almost three-fourths of the crop had been ginned. This is practically the same as the average for the years shown in the table, the highest percentage (80.5) being shown for 1909 and the lowest (65.9) for 1906.

Data as to the quantity of sea-island cotton ginned to specified dates are presented in Table 10, page 19, and similar data as to cotton put up in round bales are given in the following statement for the crops of 1909 to 1913:

Number of round bales included in reports of cotton ginned to specified dates: 1909 to 1913.

SPECIFIED DATE.	ROUND BALES GINNED TO SPECIFIED DATES: CROP OF—				
	1913	1912	1911	1910	1909
September 1.....	7,610	7,434	7,709	10,976	11,587
September 25.....	26,983	10,574	27,918	38,026	48,070
October 18.....	49,030	41,745	53,858	66,183	88,716
November 1.....	61,577	54,530	68,313	81,183	109,621
November 14.....	74,167	62,768	75,963	98,304	123,757
December 1.....	86,878	73,030	87,996	101,718	134,393
December 13.....	91,686	75,772	92,790	106,486	140,024
January 1.....	94,265	77,999	96,227	109,292	148,949
January 16.....	96,807	78,690	97,654	111,079	146,378
Total.....	99,902	81,528	101,554	112,887	150,690

Ginnings to specified dates, by states and by counties.—The quantity of cotton ginned to given dates from the crops of 1907 to 1913 and the percentage of the crop ginned to each of the report dates are shown, by states, in Tables 5 and 6. Considerable differences exist among the several states in the proportion of the total amount ginned to the specified dates. For instance, more than two-thirds of the total crop of Texas had been ginned by October 18, while Tennessee showed only a little more than one-third.

The quantity of cotton from the crop of 1913 ginned to each of the report dates is given by counties in Table 22 on pages 47 to 56. This table permits a close study of the rapidity with which cotton is ginned in various localities and enables the making of analyses which are both interesting and valuable. An examination of the table shows that, in a number of counties in southern Texas, a large part of the crop is harvested and ginned prior to September 1, and that by September 25 about 75 per cent of the crop is ginned, a few of the counties in the extreme southern part practically completing the harvesting of the crop by November 1.

An analysis of the periodical statistics of cotton ginned, as shown in Table 5, is presented in Table 7 (p. 16), which gives the number of bales of cotton ginned during each of the report periods, together with the corresponding percentages, for the crops of 1909 to 1913, inclusive.

TABLE 7.—QUANTITY OF COTTON AND PERCENTAGE OF THE TOTAL GINNED DURING EACH PERIOD BETWEEN REPORT DATES: CROPS OF 1909 TO 1913.

[Quantities are given in running bales, except that round bales are counted as half bales. Linters are not included.]

PERIOD.	1913		1912		1911		1910		1909	
	Quantity (bales).	Per cent of total.	Quantity (bales).	Per cent of total.	Quantity (bales).	Per cent of total.	Quantity (bales).	Per cent of total.	Quantity (bales).	Per cent of total.
Total.....	13,982,811	100.0	13,488,539	100.0	15,553,073	100.0	11,568,334	100.0	10,072,731	100.0
Prior to Sept. 1.....	799,099	5.7	730,884	5.4	771,297	5.0	353,011	3.1	388,242	3.9
Sept. 1 to Sept. 25.....	2,447,556	17.5	2,276,387	16.9	2,905,297	18.7	1,959,063	16.9	2,179,908	21.6
Sept. 25 to Oct. 18.....	3,726,863	26.6	3,866,935	28.7	4,082,027	26.2	3,111,554	26.9	2,962,817	29.4
Oct. 18 to Nov. 1.....	1,856,878	13.3	1,995,016	14.8	2,212,284	14.2	1,922,325	16.6	1,486,882	14.8
Nov. 1 to Nov. 14.....	1,614,133	11.5	1,430,424	10.6	1,342,331	8.6	1,434,480	12.4	1,094,350	10.8
Nov. 14 to Dec. 1.....	1,643,883	11.8	1,554,895	11.5	1,503,571	9.7	1,359,279	11.7	764,687	7.6
Dec. 1 to Dec. 13.....	839,016	6.0	584,495	4.3	953,920	6.1	555,731	4.8	481,199	4.8
Dec. 13 to Jan. 1.....	420,293	3.0	468,369	3.5	549,275	3.5	389,072	3.4	289,242	2.9
Jan. 1 to Jan. 16.....	234,315	1.7	181,525	1.3	198,797	1.3	168,632	1.5	140,265	1.4
After Jan. 15.....	400,775	2.9	399,009	3.0	1,037,274	6.7	315,187	2.7	285,139	2.8

The period from September 25 to October 18 shows the largest ginnings for each of the years given in the table. This is to be expected, however, inasmuch as this period covers 23 days during a time of great activity in the harvesting of cotton, while most of the other periods are shorter. In 1913, 26.6 per cent of the total crop was ginned during this period, as compared with 28.7 per cent in 1912, 26.2 per cent in 1911, 26.9 per cent in 1910, and 29.4 per cent in 1909. The variations in the proportion of the total ginned during the period from November 1 to November 14 are rather pronounced, the percentages ranging from 8.6 in 1911 to 12.4 in 1910. The quantity ginned during any period is obviously affected by the weather conditions and by the size of the crop.

AVERAGE WEIGHT OF BALE.

Some ginners do not weigh the baled cotton turned out from their establishments, and some of those who do so fail to keep permanent records. In view of this condition, and of the necessity of securing local weights in order to reduce the statistics to a uniform bale weight, so as to credit each county with its proper proportion of the crop, the bureau requires its canvassing agents to secure bale weights from local weighers, merchants, and other handlers of cotton. The statistics in Table 8 have been compiled from these data and should constitute a very reliable record. This table shows, by states, for the crops of 1909 to 1913, the average gross weight of upland square, upland round, sea-island, and linter bales, and the number of square bales for which weights were returned to the bureau, with their total weight in pounds.

The number of square bales for which weights were returned to the bureau in 1913 was 7,772,225, or more than one-half of the total number ginned during the season. The bale weights were returned in two instalments, with the reports of cotton ginned to November 1 and to January 1. Since weights are secured for bales ginned in different periods, the figures are representative of the varying conditions of the season and contribute to the reliability of the averages. Because of the variation throughout the season in

the weights of the bales pressed, it is not possible to arrive at a reliable average for the crop before the season's ginning is practically completed. Weights of sea-island and of upland round bales were secured by the agents from the handlers of such cotton, and from these data were computed the average weights for round and sea-island bales. The average weights of the linter bales were computed from returns secured from the operators of cottonseed-oil mills.

Method of computing average bale weights.—To obtain the average bale weights for a state, the average weights in pounds of the square, the round, and the sea-island bales weighed in each county were first multiplied separately by the numbers of bales of the respective kinds reported as ginned in the county. The several products thus obtained constituted the totals for the county. The county totals for the different kinds of bales were added separately to obtain the corresponding state totals, which were then divided, respectively, by the number of bales of the several kinds ginned in the state to obtain the average weight of each kind of bale. By deducting from the sum of the different kinds of bales one-half of the number of round bales, the divisor for finding the average weight of the bale, counting round as half bales, was obtained. The average bale weight for the crop of 1913, thus computed, counting round as half bales and excluding linters, is 506.2 pounds gross, as compared with 508 pounds for 1912, 504.5 pounds for 1911, and 501.7 pounds for 1910. The variation in the average weight of bale for upland cotton put up in square packages is pronounced throughout the cotton belt, the averages ranging from less than 430 pounds for a number of counties in Georgia and North Carolina to 560 pounds for counties in Mississippi and Texas. For the states shown separately in the table the range is from 472.9 pounds in North Carolina to 522.9 pounds in Texas. These variations are due to a number of causes, the principal one, no doubt, being the practice of putting in one package the lint obtained from a single load of seed cotton, the quantity of seed cotton in a load depending upon capacity of wagons, character of roads, local customs, price of cotton, etc.

TABLE 8.—AVERAGE GROSS WEIGHT OF THE SEVERAL KINDS OF BALES AND NUMBER AND GROSS WEIGHT OF SQUARE BALES FOR WHICH WEIGHTS WERE RETURNED, BY STATES: 1909 TO 1913.

STATE.	Growth year.	AVERAGE GROSS WEIGHT OF BALE (POUNDS).					SQUARE BALES FOR WHICH WEIGHTS WERE RETURNED.	
		Counting round as half bales.	Cotton.		Sea-island.	Linters.	Number.	Gross weight (pounds).
			Upland.					
			Square.	Round.				
United States.....	1913	506.2	506.9	251.4	384.7	506.1	7,772,225	3,931,370,190
	1912	508.0	508.7	253.9	381.9	506.0	7,326,923	3,712,983,736
	1911	504.5	505.3	250.4	399.7	500.6	7,399,832	3,951,510,387
	1910	501.7	502.6	249.4	393.3	499.3	6,191,522	3,108,196,000
	1909	496.6	497.7	246.6	384.4	494.6	5,379,824	2,675,326,661
Alabama.....	1913	504.0	503.9	257.0	.....	500.9	873,197	439,509,807
	1912	505.3	505.3	241.9	.....	504.1	794,048	401,236,388
	1911	506.3	506.3	247.2	.....	499.9	871,926	442,181,697
	1910	500.9	500.9	243.0	.....	499.8	651,927	326,757,378
	1909	492.4	492.5	241.4	.....	503.3	527,685	259,236,455
Arkansas.....	1913	516.6	516.6	258.1	.....	516.9	592,931	305,967,413
	1912	513.7	513.7	261.6	.....	515.0	478,808	245,221,337
	1911	517.2	517.2	254.0	.....	518.0	470,847	242,543,037
	1910	514.5	514.4	259.9	.....	510.9	448,929	229,111,985
	1909	511.4	511.4	256.1	.....	502.6	451,368	230,477,880
Florida.....	1913	440.0	488.7	.....	361.3	459.5	31,387	15,404,229
	1912	448.4	496.1	.....	370.4	453.2	32,364	16,065,829
	1911	441.3	492.5	.....	375.4	432.9	34,604	17,148,143
	1910	438.8	482.6	.....	382.6	435.0	32,114	15,645,860
	1909	436.4	489.7	.....	372.6	441.8	17,554	8,494,545
Georgia.....	1913	493.7	495.4	.....	404.1	491.7	1,353,200	670,356,223
	1912	490.0	492.4	.....	393.6	491.6	1,053,577	519,326,762
	1911	495.4	497.5	.....	417.0	479.8	1,340,461	667,167,970
	1910	487.6	489.7	.....	409.3	479.1	1,015,455	497,987,815
	1909	487.5	490.1	.....	400.2	475.9	942,034	463,364,220
Louisiana.....	1913	508.0	508.1	242.0	.....	512.5	290,828	147,703,664
	1912	501.7	501.8	240.5	.....	513.1	277,460	139,974,808
	1911	505.0	505.0	243.2	.....	507.8	281,358	143,373,415
	1910	497.7	497.8	243.3	.....	526.0	183,599	91,600,361
	1909	490.2	490.1	249.6	.....	506.7	233,103	115,176,185
Mississippi.....	1913	523.5	523.5	.....	.....	532.0	567,093	295,057,200
	1912	520.9	520.9	.....	.....	529.3	499,896	259,014,266
	1911	514.7	514.7	.....	.....	521.6	533,081	273,552,560
	1910	520.9	520.9	.....	.....	519.8	593,732	307,431,322
	1909	504.7	504.7	.....	.....	513.2	502,017	253,034,840
North Carolina.....	1913	472.9	472.9	.....	.....	476.0	423,356	200,763,779
	1912	477.5	477.5	.....	.....	468.7	430,424	205,583,615
	1911	477.6	477.6	.....	.....	480.3	486,697	233,204,482
	1910	468.8	468.8	.....	.....	477.9	352,844	166,081,698
	1909	473.9	473.9	.....	.....	463.2	332,169	157,216,110
Oklahoma.....	1913	498.7	498.7	250.7	.....	530.2	632,065	314,913,462
	1912	508.0	508.1	251.5	.....	527.3	561,359	284,635,940
	1911	502.7	502.9	248.2	.....	519.9	566,066	284,572,432
	1910	501.8	501.9	246.8	.....	497.0	522,686	262,597,301
	1909	493.0	493.4	238.9	.....	499.3	375,080	185,547,472
South Carolina.....	1913	485.6	486.4	.....	358.7	483.2	768,771	373,281,653
	1912	482.8	483.6	.....	348.7	480.5	794,263	383,505,671
	1911	487.2	487.6	.....	350.6	477.9	1,245,555	605,542,193
	1910	480.4	481.7	.....	358.8	480.7	710,164	341,724,236
	1909	483.5	485.3	.....	350.7	484.4	660,954	319,100,925
Tennessee.....	1913	517.3	517.3	.....	.....	515.4	195,753	101,186,497
	1912	517.0	517.0	.....	.....	521.4	154,062	79,847,517
	1911	522.9	522.9	.....	.....	510.3	220,624	115,463,393
	1910	516.9	516.9	.....	.....	531.4	170,407	88,747,883
	1909	512.2	512.2	.....	.....	517.8	147,125	75,549,064
Texas.....	1913	522.8	522.9	250.2	.....	509.4	1,958,516	1,023,227,445
	1912	525.3	525.3	262.5	.....	506.8	2,180,044	1,142,736,945
	1911	518.2	518.2	253.2	.....	501.9	1,696,179	878,447,007
	1910	516.9	517.0	251.4	.....	500.5	1,451,812	749,677,286
	1909	510.8	511.1	249.2	.....	496.1	1,139,320	582,331,542
All other states.....	1913	512.1	512.1	.....	.....	519.1	85,128	43,998,318
	1912	507.9	507.9	.....	.....	520.3	70,558	35,834,658
	1911	517.8	517.8	.....	.....	531.1	92,374	48,314,058
	1910	498.8	498.8	250.0	.....	527.6	57,853	28,832,875
	1909	500.0	500.0	.....	.....	514.8	51,415	25,797,423

Disparity between census and export bale weights.—The average weight of the bales exported during the six months ending February 28, 1914, was 520.1 pounds, which is 13.9 pounds greater than the average for the crop of 1913, as computed from the returns of

bale weights received by the bureau. This variation may be due to a number of reasons. The census figures relate approximately to the entire crop, but those of exports to a six-months' period, and, since the weight of the bale becomes less toward the close

COTTON PRODUCTION: 1913.

of the season, the average weight of the export bale as given is likely to be greater than the average weight of the total quantity exported for the entire year.

Another reason is that the states which contribute the larger portion of the export cotton are those which put up the heaviest bales. The average weight of the bale for the states of Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas, which furnished much the larger part of the export cotton, was 518.3

pounds, while that for the states of Alabama, Georgia, North Carolina, and South Carolina, which contributed most largely to the domestic consumption, was 491.4 pounds.

PRODUCTION IN POUNDS.

The statistics for the gross weight of cotton and linters from the crops of 1909 to 1913, expressed in pounds, are shown, by states, in Table 9.

TABLE 9.—GROSS WEIGHT OF LINT COTTON AND LINTERS PRODUCED, BY STATES: 1909 TO 1913.

STATE.	Growth year.	GROSS WEIGHT OF COTTON AND LINTERS PRODUCED (POUNDS).				
		Lint cotton.			Linters.	
		Total.	Upland.			Sea-island bales.
			In square bales.	In round bales.		
United States.....	1913	7,078,240,000	7,023,270,000	25,130,000	29,840,000	319,440,000
	1912	6,851,710,000	6,802,830,000	20,700,000	28,180,000	304,800,000
	1911	7,846,350,000	7,773,230,000	25,430,000	47,690,000	278,790,000
	1910	5,804,310,000	5,740,610,000	28,160,000	35,540,000	198,530,000
	1909	5,002,470,000	4,928,880,000	37,150,000	36,440,000	155,220,000
Alabama.....	1913	747,740,000	744,830,000	2,910,000	.....	26,980,000
	1912	671,140,000	668,900,000	2,240,000	.....	19,580,000
	1911	858,270,000	855,150,000	3,120,000	.....	20,340,000
	1910	597,130,000	594,340,000	2,790,000	.....	14,520,000
	1909	512,170,000	507,430,000	4,740,000	.....	12,720,000
Arkansas.....	1913	536,420,000	535,030,000	1,390,000	.....	21,030,000
	1912	396,020,000	395,380,000	640,000	.....	17,550,000
	1911	469,650,000	468,910,000	740,000	.....	16,500,000
	1910	410,610,000	409,600,000	1,010,000	.....	13,320,000
	1909	356,730,000	355,120,000	1,610,000	.....	10,310,000
Florida.....	1913	29,350,000	20,100,000	.....	9,250,000	1,200,000
	1912	26,380,000	18,110,000	.....	8,270,000	640,000
	1911	41,690,000	26,200,000	.....	15,490,000	850,000
	1910	29,470,000	18,220,000	.....	11,250,000	550,000
	1909	27,000,000	16,510,000	.....	10,490,000	470,000
Georgia.....	1913	1,158,300,000	1,140,800,000	.....	17,500,000	54,400,000
	1912	888,270,000	871,050,000	.....	17,220,000	37,460,000
	1911	1,384,310,000	1,353,910,000	.....	30,400,000	38,590,000
	1910	883,600,000	863,980,000	.....	19,620,000	26,710,000
	1909	902,010,000	881,170,000	.....	20,840,000	24,630,000
Louisiana.....	1913	221,910,000	221,490,000	420,000	.....	11,180,000
	1912	188,050,000	187,760,000	290,000	.....	9,200,000
	1911	192,300,000	191,800,000	500,000	.....	9,440,000
	1910	122,830,000	121,950,000	880,000	.....	5,040,000
	1909	126,710,000	124,530,000	2,180,000	.....	5,630,000
Mississippi.....	1913	655,370,000	655,370,000	.....	.....	32,330,000
	1912	523,210,000	523,210,000	.....	.....	23,940,000
	1911	601,770,000	601,770,000	.....	.....	24,390,000
	1910	631,340,000	631,340,000	.....	.....	21,990,000
	1909	541,610,000	541,610,000	.....	.....	18,730,000
North Carolina.....	1913	396,270,000	396,270,000	.....	.....	16,660,000
	1912	432,830,000	432,830,000	.....	.....	13,470,000
	1911	537,910,000	537,910,000	.....	.....	14,480,000
	1910	353,070,000	353,070,000	.....	.....	10,350,000
	1909	300,300,000	300,300,000	.....	.....	7,480,000
Oklahoma.....	1913	420,190,000	409,910,000	10,280,000	.....	20,430,000
	1912	510,620,000	499,660,000	10,960,000	.....	27,430,000
	1911	511,050,000	501,620,000	9,430,000	.....	20,410,000
	1910	461,530,000	454,530,000	7,000,000	.....	17,950,000
	1909	272,480,000	265,830,000	6,650,000	.....	10,550,000
South Carolina.....	1913	688,910,000	685,820,000	.....	3,090,000	22,510,000
	1912	591,060,000	588,370,000	.....	2,690,000	17,070,000
	1911	824,360,000	822,560,000	.....	1,800,000	17,690,000
	1910	581,750,000	577,080,000	.....	4,670,000	14,210,000
	1909	549,980,000	544,870,000	.....	5,110,000	13,040,000
Tennessee.....	1913	189,740,000	189,740,000	.....	.....	17,870,000
	1912	138,270,000	138,270,000	.....	.....	11,620,000
	1911	224,870,000	224,870,000	.....	.....	14,700,000
	1910	165,980,000	165,980,000	.....	.....	8,760,000
	1909	123,320,000	123,320,000	.....	.....	6,540,000
Texas.....	1913	1,972,400,000	1,962,360,000	10,130,000	.....	89,760,000
	1912	2,440,110,000	2,433,540,000	6,570,000	.....	123,320,000
	1911	2,128,210,000	2,116,570,000	11,640,000	.....	95,610,000
	1910	1,524,710,000	1,508,300,000	16,410,000	.....	61,540,000
	1909	1,261,400,000	1,239,430,000	21,970,000	.....	42,350,000
All other states ¹	1913	61,550,000	61,550,000	.....	.....	5,090,000
	1912	45,750,000	45,750,000	.....	.....	3,520,000
	1911	71,960,000	71,960,000	.....	.....	5,790,000
	1910	42,290,000	42,220,000	70,000	.....	3,520,000
	1909	28,760,000	28,760,000	.....	.....	2,770,000

¹ Includes Arizona, California, Kansas, Kentucky, Missouri, New Mexico and Virginia, and linters of mills in Illinois.

The statistics in Table 9 have been computed to represent the weight of baled cotton and linters just as they are bought and sold. The weight of the wrapping and bands of the bales are estimated to average 22 pounds for upland square bales, 3 for upland round, and 10 for sea-island. The total tare for the cotton crop of 1913, computed with these figures as a basis, amounts to 305,890,000 pounds, leaving as the net quantity of lint cotton produced 6,772,350,000 pounds. The tare for linters amounted to 13,890,000 pounds, and the net weight of linters to 305,550,000 pounds.

The proportion of the cotton crop of 1913 put up in round bales is four-tenths of 1 per cent, as compared with 4.7 per cent in 1902. For the crop of 1902 round-bale presses were operated in 12 states, while for that of 1913 they were operated in only 5 states, namely, Alabama, Arkansas, Louisiana, Oklahoma, and Texas.

LONG-STAPLE COTTON.

The limited supply of cotton having a long staple and the world-wide demand for cotton of this character for use in the manufacture of thread and the higher grade fabrics has given such varieties an importance out of proportion to the amount produced. While at one time the long-fiber sea-island cotton

grown in the West Indies provided a large proportion of the total cotton used in Europe, the world's production of this variety at the present time is comparatively insignificant, averaging less than 100,000 bales per annum. The quantity of long-fiber cotton produced in Egypt is less than a million and a half bales each year, and the quantity of upland cotton with a staple of $1\frac{3}{8}$ inches or more in length produced in the United States is not much in excess of 350,000 bales. Long-staple cotton is also produced in comparatively small quantities in India, Brazil, Peru, and several other countries. Altogether the total of long-staple cotton—that is, cotton having a fiber $1\frac{3}{8}$ inches or more in length—produced throughout the world from the crop of 1913 did not in all probability exceed 2,000,000 bales, which is less than one-tenth of the aggregate quantity produced. As stated above, great interest attaches to cotton of this character, and statistics more or less in detail are presented regarding its cultivation in the United States.

Sea-island cotton.—Table 10 is a comparative statement, by states, showing the quantity of sea-island cotton ginned in the United States from the crops of 1909 to 1913, the average gross weight of the bales, and the quantity ginned to specified dates during these years.

TABLE 10.—SEA-ISLAND COTTON—PRODUCTION, AVERAGE GROSS WEIGHT OF BALE, AND QUANTITY GINNED TO SPECIFIED DATES, BY STATES: 1909 TO 1913.

STATE.	Growth year.	PRODUCTION.		Average gross weight of bale (pounds).	COTTON GINNED TO (RUNNING BALES)—								
		Bales (number).	Total gross weight (pounds).		Sept. 1.	Sept. 25.	Oct. 18.	Nov. 1.	Nov. 14.	Dec. 1.	Dec. 13.	Jan. 1.	Jan. 16.
United States.....	1913	77,563	29,840,000	384.7	436	10,570	31,139	42,804	51,950	61,049	69,520	74,320	76,277
	1912	73,777	28,180,000	381.9	232	3,051	15,960	28,887	40,359	51,275	60,445	67,257	70,758
	1911	119,293	47,690,000	399.7	546	11,807	40,303	56,563	71,204	87,566	98,035	105,988	109,867
	1910	90,368	35,540,000	393.3	218	7,004	25,691	40,504	52,631	66,696	75,228	82,432	86,424
	1909	94,791	36,440,000	384.4	1,236	13,832	36,482	55,237	68,495	77,591	85,177	89,611	92,191
Florida.....	1913	25,587	9,250,000	361.3	140	4,049	12,259	16,356	19,542	22,207	24,126	25,166	25,366
	1912	22,334	8,270,000	370.4	167	1,690	6,976	11,067	15,052	17,826	19,505	21,085	21,916
	1911	41,270	15,490,000	375.4	233	4,381	15,110	21,038	26,818	32,350	35,585	38,091	39,340
	1910	29,417	11,250,000	382.6	120	2,988	10,098	15,191	19,669	23,663	25,854	27,646	28,790
	1909	28,158	10,490,000	372.6	631	6,133	14,534	19,740	23,453	25,905	26,870	27,532	27,888
Georgia.....	1913	43,305	17,500,000	404.1	295	6,443	17,868	24,570	29,355	34,346	39,014	41,768	42,850
	1912	43,736	17,220,000	393.6	64	1,258	8,148	16,276	22,873	29,756	35,418	39,543	41,529
	1911	72,904	30,400,000	417.0	313	7,405	24,453	33,841	41,430	51,496	58,008	63,099	65,577
	1910	47,935	19,620,000	409.3	95	3,993	14,386	22,490	28,088	35,405	39,725	43,636	45,441
	1909	52,060	20,840,000	400.2	604	7,649	19,931	31,277	38,825	46,164	47,564	49,944	51,072
South Carolina.....	1913	8,671	3,090,000	356.7	1	78	1,012	1,878	3,053	4,496	6,380	7,386	8,261
	1912	7,707	2,690,000	348.7	1	103	836	1,544	2,464	3,693	5,522	6,629	7,313
	1911	5,119	1,800,000	350.6	.....	21	740	1,684	2,656	3,810	4,442	4,798	4,950
	1910	13,016	4,670,000	358.8	3	23	1,207	2,823	4,874	7,028	9,649	11,150	12,193
	1909	14,573	5,110,000	350.7	1	50	2,017	4,220	6,217	8,522	10,743	12,135	13,231

The sea-island crop of 1913 amounted to 77,563 bales, or 29,840,000 pounds gross weight. While slightly larger than the preceding crop, it was one of the smallest produced since the inauguration of the ginning reports of this bureau in 1899. More than one-half of the total crop of sea-island cotton in 1913 was ginned prior to November 1, and 78.7 per cent prior to December 1.

The ginning of sea-island cotton in the three producing states from the crop of 1913 was confined to 38 counties, comprising 15 counties in Florida, 21 in

Georgia, and 2 in South Carolina. It was not grown, however, in all parts of the counties from which it was returned, in some instances only a small proportion of the total production of cotton being sea-island. The distribution of the crop by counties for the last five years will be found in Table 20, and the localities producing it in 1913 are represented on the map on page 34. It might be presumed that the high prices received for this cotton would cause a large increase in the acreage, but attempts to grow it in other parts of these states and in other states have been so unsatis-

factory that practically all efforts to raise it outside of certain well-defined areas in the states named have been abandoned. Recent experiments in the growing of this cotton have been made in Plaquemines Parish, La., and a few bales were produced there in 1911, 1912, and 1913.

The best sea-island cotton produced in the United States is grown on the islands off the coast of South Carolina by planters who have, for many years, paid the most careful attention to seed selection. The fiber produced is long and fine, and it is harvested and handled with such care that the cotton commands a very high price. Growers who raise sea-island cotton in the interior must secure new seed from the coast region frequently in order to preserve the quality of the fiber, which degenerates rapidly into upland fiber when grown away from the coast. Aside from the difficulties presented by soil and climatic conditions, there are obstacles in the way of extending this culture beyond the present limits. Among these are: (1) Lack of proper experience in new territory in cultivating, harvesting, and handling; (2) objection to the small and partially closed sea-island bolls on the part of pickers accustomed to upland varieties, notwithstanding the fact that they receive more for picking sea-island cotton than for picking upland cotton; (3) the necessity of using roller gins for sea-island cotton, since saws injure the fiber; and (4) the disadvantage of selling sea-island cotton in a market where the buyers are unaccustomed to it.

The average quantity of sea-island cotton produced each year is equivalent to about 75,000 bales of 500 pounds each. Of this amount, about 25,000 bales are exported and 50,000 bales are consumed in this country.

The sea-island cotton now being grown in the West Indies is said to surpass the average American product, and competes with that grown in South Carolina rather than with the less valuable varieties grown in Florida and Georgia; however, the total exports of sea-island cotton from the British West Indies for the year ending September 30, 1913, were only 4,309 bales of 500 pounds each.

Egyptian cotton.—The fiber of Egyptian cotton is not so strong nor so fine as that of sea-island, but it is nevertheless, quite strong and of uniform length. It is prepared for market more carefully than most of the American fiber, and, being freer from waste, is more satisfactory on that account to the manufacturer. The imports of Egyptian cotton into the United States during the year ending August 31, 1913, amounted to 191,075 bales of 500 pounds each. The demand for Egyptian cotton by American manufacturers has led to efforts to grow in the United States cotton having these characteristics, and much encouragement has been given the movement by the success attending the crop of 1913 in Arizona.

The status of the cultivation of Egyptian varieties of cotton in this country is presented in the following statement, compiled from information furnished by the Department of Agriculture:

The production of Egyptian cotton in Arizona increased from 280 bales in 1912 to about 2,200 bales in 1913. It is grown chiefly in the Salt River Valley, where approximately 3,500 acres were devoted to the crop of 1913. Under proper cultivation and irrigation the yields were exceedingly satisfactory, averaging, under favorable conditions, rather more than 1 bale per acre. Farmers who had had previous experience in growing cotton and whose land was old and fertile, in some instances obtained yields of $1\frac{1}{4}$ and $1\frac{1}{2}$ bales per acre. The excellent character of this cotton has been recognized both by domestic and English spinners, and the prices received for the crop were such as to indicate that this cotton will remain one of the principal crops of the Salt River Valley.

It is the policy of the department in attempting to establish the culture of new and improved varieties of cotton to distribute the seed only in communities which are prepared to organize growers' associations and to exclude other types of cotton. So far the Salt River Valley has been the only southwestern community to meet these conditions, although the prospects are that one or two other valleys in Arizona and southern California will begin growing Egyptian cotton on this basis during the present year.

Much of the land planted to cotton in the Salt River Valley was desert land, under irrigation for the first time, and many of the growers had had no previous experience in raising cotton under irrigation. These conditions and the unusually low night temperatures which prevailed during the months of September and October materially curtailed the production.

The staple of the greater part of the crop of 1913 is slightly more than $1\frac{1}{2}$ inches in length, and the Arizona crop, as a whole, represents a type of Egyptian cotton very much superior to the bulk of our Egyptian imports, there being few mills in this country which use Egyptian cotton equal in quality to that produced in Arizona.

The prospects are that about 10,000 acres in the Salt River Valley will be planted to Egyptian cotton in 1914, and there is reason to anticipate a continued increase in the production of this cotton as an increasing number of spinners become acquainted with its value.

Long-staple upland cotton.—Formerly practically all of the long-staple upland cotton produced in the United States was grown in the Mississippi Delta, where a market for handling cotton of this character had been created. With the increased demand for superior staple cottons, efforts were made in other sections of the cotton belt to grow improved varieties of upland cotton. This movement was accelerated by the fact that early maturing varieties of short-staple cotton have, in a measure, supplanted the long-staple varieties grown in the Delta, where these later maturing cottons were seriously damaged by the boll weevil. The net result has shown no pronounced increase in the quantity of long-staple upland cotton produced in the country, notwithstanding the efforts of those interested in its increased production. In order that definite information as to the production of this cotton from the crop of 1913 might be included in this bulletin, the agents of the bureau, who collect statistics of cotton ginned, were instructed to forward information as to the quantity of long-staple upland cotton grown in the several counties. They were instructed to obtain data as to the number of bales produced, con-

sideration being given only to cotton measuring $1\frac{3}{16}$ inches or more in length. In many sections the ginners have no knowledge of the length of the fiber turned out and cotton with a very good staple is frequently sold at the price of ordinary cotton. The agents encountered great difficulties in arriving at the quantity of this cotton produced and the results of the canvass were not as satisfactory as desired. Judging from the information forwarded by the agents, it would appear that there were about 350,000 bales of upland cotton having a staple of $1\frac{3}{16}$ inches or more produced in the United States from the crop of 1913. It is possible that this estimate is too small, because an investigation made by the Office of Markets of the Department of Agriculture indicates that 280,000 bales of cotton of this character are consumed annually in the mills of the United States and Canada, while large quantities also are exported.

The "Delta" section of Mississippi and the adjacent parts of Arkansas and Louisiana continue to furnish the larger part of the long-staple upland cotton. The next most important district in the production of this cotton is found in the counties of Darlington, Marlboro, and Lee in South Carolina. Among other localities producing the cotton the following are mentioned: Red River and Fort Bend Counties, Texas; Jefferson, Hempstead, Howard, and Sevier Counties, Arkansas; Cherokee and Calhoun Counties, Alabama; Gaston, Union, Cleveland, and Mecklenburg Counties, North Carolina; and Imperial County, California.

The Department of Agriculture is keenly alive to the improvement of varieties and the following statement prepared by the Office of Markets, of that department, summarizes the work of the Government in this connection, as related to the crop of 1913:

The boll weevil was less destructive last year in the lowlands along the Mississippi River than at any time since its invasion. This resulted in an increased yield of upland staple cottons in the regions to which spinners have long been accustomed to turn for the greater portion of their supplies, but the impracticability of raising the standard long-staple varieties of former years, under weevil conditions, seems to be fully realized and the Mississippi Delta is not supplying staple cottons either in as great quantity or of as high quality as in former years.

There has, however, been a notable increase in the production of upland staples in the Carolinas and in the Imperial Valley, California. In the southeast the varieties of the Columbia type appear to predominate, while in the Imperial Valley the total production of Durango cotton is believed to have been about 4,000 bales.

The prices received for staple cotton throughout the country have been abnormally low during the past season. The marketing of cotton of this character is everywhere acknowledged to be upon an unsatisfactory basis, but it is undoubtedly true that both American and foreign spinners have this year used greater quantities of the better varieties of staples produced in the South Atlantic states than ever before.

The newer varieties of upland staples developed by the department are distinctly earlier than the varieties formerly grown and seem to give promise of a continued staple production under intelligent cultural methods, even in weevil-infested areas. In spite of the fact, however, that the long-staple varieties can be grown over a greater part of the cotton belt than was formerly believed to be

the case, and in spite of the fact that the problems of seed selection and of proper cultivation and handling have been so well worked out, the prices of suitable cottons are at the present time so little in excess of the prices of short cotton that it is probable that there will be no great increase in staple production within the next year. It is freely predicted that the acreage of staple cottons in the Atlantic states will be materially reduced in 1914.

During the past year a study was made of the relative spinning values of various new types and varieties of long-staple cotton. The spinning experiments are still incomplete and will be carried on even more extensively in 1914, with a larger number of varieties included. Preliminary results, however, indicate that the best of the staples grown in the South Atlantic states are as uniform and show as small a percentage of waste in the mill as the average staples from the Mississippi Delta.

GRADE AND PRICE OF COTTON.

The estimated average grade of upland cotton, the average prices of upland and of sea-island cotton, the average price of Egyptian cotton at Boston, and the average price of seed of the crops from 1902 to 1913 are presented in the following table:

TABLE 11.—Average grade of upland cotton, average prices of upland, sea-island, and Egyptian cotton, and average price of cotton seed: 1902 to 1913.

[The Census Bureau is indebted to Mr. Henry G. Hester, secretary of the New Orleans Cotton Exchange, for the grades and prices of upland cotton; and to Messrs. Henry W. Frost & Co., of Charleston, S. C., for prices of sea-island cotton. Prices of cotton seed have been determined from information furnished by cottonseed-oil manufacturers.]

GROWTH YEAR.	AVERAGE GRADE OF UPLAND COTTON.	AVERAGE PRICE OF COTTON PER POUND (CENTS).					Average price of cotton seed per ton.
		Upland.	Sea-island.			Egyptian.	
			Florida.	Georgia.	South Carolina.		
1913.....	Strict low middling.....	13.07	19.61	19.61	23.47	20.38	\$25.00
1912.....	Middling to strict middling.....	12.05	19.50	19.50	25.00	19.76	21.20
1911.....	Strict low middling to middling.....	9.69	20.41	20.41	23.73	18.75	18.30
1910.....	Strict middling.....	14.69	27.36	27.36	35.62	22.25	27.40
1909.....	Strict middling.....	14.29	27.10	27.10	32.85	20.50	27.70
1908.....	Strict middling.....	9.24	17.92	17.92	23.39	17.25	15.00
1907.....	Middling.....	11.46	24.27	24.27	35.59	21.00	17.00
1906.....	Strict low middling.....	10.01	28.65	28.65	36.70	20.00	13.80
1905.....	Fully middling.....	10.94	17.50	17.50	26.38	19.00	14.90
1904.....	Strict middling.....	8.66	19.50	19.00	27.12	15.00	14.20
1903.....	Strict middling.....	12.16	23.60	21.00	28.40	17.75	17.80
1902.....	Strict low middling.....	8.20	20.00	17.00	25.00	15.50	15.80

Because of the fact that the annual bulletin on the production of cotton is compiled before the close of the cotton year, it is not possible to determine the average quality or the average price of the entire crop. Accordingly the figures in Table 11, which have been computed from the New Orleans market reports, are based on the average price of the average grade marketed prior to April 1. The estimated average grade of the 1913 upland cotton crop marketed prior to this date was "strict low middling," and the average price, 13.07 cents, which is within 1.62 cents of the record price of 1910. The average price of South Carolina sea-island cotton of the crop of 1913 was 23.47 cents, while that for sea-island cotton grown in Georgia and Florida was 19.61 cents. The average price of cotton

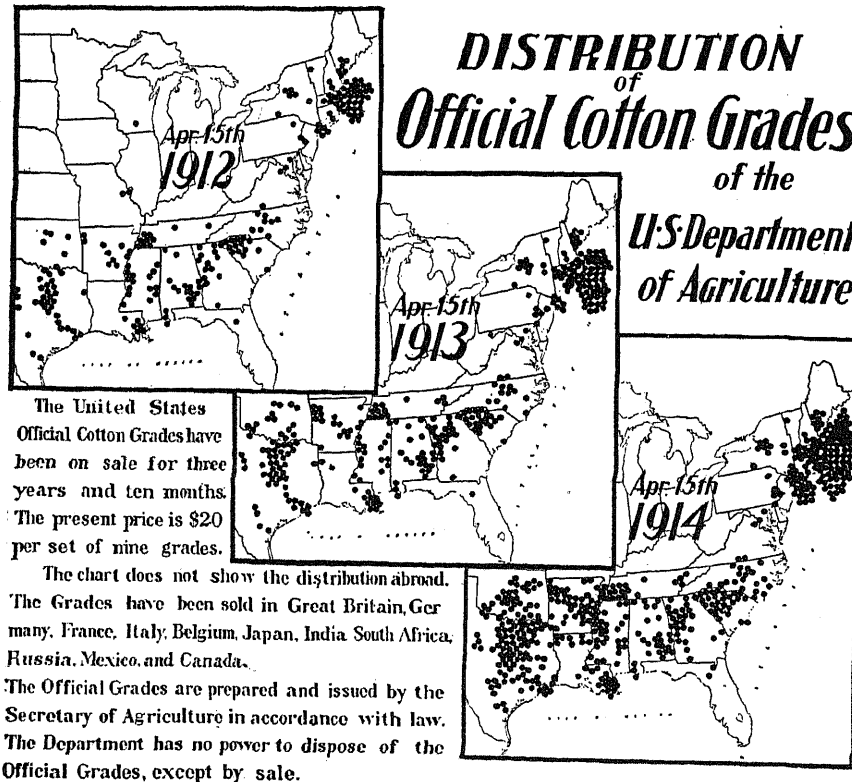
imported from Egypt at the port of Boston for the six months ending February 28, 1914, was 20.38 cents. The average value of cotton seed given in the table was computed from the prices furnished by a number of the leading cottonseed-oil companies and does not include freight and commissions. For the crop of 1913 it was \$25 per ton, which amount was exceeded only for the crops of 1909 and 1910.

COTTON HANDLING AND MARKETING.

National cotton standards.—There is a widespread demand for a change in the methods obtaining in the marketing of cotton whereby greater regard shall be given the actual worth of the staple in the sale of cotton by the producer, since a large proportion of the cotton crop is disposed of by the growers, with but scant attention to the real value of the fiber. The manufacturer, in arriving at the true value of the lint, carefully considers not only the appearance of the cotton as regards color, dirt, and trash, but also the length, strength, and uniformity of the fiber. The producer, as a rule, has slight knowledge of these characteristics, and is somewhat at a disadvantage in disposing of his crop. The desirability of establishing a uniform basis for cotton grading has long been recognized by a majority of those interested in the cotton industry. There are practical difficulties in the way of applying uniform standard grades throughout the handling of the cotton crop, but it is believed these difficulties can

be largely overcome. As a result of the demand for such action, Congress directed the Secretary of Agriculture to establish standards for the different grades of cotton, to prepare them in practical form, and to furnish them to anyone upon payment of the actual cost thereof. Congress has also authorized the making of tests to determine the spinning qualities on the basis of the official grades, and work in this direction is now under way. The following statement, showing the present status of this work was prepared by the Department of Agriculture:

During 1913 the preparation and distribution of the Official Cotton Grades were continued. A new feature of this work was the distribution of sets to agents of the Farmers' Cooperative Demonstration Work for use in helping the farmers to understand the grade of their cotton. The agents placed these sets in a public place with reliable organizations, and daily quotations are posted near by where they can be consulted by both seller and buyer. The price of the Official Cotton Grades was reduced in July, 1913, to \$20 for the full set of nine grades, fractional sets being sold at the rate of \$2.50 per grade for any three or more grade boxes. The types have been officially adopted by the cotton exchanges in the following cities: New Orleans, Memphis, St. Louis, Charleston, Natchez, Little Rock, Galveston, Macon, Mobile, Oklahoma, New York, and by the following associations: New England Cotton Buyers, Arkwright Club, Southern Cotton Buyers, Fall River Cotton Buyers. The grades are also in use in a number of other organizations which have not formally adopted them by vote of the members, while sets, based on the official grades, prepared by private concerns, are also used extensively. The accompanying map shows graphically the distribution of the Official Cotton Grades to April 15, 1914.



The spinning tests authorized by the last Congress on the basis of the Official Grades have been successfully carried out on cotton of the crop of 1912, and the results published in Departmental

Bulletin No. 121. These spinning tests and other tests are to be continued in order to establish a numerical basis for as many as possible of the qualities of cotton.

Cotton ginning.—Two distinct types of cotton gins are in use in the United States. Roller gins are used principally for ginning sea-island cotton, and, to some extent, long-staple upland varieties. While they do not break or injure the fiber, they are slow of operation and of comparatively small capacity. Saw gins, on the other hand, are rapid and meet the requirements of handling large quantities of seed cotton within the limits of the ginning season, but damage the fiber to a greater extent than the roller gins and, consequently, entail a greater percentage of waste in the later processes of manufacture. Attempts to improve the saw gin with a view to the better preservation of the fiber have, as a rule, resulted in reducing the ginning capacity below the point of expeditious handling of the crop. Experiments are being made with a number of different types of gins with a view of developing machinery which will turn out the lint rapidly and, at the same time, not damage the fiber. One line of endeavor is the use of smooth instead of sharp-toothed saws; another, the use of needles instead of saws; and still another, the use of perforated cylinders to which the fibers are held by suction until detached from the seed. The need of better machinery for ginning is strongly felt, and doubtless efforts at improvement will continue to be made until some one succeeds in accomplishing the desired result.

Cotton baling and wrapping.—There has been much criticism of the methods employed in baling and handling American cotton. The bale often presents a very poor appearance, but this is to be expected when the methods used are considered. The bales are not completely covered at the gineries, and, in the course of marketing, the covering is frequently cut in a number of places in order to obtain samples. At the compresses patches are placed over these rents, thus adding somewhat to the weight of the bale. In unloading American cotton from ships at the European ports hooks are generally used, which sometimes tear the covering and break the bands, giving the bale a ragged aspect.

Improvement in methods of compressing and covering cotton has been receiving much attention. The problem of changing the methods of baling and handling cotton is a very difficult one, however. The American crop is grown on nearly 2,000,000 farms and ginned in about 25,000 establishments. The

practices obtaining in the industry throughout the cotton belt differ greatly, and, because of the varying local conditions, it will require a long time to change present methods completely.

Cotton marketing.—The marketing of cotton is a matter intimately associated with all who have to do with this staple, and the methods employed are at times subject to criticism. In order to obtain a knowledge of conditions prefatory to the publication of the report in compliance with an act of Congress, the Department of Agriculture began a thorough study of conditions existing throughout the cotton belt in this regard. The work of the department in this connection during the past year is given in the following statement:

In the investigation of primary market conditions the department has had systematic samplings made at some 70 primary markets throughout the season, from 25 to 50 bales of cotton being sampled on the same days of the week in all markets. The samples have been forwarded to Washington, with a record of the date and place of sale and price per pound paid the grower in each case. A somewhat similar survey, made in the state of Oklahoma last year, indicated that in many markets there was very little variation between the prices paid the farmers for the best and the poorest bales offered until late in the season when the grades were running very low. It also showed that the extreme variations in price occurring in any one market on any one day were almost as likely to occur between two bales of identical character as between the best and poorest grades. In other words, there is every indication that the grade was a minor consideration in fixing the price to the grower.

The survey of 1913-14 involved the sampling of more than 35,000 bales of cotton and, from the systematic manner in which this sampling was done, it is believed that this work will furnish valuable information as to the proportion of the various grades comprising this crop in different parts of the cotton belt, the downward progress of the average grade of the cotton through the picking season, and the proportion of the various tinges, stains, and spots which go to make up the total number of off-color bales. It is also expected to furnish a comprehensive showing of the relation of grade and staple to price paid, although none of the primary markets chosen for this work are in important long-staple producing areas.

VALUE OF THE COTTON CROP.

The estimated values of upland and sea-island cottons and of cotton seed, together with the estimated net weight of cotton for the crops of 1909 to 1913, are presented, by states, in Table 12. No account is taken of linters in computing the value of the crop, as the value of the cotton seed relates to seed before reginning.

The statistics in Table 12 are based upon net weight. In computing the values of the crops the average prices of cotton given in Table 11 have been used. As stated on page 21, these prices relate to cotton marketed prior to April 1, and the values given in the table are affected accordingly. With the varying conditions found throughout the cotton belt the compilation of absolutely accurate data is practically impossible. The statistics in Table 12 are therefore estimates, but it is believed they are sufficiently close to the facts to furnish a reliable basis. The average prices given in Table 11 have been multiplied in each case by the corresponding numbers representing the weights, while the average prices of seed for the several states have been applied to the estimated quantities of seed produced. The values of cotton and of seed are combined to make up the total value of the cotton crop, which appears in the first column of the table. The estimated value of the crop of 1913 is \$1,043,760,000, as compared with \$920,630,000 for 1912, \$859,840,000 for 1911, \$963,180,000 for 1910, and \$681,230,000 for 1908. Thus the value of the crop of 1913, as estimated, was \$183,920,000, or 21.4 per cent more than the estimate for 1911, notwithstanding the fact that the quantity of lint cotton was 9.8 per cent less.

Estimated seed production.—It has generally been assumed that upland cotton, on an average, "thirds itself" at the gin—that is, the seed weighs twice as much as the lint. Greater care than heretofore is now being exercised in selecting seed for planting, which, with improved methods of ginning, tends to the saving of more lint from the first ginning than formerly, the proportions being estimated at 35 per cent lint for upland and 25 per cent lint for sea-island cotton. As thus computed, the quantity of seed produced in 1913 amounted to 6,305,000 tons.

Only approximate accuracy can be claimed for the figures of cottonseed production in Table 12, as different seasons and different localities present conditions which vary considerably. The character of soil, methods of cultivation, and weather conditions during the growing and maturing periods, as well as the care exercised, materially affect the result.

NUMBER OF GINNERIES.

The number of ginneries, both active and idle, reported for each year from 1909 to 1913, and the average number of running bales ginned per active establishment, are shown, by states, in Table 13.

TABLE 13.—NUMBER OF ACTIVE AND IDLE GINNERIES, AND AVERAGE NUMBER OF RUNNING BALES, EXCLUDING LINTERS, GINNED PER ACTIVE ESTABLISHMENT, BY STATES: 1909 TO 1913.

STATE.	Growth year.	NUMBER OF GINNERIES.			Average number of running bales ginned per active establishment.	STATE.	Growth year.	NUMBER OF GINNERIES.			Average number of running bales ginned per active establishment.
		Total.	Active.	Idle.				Total.	Active.	Idle.	
United States.....	1913	27,649	24,749	2,900	567	North Carolina.....	1913	2,988	2,715	273	308
	1912	28,358	25,279	3,079	535		1912	3,069	2,810	256	323
	1911	29,225	26,349	2,876	502		1911	3,125	2,897	228	359
	1910	29,380	26,234	3,146	443		1910	3,068	2,821	247	267
	1909	29,465	26,069	2,796	331		1909	3,026	2,781	245	228
Alabama.....	1913	3,252	2,989	263	498	Oklahoma.....	1913	1,151	1,035	116	834
	1912	3,417	3,130	287	426		1912	1,153	1,051	102	977
	1911	3,569	3,295	274	516		1911	1,129	1,068	61	970
	1910	3,610	3,337	273	359		1910	1,061	986	75	947
	1909	3,645	3,408	237	308		1909	1,036	897	139	632
Arkansas.....	1913	2,080	1,923	157	541	South Carolina.....	1913	3,466	3,216	250	441
	1912	2,140	1,921	219	402		1912	3,532	3,258	274	376
	1911	2,232	2,019	213	450		1911	3,567	3,331	236	508
	1910	2,257	2,035	222	393		1910	3,521	3,253	268	372
	1909	2,273	2,051	222	342		1909	3,451	3,238	213	351
Florida.....	1913	286	221	65	302	Tennessee.....	1913	639	565	74	649
	1912	303	247	56	238		1912	666	584	82	458
	1911	310	276	34	342		1911	666	603	63	713
	1910	312	275	37	244		1910	674	602	72	533
	1909	298	252	46	246		1909	705	633	72	330
Georgia.....	1913	4,351	3,867	484	607	Texas.....	1913	4,695	4,352	343	872
	1912	4,514	3,993	521	454		1912	4,607	4,300	307	1,083
	1911	4,727	4,254	473	657		1911	4,591	4,260	331	970
	1910	4,818	4,276	542	424		1910	4,506	4,120	386	724
	1909	4,843	4,437	406	417		1909	4,452	4,057	395	620
Louisiana.....	1913	1,525	1,198	327	365	Virginia.....	1913	154	134	20	183
	1912	1,599	1,132	467	332		1912	153	135	18	189
	1911	1,675	1,233	442	310		1911	149	131	18	237
	1910	1,760	1,249	511	199		1910	142	121	21	133
	1909	1,840	1,431	409	184		1909	138	106	32	101
Mississippi.....	1913	2,023	2,400	514	520	All other states ¹	1913	25	23	2	1,386
	1912	3,070	2,598	472	387		1912	25	17	8	649
	1911	3,357	2,864	493	408		1911	20	13	7	1,289
	1910	3,537	3,052	485	397		1910	16	14	2	705
	1909	3,655	3,283	372	327		1909	11	9	2	260
Missouri.....	1913	114	102	12	625						
	1912	113	103	10	520						
	1911	108	105	3	868						
	1910	98	93	5	634						
	1909	92	86	6	517						

¹ Includes Arizona, California, Kansas, Kentucky, and New Mexico.

Notwithstanding the decided increase in the quantity of cotton ginned from the crops of 1911, 1912, and 1913, as compared with previous years, the total number of active ginneries has been decreasing. Texas shows an increase of 52 active ginneries in 1913 over the number in 1912, Louisiana 66, and Arkansas 2. Each of the other states report decreases, as compared with 1912, Mississippi showing a loss of 189, Alabama 141, Georgia 126, and North Carolina 95.

The average number of bales ginned per establishment was 567 in 1913, 535 in 1912, 592 in 1911, and 443 in 1910, the size of the crop necessarily affecting the average. As a result of the more general use of larger and more modern ginneries in the newer portions of the cotton belt, the average number of bales ginned

per establishment is naturally larger for those sections than for the older.

It is the practice of the bureau to retain on the official list and to class as "idle" all establishments which contain the machinery necessary for ginning and which may be operated at some future time, and to drop from the list as "dismantled" only those not properly equipped with ginning machinery. This accounts, in part, for the relatively large number of idle establishments. The numbers of active and of idle ginneries in each county are shown in Table 21.

ACREAGE AND PRODUCTION.

Table 14 shows, by states, the acreage from which cotton was harvested and the production for selected years.

in Arkansas 205 pounds, and in Mississippi 204 pounds. In Oklahoma the average was only 132 pounds and in Texas 150 pounds. When conditions are favorable the yield of cotton in some localities approaches a bale to the acre. This is largely the result of improved cultural methods, which involve thorough preparation of the soil, the use of commercial fertilizers, rotation of cotton with leguminous crops, and rapid and intelligent cultivation. With the spread of the system of intensive farming there may be a large increase in production without any further extension of acreage devoted to this crop.

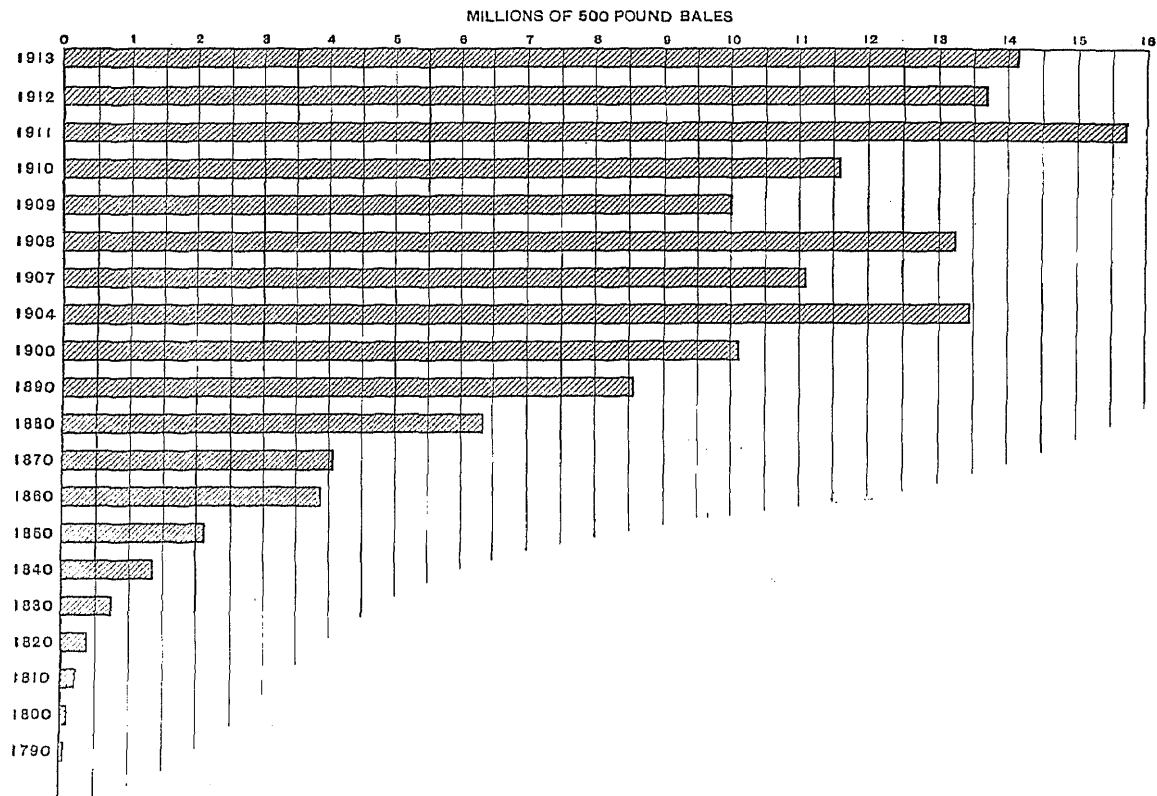
In 1839 cotton was grown in Delaware, Maryland, Indiana, and Illinois, the last-named state alone producing more than 5,000 bales. Under the stimulus of the high prices following the Civil War, cotton was grown to a limited extent in West Virginia, Nevada, California, Illinois, and Utah, in all of which states its cultivation subsequently ceased. New Mexico, which

produced more than 7,000 pounds of cotton in 1859, afterwards abandoned its culture, but has again established the industry, while California, as previously stated, has also resumed the cultivation of cotton.

COTTON INDUSTRY AND TRADE OF THE UNITED STATES.

A complete record of the cotton industry in the United States, covering annual statistics of production, value of upland cotton per pound, consumption, exports, and imports, since 1790, is given in Table 15, on the following page. Because of the variations in the weights of bales and differences in the methods of collecting and compiling statistics employed by the several authorities consulted, absolute accuracy can not be claimed for all of the statistics in this table, but it is believed that the figures closely approach the facts. Certainly a very interesting record of the American cotton industry is presented by these statistics, and the table will serve as a valuable reference.

DIAGRAM 1.—COTTON PRODUCTION IN SPECIFIED YEARS: 1790 TO 1913.



COTTONSEED PRODUCTS.

Prior to the introduction of oil mills cotton seed was practically valueless, except for planting purposes. Although it was used to some extent for fertilizing and for planting, a very large proportion of the total amount produced was considered a waste product and treated accordingly. The manufacture of oil from cotton seed first reached importance in England. That country, with a crush of about 200,000 tons of cotton seed annually, was the leading cottonseed-oil producing country in the world as late as 1870. A few mills were constructed in the United States prior to the Civil War, but the growth of the industry was very slow, and at the census of 1880 only 45 such establishments were reported in the United States. Since that time the industry has shown marvelous growth in this country, there being 870 establishments engaged in the crushing of cotton seed during the season of 1913-14, with a crush of more than 4,750,000 tons. While showing no marked increase in Europe, the industry is being established in the various cotton-growing countries, mills having been built in India, Egypt, Russia, China, Brazil, and several other countries of less importance from the viewpoint of cotton production.

Many changes have been brought about in this industry, that of delinting the seed preparatory to crushing being of particular interest in a report on the cotton crop. The first mills erected were not equipped with machinery for this purpose, as the seed treated were usually of the sea-island or Egyptian varieties, which are smooth and comparatively free from lint. Practically all of the seed treated in the United States are of the upland varieties of cotton, and these seed, unless specially reginned, are covered with short fibers, which prevent a complete separation of the meats from the hulls, as small particles of the former become enmeshed in the fibers and are carried away with the hulls. When seed were first delinted, not more than

25 or 30 pounds of linters were obtained per ton of seed treated. With the increase in the value of oil and meal, efforts were made to increase the yield of these products, and machinery was devised for the closer delinting of seed. Accordingly improved machinery of this character has very generally been installed, and now many establishments obtain more than 100 pounds of linters per ton of seed treated, some obtaining as much as 150 or 160 pounds per ton. Some establishments regin the seed twice. When this is done the linters obtained in the first run are of a much better grade than those obtained in the second.

The closer delinting of cotton seed has resulted in a largely increased production of linters and a consequent lowering of the average grade. Formerly linters were used to some extent for the same purposes as the lower grades of cotton and were accordingly included in the total production of cotton. With the lowering of the average grade of linters and the enormous increase in the production, it was deemed best not to include linters in the totals of the production of cotton, and the bureau has accordingly changed its practice in this respect. The total production of linters for each year since the inauguration of the annual reports of cotton ginned by this bureau is shown in Table 1, while the amounts, by states, for the years 1909 to 1913 are given in Table 2.

Cotton seed crushed and linters obtained.—Although the data relative to the production of linters have been collected each year since 1902, in connection with the statistics of cotton ginned, information as to the quantity of cotton seed used by the oil mills in manufacture has been collected for only the last three years, except at the general censuses of manufactures. Table 16 shows, by states, for the crops of 1911, 1912, and 1913, the number of cottonseed-oil mills active, the quantity of seed crushed, the total quantity of linters obtained, and the average quantity of linters obtained per ton of seed treated.

TABLE 16.—NUMBER OF COTTONSEED-OIL MILLS, QUANTITY OF SEED CRUSHED, AND QUANTITY OF LINTERS OBTAINED, BY STATES: CROPS OF 1911, 1912, AND 1913.

STATE.	ACTIVE COTTON-SEED-OIL MILLS.			COTTON SEED CRUSHED.			LINTERS OBTAINED.								
	Number.			Tons.			Running bales.			Equivalent 500-pound bales.			Average per ton of seed crushed (pounds).		
	1913	1912	1911	1913	1912	1911	1913	1912	1911	1913	1912	1911	1913	1912	1911
United States.....	870	857	830	4,767,802	4,579,503	4,921,073	631,153	602,324	556,276	638,681	609,504	557,575	67	67	57
Alabama.....	85	79	78	428,447	347,224	410,295	53,860	38,830	40,667	53,960	39,161	40,673	63	56	50
Arkansas.....	43	42	43	305,042	249,360	273,455	40,671	34,084	31,836	42,049	35,106	32,994	69	70	60
Florida.....	4	4	4	23,650	19,060	26,156	2,621	1,415	1,955	2,409	1,283	1,693	51	34	32
Georgia.....	156	157	154	861,177	630,836	814,152	110,629	76,185	80,313	108,799	74,900	77,172	63	59	47
Louisiana.....	32	31	34	153,526	151,742	167,175	21,823	17,927	18,592	22,368	18,398	18,885	73	61	60
Mississippi.....	68	75	73	502,326	363,635	430,356	60,766	45,228	46,718	64,658	47,881	48,777	64	61	57
Missouri.....	4	4	4	27,994	22,419	42,271	3,399	2,433	4,217	3,528	2,520	4,381	63	50	52
North Carolina.....	64	63	63	317,955	359,830	330,734	34,998	28,729	33,131	33,321	26,929	28,955	53	43	44
Oklahoma.....	58	55	48	249,721	337,617	306,842	38,536	52,016	39,260	40,887	54,837	40,830	82	81	67
South Carolina.....	98	99	102	411,292	340,555	387,962	46,580	35,517	36,989	45,016	34,131	35,384	55	50	46
Tennessee.....	23	23	22	259,556	104,703	251,829	34,671	22,292	28,615	35,739	23,247	29,408	69	71	58
Texas.....	229	220	209	1,166,309	1,670,906	1,415,321	176,202	243,314	190,096	179,525	246,038	101,221	77	78	68
All other states ¹	6	5	5	60,747	41,582	74,475	6,397	4,345	6,687	6,632	4,525	7,202	55	54	48

¹ Includes California, 1; Illinois, 2; Kansas, 1; and Kentucky, 1; also Arizona, 1, in 1913.

The estimated quantity of cotton seed produced from the crop of 1913, according to Table 12, was 6,305,000 tons, which compares with 6,104,000 tons from the crop of 1912 and 6,997,000 tons from that of 1911. Of the total for 1913, 4,767,802 tons or 75.6 per cent, were taken by the oil mills, thus leaving 1,537,000 tons, or 24.4 per cent, for planting, export, feeding, and other purposes. The proportion of the seed taken by the oil mills from the crop of 1912 was 75 per cent and from the crop of 1911, 70 per cent. The proportion which the quantity of seed crushed forms of the total produced, as shown in Table 12, varies for the different states, but this is accounted for in part by the interstate shipment of seed and by differences as to accessibility to the mills and as to the quantity of the seed retained for planting, larger proportions being kept for this purpose in some localities, especially where the better varieties of cotton are grown. In Alabama, Arkansas, and South Carolina the proportion of the estimated seed production which was taken by the oil mills of those states was comparatively low, large quantities of seed grown in these states being shipped to other states for crushing. On the other hand, the amount returned by the mills in Tennessee exceeded the total production of the state. This is due to the fact that Memphis is one of the most important crushing centers in the cotton belt and draws seed from other states, particularly Arkansas.

There were 870 establishments engaged in crushing cotton seed from the crop of 1913, as compared with 857 in 1912, 839 in 1911, and 810 in 1909. Since 1909 Texas has made a gain of 37 active establishments, Oklahoma of 19, Alabama of 14, and Georgia and North Carolina of 11 each, while Mississippi shows a loss of 21 and Louisiana of 9.

The average quantity of seed crushed per establishment in the United States in 1913 was 5,480 tons, which compares with 5,344 and 5,865 tons, respectively, for the two previous seasons. Large variations appear in the averages for the different states, South Carolina showing the smallest and Tennessee the largest for each of the years named.

As previously stated, the quantity of linters produced increased from 114,544 bales from the crop of 1899 to 638,881 bales from the crop of 1913. Statistics as to the quantity of seed treated in obtaining the linters have been collected for only the last three years, but it is evident that the average production of linters per ton of seed crushed has been steadily increasing. The average for the country as a whole was 67 pounds in 1913 and in 1912, and 57 pounds in 1911. The increase in the average for 1912 over that for 1911 was so marked that the bureau corresponded with a number of establishments which showed the largest average production per ton of seed treated. The replies received to these letters of inquiry indicate that the

installation of improved machinery, which effects closer delinting, was the most important factor in bringing about the increase. The average for 1913 would have exceeded that of 1912 had there not been such a decrease in quantity of seed treated in Texas and Oklahoma, where the highest averages obtain, the states in the eastern part of the cotton belt all showing increases. For 1913 Oklahoma shows 82 pounds of linters per ton of seed treated; while Texas is second, with 77 pounds; Louisiana third, with 73 pounds; and Arkansas and Tennessee next, with 69 pounds each. In Florida and Georgia the averages are affected somewhat by the sea-island seed treated, the yield of linters obtained from this seed being very small, some of it not being delinted at all.

Cotton seed crushed and linters obtained to specified dates.—Prior to the season of 1912–13 statistics of linters obtained by reginning cotton seed were collected only in March of each year. For the crop of 1912 data were also obtained showing the quantity of seed crushed and linters obtained to January 1, and for the crop of 1913 the quantities to December 1 and January 1. This information is given, by states, in the following table:

TABLE 17.—Cotton seed crushed and linters obtained to specified dates, by states: Crops of 1912 and 1913.

STATE.	COTTON SEED OF CROP INDICATED CRUSHED PRIOR TO—			LINTERS OF CROP INDICATED OBTAINED PRIOR TO—		
	January 1.		December 1.	January 1.		December 1.
	1913	1912	1913	1913	1912	1913
United States....	Tons. 3,012,685	Tons. 2,739,897	Tons. 2,192,276	Bales. 397,974	Bales. 352,972	Bales. 288,468
Alabama.....	262,854	235,264	192,841	32,789	25,966	23,863
Arkansas.....	175,312	142,533	116,632	22,667	18,829	15,299
Florida.....	17,578	15,650	13,806	1,677	1,154	1,397
Georgia.....	515,137	405,541	375,266	65,461	48,900	46,846
Louisiana.....	103,022	94,877	74,625	13,538	10,324	9,508
Mississippi.....	284,527	241,987	195,700	34,620	27,936	23,390
Missouri.....	19,530	15,588	13,749	2,381	1,642	1,649
North Carolina.....	162,995	160,164	114,283	17,607	14,889	11,823
Oklahoma.....	188,473	191,936	136,191	28,885	28,794	20,966
South Carolina.....	239,439	203,889	171,496	26,779	20,719	19,105
Tennessee.....	151,221	107,739	100,120	19,234	13,432	12,658
Texas.....	880,321	901,047	667,176	129,243	138,190	99,959
All other states.....	32,276	23,702	20,391	3,093	2,187	2,005

Prior to January 1, 1914, 3,012,685 tons of cotton seed from the crop of 1913 were crushed, compared with 2,739,897 tons from the crop of 1912. These amounts represent, respectively, 63.2 per cent and 59.8 per cent of the totals crushed for the two seasons. The states crushing prior to this date the largest proportions of their totals for the season are Oklahoma, with 75.5 per cent; Florida, with 74.3 per cent; and Texas, with 73.8 per cent; while North Carolina, with 51.3 per cent, shows the smallest proportion.

Nearly one-half of the total quantity of seed crushed from the crop of 1913 was treated by the mills prior to December 1. In Texas, where some mills began

COTTON PRODUCTION: 1913.

operation much earlier than in the other states, 57.2 per cent of the total quantity of seed crushed for the season was treated prior to December 1, while the proportion in Oklahoma, where the crop was affected by the drought, was 54.5, and in Florida 58.4. On the other hand, only 35.9 per cent of the total quantity crushed in North Carolina was treated prior to that date.

Comparative data for the industry.—The remarkable development of the cottonseed products industry in the United States is indicated in Table 18, which shows the estimated quantity of cotton seed produced, the quantity utilized for manufacturing purposes, and the estimated quantities and values of crude products manufactured, together with statistics regarding the exports of cotton seed and its products.

TABLE 18.—ESTIMATED QUANTITY OF COTTON SEED PRODUCED, QUANTITY OF COTTON SEED CRUSHED, ESTIMATED QUANTITIES AND VALUES OF CRUDE PRODUCTS OBTAINED, AND EXPORTS OF COTTONSEED PRODUCTS: 1874 TO 1913.

[In the preparation of this table a number of sources of information have been utilized, but it has been found impracticable to secure in all instances satisfactory data for the years indicated, and only an approximation to the facts is claimed. Statistics of the quantity of seed produced and the quantity crushed and of cottonseed products relate to the growth year, while the statistics of exports are for the year ending June 30, following.]

YEAR.	COTTON SEED—			CRUDE COTTON SEED PRODUCTS.								EXPORTS.		
	Produced (tons).	Crushed (tons).	Total value.	Oil.		Cake and meal.		Hulls.		Linters.		Cotton seed (tons).	Cottonseed products.	
				Quantity (gallons).	Value.	Quantity (tons).	Value.	Quantity (tons).	Value.	Quantity (bales of 500 pounds net).	Value.		Oil (gallons).	Cake and meal (tons).
1913	6,305,000	4,767,802	\$155,500,000	197,160,000	\$83,320,000	2,090,000	\$52,790,000	1,564,000	\$12,230,000	611,110	\$7,160,000			
1912	6,104,000	4,579,508	132,230,000	185,750,000	69,100,000	1,999,000	45,970,000	1,540,000	9,710,000	533,001	7,450,000	12,024	42,031,052	564,046
1911	6,097,000	4,021,073	131,340,000	201,650,000	66,580,000	2,151,000	49,720,000	1,642,000	9,800,000	533,039	5,150,000	32,030	53,262,796	646,845
1910	5,175,000	4,106,000	142,710,000	167,970,000	80,430,000	1,792,000	44,060,000	1,375,000	11,370,000	379,576	6,250,000	6,112	30,069,469	402,298
1909 ¹	4,462,000	3,269,000	105,720,000	131,000,000	55,230,000	1,826,000	35,910,000	1,189,000	9,810,000	296,640	4,770,000	12,466	29,860,607	320,044
1908	5,004,000	3,670,000	86,080,000	146,790,000	44,090,000	1,492,000	33,580,000	1,330,000	6,080,000	330,277	2,340,000	25,813	51,087,329	616,875
1907	4,952,000	2,566,000	65,980,000	103,050,000	33,390,000	1,043,000	23,300,000	927,000	6,370,000	255,487	2,920,000	14,239	41,019,991	464,644
1906	5,013,000	3,844,000	94,380,000	153,760,000	43,050,000	1,786,000	30,140,000	1,593,000	8,840,000	307,518	3,350,000	8,814	41,880,304	670,484
1905	5,060,000	3,131,000	64,950,000	125,700,000	26,400,000	1,272,000	29,250,000	1,135,000	5,110,000	219,307	4,190,000	11,859	43,793,519	555,417
1904	6,427,000	3,345,000	69,310,000	133,820,000	31,340,000	1,350,000	27,770,000	1,213,000	5,590,000	235,580	4,610,000	10,531	51,535,580	625,954
1903	4,716,000	3,241,000	73,930,000	121,880,000	39,000,000	1,150,000	24,840,000	1,528,000	5,710,000	194,486	4,380,000	6,430	29,013,743	410,175
1902	5,092,000	3,269,000	71,290,000	122,910,000	40,560,000	1,166,000	23,310,000	1,541,000	5,390,000	150,368	2,030,000	25,811	35,642,994	550,196
1901	4,630,000	3,154,000	62,980,000	118,610,000	33,210,000	1,125,000	21,930,000	1,487,000	6,320,000	145,103	1,520,000	28,202	33,042,848	525,233
1900	4,830,000	2,415,000	48,230,000	96,610,000	26,030,000	845,000	16,270,000	1,139,000	3,990,000	111,000	1,800,000	21,065	49,356,741	629,344
1899	4,468,000	2,479,000	42,410,000	93,330,000	21,390,000	884,000	16,030,000	1,169,000	3,190,000	114,544	1,800,000	24,928	21,187,728	244,888
1898	5,472,000	2,353,000	27,960,000	94,110,000	13,180,000	823,000	14,780,000					17,222	50,627,219	539,397
1897	5,253,000	2,101,000	26,680,000	84,040,000	12,610,000	735,000	14,070,000					16,382	40,230,784	459,864
1896	4,070,000	1,628,000	20,260,000	65,120,000	11,720,000	570,000	14,540,000					13,283	27,198,882	311,093
1895	3,416,000	1,435,000	20,180,000	57,300,000	11,480,000	502,000	8,700,000					13,490	10,445,848	202,469
1894	4,792,000	1,677,000	24,870,000	67,000,000	13,420,000	687,000	11,450,000					5,520	21,187,728	244,888
1893	3,579,000	1,431,000	28,500,000	57,260,000	16,600,000	501,000	11,900,000					2,710	14,958,300	
1892	3,183,000	1,050,000	18,630,000	42,010,000	10,080,000	368,000	8,550,000					2,200	9,402,074	
1891	4,274,000	1,068,000	20,520,000	42,740,000	11,540,000	374,000	8,980,000					6,075	13,359,278	
1890	4,093,000	1,023,000	19,790,000	40,630,000	11,460,000	358,000	8,230,000					5,054	11,003,160	
1889	3,495,000	2,479,000	16,460,000	34,950,000	10,130,000	309,000	6,270,000					3,380	13,384,385	
1888	3,310,000	794,000	20,370,000	31,770,000	13,980,000	278,000	6,390,000					5,687	2,690,700	
1887	3,291,000	823,000	17,130,000	32,910,000	11,520,000	288,000	5,610,000					3,109	4,458,597	
1886	3,015,000	694,000	12,820,000	27,770,000	8,050,000	243,000	4,770,000					5,616	4,007,136	
1885	3,045,000	578,000	10,970,000	23,140,000	6,710,000	202,000	4,250,000					5,897	6,240,139	
1884	2,625,000	499,000	10,470,000	19,950,000	6,980,000	174,000	3,490,000					5,523	6,364,270	
1883	2,639,000	396,000	9,850,000	15,840,000	6,020,000	138,000	3,830,000					2,837	3,605,940	
1882	3,206,000	392,000	10,640,000	15,680,000	7,060,000	137,000	3,580,000					5,900	415,011	
1881	2,455,000	295,000	8,380,000	11,780,000	5,420,000	103,000	2,950,000					5,951	713,549	
1880	3,039,000	182,000	4,610,000	7,290,000	2,770,000	64,000	1,840,000					5,814	3,444,684	
1879	2,616,000	235,000	5,640,000	9,420,000	3,670,000	82,000	1,970,000					6,071	6,997,793	
1878	2,268,000	181,000	3,810,000	7,260,000	2,400,000	64,000	1,410,000					8,199	5,352,530	
1877	2,148,000	150,000	3,910,000	6,020,000	2,650,000	53,000	1,200,000					8,379	4,092,345	
1876	1,969,000	98,000	2,610,000	3,940,000	1,770,000	34,000	840,000					5,155	1,705,422	
1875	2,087,000	123,000	3,970,000	4,940,000	2,670,000	43,000	1,300,000					2,582	281,054	
1874	1,687,000	84,000	2,530,000	3,370,000	1,590,000	30,000	940,000					2,658	417,357	

¹ The figures of the Thirteenth Census are not shown in this table because they do not represent a single growth year.

The average yields of oil, meal and cake, and hulls per ton of seed crushed vary for the different years and for the several states, according to the seasons, the kinds and conditions of the seed, and the efficiency of the crushing plants. The estimated quantities of these products for 1913, however, are based upon the average production per ton of seed crushed, as returned at the census of 1910, which related to

seed crushed from the crops of 1908 and 1909. The value of the products has been computed according to prices furnished by manufacturers. The bureau does not claim absolute accuracy for the statistics in this table, except for the quantities of linters since 1899 and of seed crushed for 1911, 1912, and 1913, but presents the estimates for the other items as approximately correct.

LOCALIZATION OF COTTON GINNING.

The cotton crop of 1913 was ginned in 888 counties, that of 1912 in 877, and that of 1911 in 883. In several instances there were counties in which the ginneries were active for one crop and idle for another, this fact accounting, in part, for the differences in the number of counties for the different crops. Table 19 gives the number of counties, by states, from which cotton ginning was reported, and classifies the counties according to the total quantities returned by the ginneries.

Of the total number of counties reporting cotton ginned from the crop of 1913, 265 returned less than 5,000 equivalent 500-pound bales each, as compared with 264 from the crop of 1912 and 243 from the crop of 1911. For many of these counties the quantity of cotton reported is small, in some cases only one or two ginneries being operated in a county. There were 189 counties which reported more than 25,000 bales each in 1913, as compared with 166 in 1912 and 221 in 1911. There were 38 counties which reported more than 50,000 bales each in 1913, 11 of which—4 in Mississippi and 7 in Texas—returned more than 75,000 bales each and 5—Bolivar County, Miss., and Ellis, Williamson, McLennan, and Navarro Counties, Tex., in the order named—more than 100,000 bales each.

The counties reporting cotton ginned are indicated on the United States map on page 34, while on the state maps, pages 71 to 79, inclusive, the counties ginning cotton are designated according to the production in 500-pound bales.

Table 20 shows the quantity of sea-island cotton ginned to December 13 and for the season, by counties, Table 21 gives similar data for sea-island and upland cotton combined, as well as the number of active and idle ginneries, while Table 22 presents statistics of

cotton ginned to specified dates and throughout the season. Linters are not included.

TABLE 19.—Cotton-producing counties classified according to quantity of cotton ginned, by states: 1911, 1912, and 1913.

STATE.	Year.	NUMBER OF COUNTIES GINNING—						
		Total.	Less than 5,000 bales.	5,000 to 10,000 bales.	10,000 to 15,000 bales.	15,000 to 25,000 bales.	25,000 to 40,000 bales.	40,000 bales and over.
United States...	1913	888	265	143	117	174	127	62
	1912	877	264	145	129	173	109	57
	1911	883	243	119	122	178	137	84
Alabama.....	1913	67	3	7	7	23	24	3
	1912	67	3	6	13	22	20	3
	1911	67	3	3	8	22	23	3
Arkansas.....	1913	71	13	18	11	19	6	4
	1912	71	18	17	15	17	4	2
	1911	71	16	14	17	17	5	2
Florida.....	1913	24	23			1		
	1912	24	23			1		
	1911	24	19	4		1		
Georgia.....	1913	143	24	19	32	41	21	6
	1912	142	26	38	32	36	10	11
	1911	140	20	15	22	41	31	11
Louisiana.....	1913	54	27	10	7	5	4	1
	1912	52	27	9	9	5	1	1
	1911	52	27	9	7	8	1	1
Mississippi.....	1913	77	29	9	13	12	8	6
	1912	76	27	10	13	17	3	6
	1911	77	19	11	15	20	7	5
Missouri.....	1913	11	8	1		1	1	
	1912	10	7	1	1		1	
	1911	11	7	1		1	1	1
North Carolina.....	1913	75	27	21	9	8	9	1
	1912	75	27	18	10	8	11	1
	1911	74	21	17	11	11	8	6
Oklahoma.....	1913	63	15	9	14	16	8	1
	1912	63	17	5	9	20	10	2
	1911	66	16	10	6	21	11	2
South Carolina.....	1913	44	1	3	2	12	16	10
	1912	44	1	5	5	11	16	6
	1911	43		3		9	13	18
Tennessee.....	1913	32	12	8	1	5	5	1
	1912	32	16	5	4	6		1
	1911	33	13	4	5	4	6	1
Texas.....	1913	209	69	35	21	30	25	29
	1912	204	58	28	18	30	33	37
	1911	209	70	24	31	23	31	30
All other states.....	1913	18	14	3		1		
	1912	17	14	3				
	1911	16	12	4				

COTTON-PRODUCING AREA OF THE UNITED STATES IN 1913, AND CENTER OF PRODUCTION: 1859-1913.

The cotton-producing area of the United States, as shown by the returns of ginner, is indicated on the map below. Localities producing upland cotton only are represented by diagonal lines, and those producing sea-island or both sea-island and upland, by intercrossed lines. On pages 71 to 79 will be found maps of the principal cotton-producing states, upon which are indicated the relative quantities of cotton produced by counties in 1913. The centers of production in the United States for the crops of 1859, 1879, 1899, 1906, 1908, 1910, 1911, 1912, and 1913 are indicated on the map below. The center of production in 1859 was approximately 13 miles south-east of Macon, in Noxubee County, Miss.; in 1879 it was 11 miles south of Columbus, in Lowndes County; in 1899 it was 13 miles southeast of Lexington, in Holmes County; in 1906 it was 5 miles northeast of Mayersville, in Issaquena County; in 1908 it was 4 miles west of Lexington, in Holmes County; in 1910 it was 3 miles southwest of Vaiden, in Carroll County; in 1911 it was in Attala County, 2½ miles southwest of French Camps; in 1912 it was in Sharkey County, 2 miles north of Midnight; and in 1913 it was in Attala County, 10 miles northwest of Kosciusko.

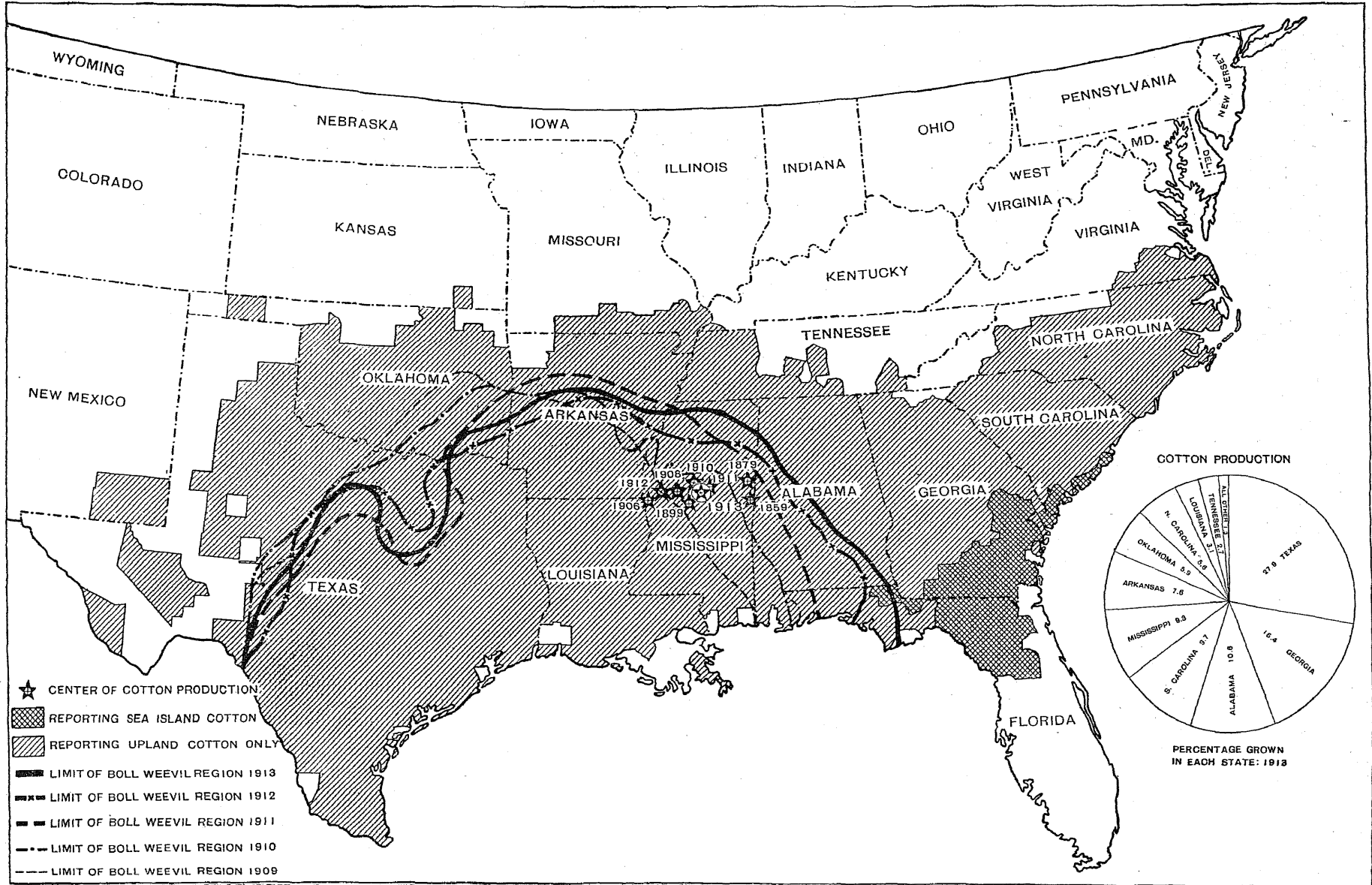


TABLE 21.—NUMBER OF GINNERIES IN 1913 AND QUANTITY OF COTTON, EXCLUSIVE OF LINTERS, GINNED FROM THE CROPS OF 1909 TO 1913, BY COUNTIES—Continued.

Table with columns for COUNTY, GINNERIES (Active, Idle), and TOTAL QUANTITY GINNED (Number of bales, Number of equivalent 500-pound bales) for years 1913, 1912, 1911, 1910, 1909. Section: ARKANSAS—Continued.

Table with columns for The state... and county names, followed by 15 columns of bales ginned for years 1913, 1912, 1911, 1910, 1909. Section: FLORIDA. [See map on page 73.]

Table with columns for The state... and county names, followed by 15 columns of bales ginned for years 1913, 1912, 1911, 1910, 1909. Section: GEORGIA. [See map on page 74.]

1 Bleckley County organized from part of Pulaski.

TABLE 21.—NUMBER OF GINNERIES IN 1913 AND QUANTITY OF COTTON, EXCLUSIVE OF LINTERS, GINNED FROM THE CROPS OF 1909 TO 1913, BY COUNTIES—Continued.

Table with columns for County, Gineries (Active/Idle), Total Quantity Ginned (Number of bales and equivalent 500-pound bales), and Number of Bales Ginned to Dec. 13 (1913-1909). Includes Georgia counties like Montgomery, Morgan, Murray, etc.

LOUISIANA.

[See map on page 75.]

Table with columns for The state and 16 Louisiana counties, showing cotton production statistics for 1913 and 1909.

1 Wheeler County organized from part of Montgomery. 2 Bleckley County organized from part of Pulaski.

3 Allen and Beauregard Parishes organized from part of Calcasieu. 4 Evangeline Parish organized from part of St. Landry.

TABLE 21.—NUMBER OF GINNERIES IN 1913 AND QUANTITY OF COTTON, EXCLUSIVE OF LINTERS, GINNED FROM THE CROPS OF 1909 TO 1913, BY COUNTIES—Continued.

Table with columns for County, Gineries (Active, Idle), Total Quantity Ginned (Number of bales, Number of equivalent 500-pound bales), and Number of Bales Ginned to Dec. 13 (1913, 1912, 1911, 1910, 1909). Section titled NORTH CAROLINA—Continued.

OKLAHOMA.

[See map on page 77.]

Table with columns for County, Gineries (Active, Idle), and Number of Bales Ginned to Dec. 13 (1913, 1912, 1911, 1910, 1909). Section titled OKLAHOMA.

1 Hoke County organized from parts of Cumberland and Robeson. 2 Cotton County organized from part of Comanche.

3 Latimer County included in "All other" for 1911, 1910, and 1909.

COTTON PRODUCTION: 1913.

TABLE 21.—NUMBER OF GINNERIES IN 1913 AND QUANTITY OF COTTON, EXCLUSIVE OF LINTERS, GINNED FROM THE CROPS OF 1909 TO 1913, BY COUNTIES—Continued.

Main table for Tennessee showing cotton production data by county from 1913 to 1909. Columns include County, Gineries (Active/Totale), Total Quantity Ginned (Number of bales and equivalent 500-pound bales), and Number of Bales Ginned to Dec. 13 (1913-1909).

TENNESSEE. [See map on page 78.]

Detailed Tennessee data table with columns: The state..., 565, 74, 366,788, 267,439, 430,027, 321,103, 240,757, 379,471, 276,546, 449,737, 331,947, 246,630, 340,685, 230,239, 360,510, 269,670, 221,465.

TEXAS. [See map on page 79.]

Main table for Texas showing cotton production data by county from 1913 to 1909. Columns include County, Gineries (Active/Totale), Total Quantity Ginned (Number of bales and equivalent 500-pound bales), and Number of Bales Ginned to Dec. 13 (1913-1909).

1 Franklin and Lawrence Counties included in "All other" for 1911, 1910, and 1909. 2 Brooks County organized from parts of Hidalgo, Starr, and Zapata in 1911; included in "All other" for 1911. 3 Wilacy County organized from parts of Cameron and Hidalgo in 1911. 4 Crosby County included in "All other" for 1911, 1910, and 1909.

COTTON PRODUCTION: 1913.

TABLE 21.—NUMBER OF GINNERIES IN 1913 AND QUANTITY OF COTTON, EXCLUSIVE OF LINTERS, GINNED FROM THE CROPS OF 1909 TO 1913, BY COUNTIES—Continued.

Table with 17 columns: COUNTY, Ac-tive, Idle, and 15 columns for bales ginned in 1913, 1912, 1911, 1910, 1909. Includes section for TEXAS-Continued with numerous county entries and their respective ginning statistics.

1 Donley, Hidalgo, and Matagorda Counties included in "All other" for 1909.
2 Floyd, Hale, Kimble, and Live Oak Counties included in "All other" for 1911, 1910, and 1909.
3 Parts of Hidalgo County included in Brooks and Willacy Counties, organized in 1911.
4 Jim Wells and Kleberg Counties organized from parts of Nueces.

COTTON PRODUCTION: 1913.

**TABLE 22.—COTTON GINNED TO SPECIFIED DATES AND THROUGHOUT THE SEASON, BY COUNTIES:
CROP OF 1913—Continued.**

[Quantities are given in running bales, except that round bales are counted as half bales. Linters are not included.]

COUNTY.	COTTON GINNED TO—									Total ginned.
	Sept. 1.	Sept. 25.	Oct. 18.	Nov. 1.	Nov. 14.	Dec. 1.	Dec. 13.	Jan. 1.	Jan. 16.	
ARKANSAS—Continued.										
Columbia.....	22	2,816	9,154	12,375	16,099	20,562	22,071	22,627	23,071	23,288
Conway.....	68	2,456	9,385	11,032	14,066	17,187	18,516	18,889	19,382	20,320
Craighead.....		274	3,707	4,910	7,549	11,180	13,238	14,033	14,377	14,671
Crawford.....	87	2,157	7,493	9,947	14,197	16,636	17,219	17,844	18,143	18,892
Crittenden.....	(1)	1,230	9,484	11,578	17,710	24,709	28,630	30,898	32,656	35,535
Cross.....	(1)	189	1,958	2,486	4,134	6,027	7,028	7,498	7,679	7,957
Dallas.....	35	500	1,651	2,260	3,344	4,472	4,980	5,160	5,265	5,344
Desha.....		513	2,858	4,290	6,220	8,604	10,753	11,175	12,000	16,047
Draw.....	13	895	4,490	6,074	8,673	12,184	14,600	15,664	16,554	18,006
Faulkner.....	22	3,383	11,322	13,417	17,528	21,688	22,845	23,800	24,534	25,306
Franklin.....	16	1,072	4,932	7,080	9,631	11,401	11,963	12,118	12,249	12,395
Fullon.....		23	907	1,440	2,250	3,130	3,578	3,807	3,902	4,063
Grant.....	8	553	2,107	2,769	3,812	4,937	5,267	5,600	5,733	5,796
Greene.....		162	2,381	3,381	5,252	7,273	9,001	9,268	9,618	9,938
Hempstead.....	102	3,354	9,961	12,655	16,130	18,518	19,108	19,266	19,352	19,455
Hot Spring.....	16	321	1,781	2,390	3,244	4,053	4,301	4,482	4,540	4,617
Howard.....	100	1,601	5,361	6,886	8,516	9,803	10,030	10,135	10,172	10,176
Independence.....		431	4,374	5,523	8,180	10,959	12,015	12,366	12,660	13,036
Izard.....		72	1,530	2,157	3,437	4,691	5,092	5,261	5,335	5,447
Jackson.....	5	1,527	8,605	11,516	16,928	22,949	20,652	28,576	30,121	32,927
Jefferson.....		1,899	11,223	17,389	24,405	33,632	40,489	45,868	48,706	60,047
Johnson.....	13	707	4,316	5,904	8,207	9,794	10,252	10,603	11,051	11,483
Lafayette.....	31	1,657	5,496	7,302	9,439	11,739	12,628	12,980	13,450	13,775
Lawrence.....		545	5,077	6,012	9,791	13,947	15,808	16,662	17,045	17,794
Lee.....	(1)	563	6,141	8,312	12,610	17,308	20,953	23,330	24,504	27,329
Lincoln.....	(1)	1,045	4,637	7,196	10,524	14,102	17,053	18,407	19,290	22,084
Little River.....	60	2,022	6,076	7,915	10,402	12,731	13,430	14,070	14,070	14,616
Logan.....	64	2,129	8,425	11,127	15,699	18,478	19,116	19,440	19,704	20,122
Lonoke.....	19	2,685	9,949	14,441	20,008	27,630	31,873	33,983	36,765	41,172
Miller.....	22	1,243	4,363	6,501	8,488	10,252	10,906	11,417	11,971	12,583
Mississippi.....	9	2,790	11,370	15,218	23,008	34,010	38,526	40,157	42,531	47,180
Monroe.....	18	904	5,142	6,372	9,131	11,937	14,067	14,953	15,786	16,170
Montgomery.....	(1)	141	1,460	2,106	3,186	3,718	3,833	3,896	3,911	3,922
Nevada.....	67	2,574	6,071	8,424	9,874	12,602	12,717	12,775	12,776	13,043
Ouachita.....	22	1,119	3,690	4,919	6,536	8,165	8,829	9,021	9,132	9,304
Perry.....	14	687	2,667	3,177	4,350	5,412	5,722	5,932	6,046	6,190
Philips.....	(1)	1,495	10,266	13,340	19,134	25,752	30,848	33,853	36,082	40,737
Pike.....	(1)	177	1,680	2,204	3,066	3,779	3,897	4,011	4,066	4,101
Poinsett.....		62	1,121	1,593	3,086	4,709	5,616	5,880	6,083	7,005
Folk.....	(1)	193	1,461	2,204	2,935	3,437	3,637	3,558	3,618	3,619
Pope.....	74	2,304	9,303	11,580	15,698	18,587	19,827	20,300	20,955	21,461
Prarie.....	(1)	425	2,649	3,296	4,999	6,871	7,865	8,387	8,723	9,299
Pulaski.....	(1)	917	5,335	7,871	11,388	15,028	18,266	19,861	20,906	24,236
Randolph.....		370	2,372	3,531	5,315	6,885	7,817	8,263	8,350	8,485
St. Francis.....	(1)	696	6,404	8,242	13,154	18,185	21,370	23,107	24,072	26,336
Saline.....	(1)	228	2,079	2,877	4,132	5,501	6,205	6,719	6,864	7,436
Scott.....	(1)	567	3,281	4,795	6,464	8,056	8,536	8,815	8,924	9,033
Sebastian.....	68	1,796	6,661	8,820	11,848	13,694	14,086	14,387	14,548	14,800
Sevier.....	40	820	3,680	4,884	6,369	7,253	7,393	7,486	7,511	7,541
Sharp.....		64	1,452	1,907	2,934	4,152	4,608	4,696	4,804	4,908
Union.....	26	1,225	4,809	7,040	9,705	12,979	14,363	14,794	15,071	15,431
Van Buren.....		233	2,008	2,685	3,749	4,633	4,918	5,071	5,175	5,225
White.....	(1)	1,530	7,589	9,875	13,567	18,901	20,637	21,296	21,646	22,171
Woodruff.....		1,003	7,053	9,023	13,410	17,933	20,568	22,148	23,146	25,347
Yell.....	53	1,920	9,302	11,514	16,688	21,059	22,070	22,644	23,378	24,051
All other.....	80	54	512	2,842	3,227	4,084	7,212	7,293	7,406	8,373

FLORIDA.

The state.....	2,960	16,367	35,956	47,315	53,217	58,485	63,082	65,299	65,765	66,700
Alachua.....	80	1,551	3,750	4,656	5,261	5,630	5,883	6,057	6,078	6,090
Baker.....		69	906	454	562	709	773	796	796	807
Bradford.....	12	584	1,600	1,941	2,227	2,485	2,596	2,661	2,669	2,673
Columbia.....	28	528	1,588	2,046	2,282	2,453	2,576	2,607	2,607	2,607
Hamilton.....	(1)	652	1,573	2,083	2,660	3,214	3,560	3,766	3,793	3,805
Holmes.....	260	1,350	2,753	3,076	3,321	3,410	3,473	3,735	3,741	3,747
Jackson.....	1,831	7,202	12,737	14,837	16,226	17,355	17,842	18,079	18,164	18,285
Jefferson.....	166	1,103	2,676	3,249	3,547	3,950	4,419	4,665	4,675	4,683
Lafayette.....		89	290	308	493	564	605	619	619	607
Leon.....	62	600	1,789	2,300	2,750	3,217	3,560	4,045	4,049	4,055
Madison.....	39	557	1,909	2,754	3,508	4,231	4,925	5,220	5,300	5,340
Suwanee.....		483	1,886	2,825	3,407	3,957	4,295	4,598	4,612	4,616
Taylor.....		(1)	(1)	(1)	(1)	149	160	173	178	181
Washington.....	(1)	(1)	1,171	1,330	1,455	1,564	1,625	1,646	1,667	1,667
All other.....	472	1,599	1,922	5,306	5,468	5,597	6,490	6,632	6,817	7,447

¹ Included in all other counties, to avoid disclosure of individual operations.

COTTON PRODUCTION: 1913.

TABLE 22.—COTTON GINNED TO SPECIFIED DATES AND THROUGHOUT THE SEASON, BY COUNTIES: CROP OF 1913—Continued.

[Quantities are given in running bales, except that round bales are counted as half bales. Linters are not included.]

COUNTY.	COTTON GINNED TO—									Total ginned.
	Sept. 1.	Sept. 25.	Oct. 18.	Nov. 1.	Nov. 14.	Dec. 1.	Dec. 13.	Jan. 1.	Jan. 16.	
MISSOURI.										
The state.....	4	5,114	22,626	29,152	39,803	52,553	59,376	61,623	62,467	63,761
Dunklin.....		2,280	10,702	13,679	18,642	24,957	28,518	29,674	29,983	30,458
New Madrid.....	(¹)	857	3,571	4,628	6,046	7,885	8,757	8,979	9,105	9,204
Oregon.....		(¹)	50	104	166	223	307	321	329	338
Pemissot.....	(¹)	1,490	5,768	7,549	10,510	13,885	15,309	15,922	16,246	16,575
Stoddard.....		426	1,840	2,167	2,991	3,677	3,901	3,987	3,992	4,034
All other.....	4	61	605	1,025	1,448	1,926	2,584	2,740	2,812	3,062
NORTH CAROLINA.										
The state.....	177	49,952	252,193	384,260	493,360	622,369	708,598	759,800	783,817	837,995
Alexander.....			526	1,072	1,492	1,978	2,290	2,392	2,423	2,591
Anson.....	87	3,655	11,594	15,644	18,488	21,307	23,067	24,018	24,259	25,515
Beaufort.....		302	1,642	3,295	4,406	6,045	7,477	8,272	8,644	9,551
Bertie.....		56	1,255	2,990	4,692	6,994	9,493	10,698	11,607	13,373
Bladen.....		478	2,132	3,380	4,714	6,879	7,450	7,673	7,753	8,062
Cabarrus.....	(¹)	1,120	4,996	7,229	9,211	10,708	11,591	11,936	12,235	12,676
Camden.....		55	976	1,855	2,945	3,551	3,652	3,811	3,875	4,040
Catawba.....		182	4,073	6,007	7,397	8,911	9,518	9,845	9,934	10,137
Chatham.....		152	2,694	4,200	5,661	7,083	7,943	8,550	8,505	8,803
Chowan.....		123	1,139	1,869	2,617	3,222	3,788	4,407	4,523	4,888
Cleveland.....		627	9,544	13,856	16,374	19,727	21,452	22,422	22,721	23,482
Columbus.....		463	2,434	3,924	5,303	7,221	8,129	8,667	8,903	9,114
Craven.....		140	909	1,994	2,716	3,748	4,481	4,987	5,307	5,395
Cumberland.....	(¹)	2,400	7,649	10,528	13,201	16,159	17,491	18,262	18,689	19,155
Davidson.....		5	589	1,019	1,625	2,232	2,523	2,736	2,771	2,985
Davie.....			261	725	1,158	1,814	2,153	2,411	2,461	2,649
Duplin.....		799	2,331	4,409	5,948	8,041	9,306	10,010	10,192	10,645
Durham.....		45	375	584	773	1,035	1,259	1,291	1,383	1,484
Edgecombe.....	(¹)	896	5,864	9,596	12,435	17,142	20,541	23,118	24,526	25,976
Franklin.....		479	4,136	7,052	8,877	11,433	12,721	13,529	14,129	15,536
Gaston.....		516	5,415	7,809	9,280	10,976	12,178	12,910	13,205	13,706
Gates.....		75	1,301	2,002	2,589	3,751	4,384	4,604	4,839	5,207
Greene.....		70	992	2,154	3,199	4,823	6,189	6,862	7,542	8,008
Halifax.....		661	5,939	10,851	15,874	20,942	24,694	26,866	28,032	32,110
Harnett.....	(¹)	2,499	7,545	10,380	13,047	16,967	17,677	18,403	18,918	19,403
Hertford.....		36	536	1,124	1,683	2,452	3,485	4,214	4,435	5,039
Hoke.....	(¹)	2,120	6,454	8,791	10,445	12,413	13,343	13,872	14,145	14,490
Iredell.....		214	4,763	7,551	9,674	12,016	13,233	14,007	14,222	15,108
Johnston.....	6	4,251	13,507	19,285	23,694	30,365	34,593	36,716	37,674	39,751
Jones.....		223	1,033	1,890	2,631	3,755	4,528	4,938	4,904	5,068
Lee.....		419	2,502	3,513	4,310	5,372	5,904	6,330	6,482	6,787
Lenoir.....		737	2,501	4,027	5,503	7,538	8,985	9,600	10,002	10,616
Lincoln.....		241	3,068	5,437	6,304	7,183	7,936	8,144	8,258	8,522
Martin.....		150	1,378	2,524	3,624	5,130	6,832	8,050	8,405	9,745
Mecklenburg.....	(¹)	972	10,932	16,876	21,181	28,083	27,453	29,183	29,589	31,164
Montgomery.....		217	1,601	2,532	3,264	4,088	4,651	4,908	5,060	5,237
Moore.....		138	1,274	1,940	2,625	3,276	3,632	3,765	3,870	4,017
Nash.....		364	5,443	9,642	13,811	18,717	22,780	26,212	26,509	29,860
Northampton.....		283	3,615	6,022	8,245	10,629	12,756	14,038	14,596	16,171
Onslow.....		125	653	1,045	1,718	2,689	3,431	3,855	3,988	4,437
Orange.....		12	484	752	1,026	1,295	1,523	1,602	1,656	1,738
Pamlico.....		149	913	1,648	2,257	3,109	3,802	4,191	4,373	4,682
Pasquotank.....		48	1,040	1,972	2,703	3,755	4,497	4,951	5,180	5,313
Perquimans.....	(¹)		1,921	2,914	4,236	5,395	6,501	6,985	7,014	7,308
Pitt.....		465	3,049	5,724	8,558	12,642	16,194	18,423	19,500	21,556
Polk.....			538	982	1,247	1,537	1,675	1,719	1,740	1,767
Richmond.....	16	1,847	6,207	8,536	10,265	12,009	13,028	13,424	13,648	13,931
Robeson.....	29	6,475	20,124	28,823	35,993	43,431	47,283	50,325	51,773	54,039
Rowan.....		343	3,346	5,653	7,081	8,552	9,320	9,687	9,862	10,278
Rutherford.....		246	4,095	6,043	7,067	8,745	9,517	9,896	10,024	10,253
Sampson.....	(¹)	2,387	7,163	9,810	11,951	15,985	17,582	19,168	20,204	21,510
Scotland.....	(¹)	4,305	12,304	16,545	19,435	23,464	24,884	26,243	26,608	27,649
Stanly.....		191	2,767	4,136	5,292	6,551	7,555	8,062	8,214	8,488
Union.....	3	1,231	11,771	17,247	21,318	24,848	27,164	28,617	29,181	31,409
Vance.....		68	972	1,726	2,714	3,507	3,949	4,203	4,290	4,375
Wake.....		2,890	11,143	15,352	18,878	23,011	25,392	26,720	27,343	28,530
Warren.....		200	2,773	5,183	7,386	9,237	10,112	10,730	11,051	11,653
Washington.....		48	626	1,204	1,581	2,379	3,047	3,432	3,564	3,741
Wayne.....	(¹)	2,855	8,046	12,267	16,118	20,577	23,916	26,341	27,465	29,065
Wilson.....		456	4,358	7,422	10,623	14,953	18,024	19,929	21,296	23,557
All other.....	36	247	1,312	3,608	4,777	5,784	9,260	10,285	10,285	12,994

¹ Included in all other counties, to avoid disclosure of individual operations.

COTTON PRODUCTION: 1913.

TABLE 22.—COTTON GINNED TO SPECIFIED DATES AND THROUGHOUT THE SEASON, BY COUNTIES: CROP OF 1913—Continued.

[Quantities are given in running bales, except that round bales are counted as half bales. Linters are not included.]

COUNTY.	COTTON GINNED TO—								Total ginned.	
	Sept. 1.	Sept. 25.	Oct. 18.	Nov. 1.	Nov. 14.	Dec. 1.	Dec. 13.	Jan. 1.		Jan. 16.
TEXAS—Continued.										
Live Oak	323	524	587	620	636	668	668	674	674	674
Llano	211	2,798	3,532	3,532	3,562	4,077	4,123	4,210	4,398	4,444
McCulloch	1,166	8,347	11,888	14,182	14,963	15,510	15,650	15,790	15,878	15,882
McLennan	21,259	49,898	66,684	81,490	89,147	92,454	93,391	94,389	96,331	98,367
Madison	2,910	6,732	9,615	10,145	11,131	11,999	12,329	12,523	12,873	13,017
Marion	98	1,185	2,946	3,904	4,915	5,787	6,070	6,186	6,258	6,313
Mason	169	2,343	3,486	4,301	4,625	4,788	4,809	4,835	4,944	4,974
Matagorda	1,237	2,921	4,325	5,177	5,960	6,566	6,601	6,709	6,801	6,821
Medina	5,314	9,317	11,272	12,011	12,662	12,764	12,811	12,877	12,915	13,000
Milam	19,807	40,914	51,736	56,833	59,045	60,255	60,867	61,201	61,528	62,220
Mills	393	4,777	7,018	7,972	8,458	8,625	8,793	8,867	8,922	9,006
Mitchell	287	3,825	6,672	8,877	10,350	11,266	11,431	11,600	11,975	12,028
Montague	214	5,983	12,883	16,781	19,302	21,120	21,319	21,536	21,707	21,807
Montgomery	1,976	4,712	6,506	7,171	7,823	8,138	8,192	8,243	8,264	8,312
Morris	245	2,316	5,396	6,729	8,149	9,376	9,646	9,787	9,823	9,854
Nacogdoches	917	5,069	10,524	13,831	16,796	19,555	20,510	21,035	21,390	21,717
Navarro	22,375	50,555	63,675	77,355	87,365	93,519	95,575	95,781	97,224	98,470
Nolan	172	2,827	5,526	6,824	6,834	6,912	6,961	7,177	7,231	7,302
Nueces	9,610	13,071	13,996	14,476	14,605	14,753	14,799	14,819	14,836	14,853
Palo Pinto	148	2,647	4,402	5,909	6,567	7,236	7,298	7,405	7,478	7,487
Panola	1,009	6,021	10,737	13,668	16,777	19,713	20,406	20,842	20,990	21,274
Parker	253	6,444	11,234	14,906	18,838	18,100	18,464	18,855	19,013	19,157
Polk	464	4,967	6,486	7,670	8,497	8,681	8,681	8,783	8,931	9,101
Rains	145	1,647	3,520	4,633	6,190	7,405	7,665	7,718	7,810	7,882
Red River	1,382	10,808	24,912	30,804	39,631	43,495	44,130	44,395	44,609	44,929
Robertson	12,719	24,607	31,498	35,580	38,785	40,580	41,126	41,367	41,998	42,150
Rockwall	1,214	6,973	13,104	16,535	20,227	22,398	22,603	22,637	22,793	23,029
Runnels	830	7,775	10,912	13,469	14,515	15,618	15,697	15,880	15,990	16,054
Rusk	1,794	8,757	16,337	20,411	24,274	27,539	28,456	28,719	28,957	29,496
Sabine	41	834	1,702	2,576	3,104	3,618	3,785	4,192	4,296	4,445
San Augustine	373	2,743	5,090	6,689	8,093	9,395	10,047	10,451	10,656	10,878
San Jacinto	309	2,034	3,840	5,039	6,192	7,246	7,553	7,712	7,772	7,833
San Patricio	13,982	17,501	18,650	19,186	19,390	19,390	19,390	19,399	19,404	19,404
San Saba	395	4,934	7,141	8,534	8,973	9,225	9,242	9,428	9,516	9,576
Scurry	71	3,192	5,434	7,314	8,913	9,297	9,538	9,671	9,931	10,014
Shackelford	82	1,060	1,410	1,669	1,792	1,882	1,894	1,922	1,931	1,931
Shelby	739	5,839	11,899	15,223	18,793	21,873	23,112	23,495	24,020	24,592
Smith	2,829	14,551	24,143	28,791	33,823	37,716	38,502	38,954	39,101	39,288
Somervell	37	784	1,220	1,618	1,843	2,012	2,049	2,075	2,119	2,134
Stephens	41	1,303	2,044	2,464	2,583	2,729	2,748	2,773	2,800	2,807
Stonewall	(1)	1,282	2,573	4,001	4,779	5,514	5,732	5,985	6,258	6,473
Tarrant	1,752	9,631	15,255	20,790	23,706	26,146	26,542	26,980	27,153	27,725
Taylor	987	7,108	9,658	11,813	12,790	13,645	13,688	13,961	14,159	14,207
Throckmorton	(1)	1,298	1,979	2,683	2,981	3,174	3,180	3,191	3,265	3,267
Titus	182	3,821	8,579	10,821	13,073	14,740	15,642	15,902	15,994	16,243
Tom Green	63	1,378	2,309	2,897	3,107	3,366	3,436	3,530	3,588	3,589
Travis	15,773	37,427	49,169	57,611	60,625	61,782	61,833	62,246	62,961	63,525
Trinity	374	2,614	4,707	5,801	6,415	7,182	7,441	7,577	7,700	7,892
Upshur	584	4,446	10,968	14,051	17,026	19,776	20,824	21,349	21,589	21,773
Uvalde	1,432	3,933	6,266	6,411	6,596	6,604	6,604	6,605	6,632	6,650
Van Zandt	2,144	12,696	21,090	28,403	34,441	37,613	39,215	39,297	39,599	40,130
Victoria	10,465	17,928	20,691	22,177	23,097	23,503	23,547	23,640	23,731	23,752
Walker	2,568	6,256	8,958	10,464	11,852	12,766	12,912	13,066	13,123	13,194
Waller	3,327	7,092	9,163	9,914	10,719	11,237	11,204	11,350	11,540	11,621
Washington	19,238	30,846	35,370	37,396	39,369	40,552	40,641	40,785	41,020	41,248
Wharton	6,944	13,651	16,742	18,231	19,156	20,118	20,245	20,463	20,626	21,091
Wichita	32	1,369	2,091	4,176	4,917	5,568	5,716	5,767	5,913	6,003
Wilbarger	18	2,092	4,511	6,755	8,313	9,709	9,929	10,192	10,835	11,168
Williamson	28,080	68,470	85,539	94,831	98,931	101,158	101,398	101,817	102,586	103,131
Wilson	10,185	18,005	22,338	25,103	26,908	27,435	27,524	27,681	27,814	27,854
Wise	160	4,938	9,894	14,287	16,726	18,606	18,800	19,261	19,554	19,669
Wood	438	6,718	14,447	18,612	22,973	27,087	27,839	28,016	28,494	28,823
Young	207	4,286	6,509	8,857	9,941	10,826	10,891	11,009	11,194	11,195
All other	10,634	25,840	32,234	41,634	50,144	57,439	59,455	61,057	62,335	66,526
VIRGINIA.										
The state		171	4,312	8,909	13,376	17,460	20,832	22,180	22,677	24,569
Brunswick		(1) 44	862	1,610	2,254	2,923	3,323	3,426	3,489	3,727
Greensville		50	562	1,120	1,508	2,474	2,798	2,910	2,905	3,189
Nansmond			1,005	2,149	3,370	4,163	4,718	5,003	5,048	5,296
Norfolk		75	202	521	810	1,150	1,163	1,279	1,279	1,357
Southampton		2	1,521	2,649	4,025	5,241	5,900	6,547	6,812	7,228
All other			160	860	1,109	1,509	2,840	3,015	3,084	3,772

¹ Included in all other counties, to avoid disclosure of individual operations.

THE WORLD'S PRODUCTION OF COTTON.

Cotton is grown in many localities within a globe-encircling belt about 5,000 miles wide, but the total area devoted to its cultivation constitutes only a small part of the entire land surface within this belt. A number of conditions are requisite to the successful production of cotton, the most important factor being a suitable climate. The cotton plant requires a long warm season in which to come to full maturity, as well as adequate moisture. In some localities where the rainfall is insufficient, recourse is had to irrigation. This method of supplying the necessary moisture is used extensively in the cotton-growing districts of Egypt, Russia, Mexico, Peru, Persia, and in some of the districts of India. In order to produce the crop economically it is necessary to have sufficient labor, trained in growing cotton, and, in addition, adequate ginning and transportation facilities. The state of Oklahoma is an example of the effect of these conditions. Formerly this section lacked all these factors, although no part of this country has had a greater expansion in recent years. In 1899 the combined production of cotton in Oklahoma and Indian Territories was 214,591 bales, while the crops of 1910 and 1911 each exceeded 1,000,000 bales. The establishment of better transportation facilities in Russian Turkestan has been an important factor in increasing the production in that country.

Many attempts have been made in recent years to extend the cultivation of cotton to new districts, but either one or all of the requisites just mentioned have been lacking. While these efforts have demonstrated the possibility of growing very good grades of cotton in a number of new fields, they have not been sufficiently encouraging to warrant the hope of any considerable addition to the world's production of cotton from these sources within the next few years. It seems, therefore, that the growing demand for cotton must be met, for a time at least, by increased production in those countries in which the cultivation is already firmly established.

The United States is the only country which has provided an adequate statistical service to ascertain the quantity of cotton produced each year. The governments of India, Egypt, and Russia compile and publish estimates of acreage and production from time to time during the season, and it is said that the Indian Government proposes to establish a system of enumerating the bales at the presses. No official report as to the production of cotton is collected by any other country, and the information can be secured only

by special correspondence, from consular reports, trade publications, and other miscellaneous sources. The statistics given in Table 23 have been compiled from information secured from these various sources. The table shows the production of commercial cotton, by countries, for the crops of 1909 to 1913. The figures for some countries published in previous bulletins have been revised.

TABLE 23.—*World's production of commercial cotton, by countries: 1909 to 1913.*

[The statistics for the United States were collected by this bureau. Those for other countries have been compiled from a number of sources, among them being: The Cotton Gazette, Liverpool; Mitsui & Co., Osaka; Reinhart & Co., Alexandria; Commercial Intelligence Department of the Indian Government; Russian Department of Agriculture; E. T. Craig, Mexico City; Pan American Union; and the United States Consular Reports.]

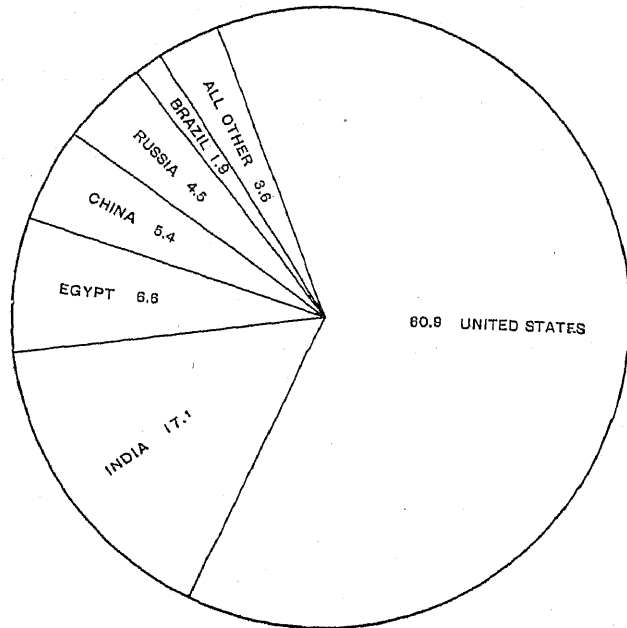
COUNTRY.	COTTON PRODUCTION (BALES OF 500 POUNDS NET).				
	1913	1912	1911	1910	1909
Total.....	22,255,000	20,976,000	21,269,000	18,027,000	16,241,000
United States.....	13,545,000	13,113,000	15,013,000	11,104,000	9,566,000
India ¹	3,801,000	3,328,000	2,270,000	2,722,000	3,414,000
Egypt.....	1,470,000	1,492,000	1,463,000	1,506,000	1,000,000
China.....	1,200,000	1,074,000	625,000	775,000	600,000
Russia.....	1,004,000	917,000	939,000	981,000	785,000
Brazil.....	420,000	315,000	275,000	280,000	225,000
Mexico.....	150,000	140,000	130,000	147,000	125,000
Peru.....	110,000	110,000	100,000	95,000	107,000
Persia.....	140,000	137,000	120,000	117,000	116,000
Turkey.....	130,000	115,000	124,000	105,000	108,000
All other countries...	285,000	235,000	210,000	195,000	195,000

¹ The amounts for India do not include cotton used in home manufacture, although such cotton is included in the reports of cotton produced compiled by the Indian Government.

As the statistics of cotton production for foreign countries are generally expressed in net-weight bales, those for the United States in this table have been reduced to that basis. The world's production of cotton in 1913, exclusive of linters, as measured by the factory supply—that is, the quantity entering commercial channels—was 22,255,000 bales of 500 pounds net, as compared with 20,976,000 bales in 1912, 21,269,000 bales in 1911, and 16,241,000 in 1909. The table shows a great variation in the production of cotton, the total in 1913 being 6,014,000 bales, or 37 per cent greater than in 1909. The average production for mill consumption during the five years covered by the table was 19,753,600 bales, or 2,501,400 bales less than the production of 1913. In addition to the amounts shown in the table, large quantities of cotton are produced in some countries and consumed in the homes of the people, without entering commercial channels. This is the case especially in China and to a less extent in other eastern countries; but the amount of such cotton can not be estimated with any degree of accuracy.

The relative importance of the several cotton-producing countries is graphically presented in the following diagram. Of the total production of commercial cotton in 1913, the United States contributed 60.9 per cent, India 17.1 per cent, Egypt 6.6 per cent, China 5.4 per cent, and Russia 4.5 per cent.

DIAGRAM 2.—Percentage of the world's mill supply of cotton contributed by each country: 1913.



UNITED STATES.

The first effort to cultivate cotton in the United States was made in Virginia in 1621. Later, experiments in cotton culture were made in Maryland, Delaware, Pennsylvania, and New Jersey, but conditions of climate in those states were found unsuitable. It was introduced into South Carolina in 1733 and into Georgia in 1734. It was being grown in Louisiana in 1741. Cotton was not grown as a staple crop, however, until 1770, at which time shipments of American cotton to Liverpool were recorded as: Ten bales from Charleston, three bales from New York, four bags from Virginia, and three barrels from North Carolina. After the Revolutionary War the cultivation of cotton spread more rapidly. The crop of 1790 produced 3,138 equivalent bales of 500 pounds each, 379 of which were exported. Table 15, page 29, indicates the growth in the production of cotton in the United States from 1790 to 1913.

Altogether the greatest cotton-growing section in the world, both in extent and in production, is located in the southern and southeastern parts of the United States. It includes small portions of Virginia, Kentucky, Missouri, Kansas, and New Mexico, and the states lying to the south. This cotton-producing area is about 1,500 miles long, from east to west, and about 500 miles in width. Within the past few years the cultivation of cotton has been undertaken in Arizona and California, on irrigated land, with considerable

success, especially in the latter state. The growing of other valuable crops, however, will likely prevent any appreciable increase in the production in these states.

Some idea of the importance of cotton production in the United States from an economic standpoint may be had when it is considered that, next to corn, cotton is the most valuable crop grown in the country, and that cotton is the largest single item of export. The value of the cotton crop of 1909 represented 15 per cent of the total value of all the crops of the country. The value of cotton exported during the fiscal year 1913 amounted to \$547,357,195, or 22.5 per cent of the total value of all articles of domestic merchandise exported during the year. These large exports, combined with the more than 5,000,000 bales consumed in domestic manufacture, strikingly indicate the importance of cotton in the economic affairs of the Nation.

It is therefore not surprising that the Federal and state governments are giving so much attention to this crop. The investigations and experiments have covered every phase of the subject and have aided greatly not only in increasing the production of cotton but in propagating varieties suited to the varying conditions of soil, moisture, insect life, etc., found throughout the cotton belt.

INDIA.

Cotton has long been an important agricultural product of India, where it has been used from time immemorial in making cloth for garments. Until in comparatively recent years the fiber was used almost entirely for home consumption, and therefore information as to the quantity produced is not available. The crop of 1790, however, has been estimated at 260,000 equivalent 500-pound bales; that of 1859, at 1,316,800 bales; that of 1865, at 2,090,400 bales; and that of 1913, at 4,160,800 bales. The following table presents statistics of cotton acreage, production, and yield per acre for India since 1897, together with the average for the period:

TABLE 24.—Cotton acreage, production, and yield per acre in India: 1897 to 1913.

YEAR.	Acreage planted in cotton.	COTTON PRODUCTION.	
		Total (500-pound bales).	Average per acre (lbs.).
1913.....	24,595,000	4,160,800	85
1912.....	22,028,000	3,688,000	84
1911.....	21,615,000	2,630,400	59
1910.....	22,596,000	3,082,400	68
1909.....	20,545,000	3,774,400	92
1908.....	19,999,000	2,952,800	73
1907.....	21,630,000	2,497,600	58
1906.....	22,488,000	3,926,400	88
1905.....	20,401,000	3,389,600	83
1904.....	19,918,000	3,060,800	77
1903.....	18,025,000	2,863,714	79
1902.....	16,581,046	3,000,439	90
1901.....	14,506,295	2,648,586	91
1900.....	14,231,150	2,162,918	76
1899.....	11,884,576	1,674,817	70
1898.....	14,602,892	2,512,104	86
1897.....	13,683,487	2,122,968	78
Average.....	18,784,085	2,949,926	79

According to the Final General Memorandum on the cotton crop of 1913-14 issued by the Indian Government on February 25, the total outturn is estimated at 4,160,800 bales of 500 pounds each. As a rule, the government estimates are too low when considered in connection with the figures of cotton exported and of cotton consumed. While the estimates in some years closely approximate the movement, in other years they are very much below it.

According to Table 24 there were 24,595,000 acres planted in cotton in India in 1913, an increase of 2,567,000 acres over 1912. It is the largest area ever planted to cotton in that country. The crop of 1913 was 472,800 bales larger than that of 1912, and exceeded that of 1906, the second largest crop, by 234,400 bales, and the average for the period covered by the table by 1,210,000 bales. This increase in production was due, in part, to the relatively large increase in the area planted and in part to more favorable conditions during the growing season. The average yield per acre in 1913 was 85 pounds, an amount woefully small when compared with the average production in other countries. This seems all the more strange when consideration is given to the fact that the population of the country as a whole is very dense and that the value of the land for the raising of foodstuffs must be correspondingly great. The average production per acre for the different provinces varies greatly, ranging from 44 pounds in Hyderabad and 79 pounds in Madras to 122 pounds in the United Provinces and 160 pounds in Sind. Rainfall is depended on very largely for the supply of moisture in growing the cotton crop. The dry seasons in some of the provinces are sometimes extended into periods of drought, which accounts very largely for the low averages in those provinces. In Sind and in some other sections irrigation is depended on, to some extent, and where this condition is found the average yield per acre is relatively high. Table 25 gives the statistics for the acreage in cotton and the production, by provinces, for the crops of 1909 to 1913, inclusive.

The native Indian cotton has a short coarse fiber and can not be utilized in the manufacture of the finer counts of yarn. The demand for a better staple on the part of some of the Indian mills, as well as for export, has resulted in the Indian Government giving the subject of improving the cotton serious consideration. The principal difficulties to be surmounted are the low yield per acre of these higher grade cottons, the fact that the grower realizes but little more for the better than for the poorer grades, and the mixing of the seed at the ginneries. The Government of India, together with the provincial and local governments, has established seed farms for the purpose of furnishing pure seed to the growers. This plan will ultimately result in materially improving the staple of Indian cotton and permit this cotton to enter European markets to a much greater extent than heretofore.

TABLE 25.—Cotton acreage and production in India, by provinces: 1909 to 1913.

PROVINCE. (Includes native states within provincial boundaries.)	Year.	Acreage planted in cotton.	Cotton production (500-pound bales).
Total.....	1913	24,595,000	4,160,800
	1912	22,028,000	3,688,000
	1911	21,615,000	2,630,400
	1910	22,596,000	3,082,400
	1909	20,545,000	3,774,400
Bombay.....	1913	6,351,000	1,117,600
	1912	6,064,000	1,059,200
	1911	5,121,000	479,200
	1910	6,528,000	1,052,800
	1909	5,794,000	1,140,800
Central Provinces and Berar.....	1913	4,715,000	768,800
	1912	4,493,000	728,000
	1911	4,648,000	730,400
	1910	4,487,000	503,200
	1909	4,167,000	856,000
Hyderabad.....	1913	3,653,000	320,000
	1912	2,888,000	240,000
	1911	3,234,000	240,000
	1910	3,562,000	234,400
	1909	3,401,000	368,800
Madras.....	1913	2,593,000	410,400
	1912	2,414,000	376,800
	1911	2,878,000	268,000
	1910	1,873,000	188,000
	1909	1,569,000	144,000
Punjab.....	1913	2,053,000	475,200
	1912	1,575,000	298,400
	1911	1,582,000	192,800
	1910	1,385,000	244,800
	1909	1,436,000	316,800
United Provinces.....	1913	1,586,000	337,200
	1912	1,158,000	342,400
	1911	921,000	200,800
	1910	1,347,000	278,400
	1909	1,241,000	307,200
Central India.....	1913	1,426,000	218,400
	1912	1,314,000	164,800
	1911	1,400,000	182,400
	1910	1,349,000	189,600
	1909	1,068,000	176,800
Baroda.....	1913	749,000	140,000
	1912	762,000	156,800
	1911	665,000	76,800
	1910	806,000	107,200
	1909	675,000	188,000
Rajputana.....	1913	470,000	105,600
	1912	393,000	100,000
	1911	263,000	58,400
	1910	465,000	114,400
	1909	464,000	118,400
Sind.....	1913	332,000	106,400
	1912	296,000	98,400
	1911	346,000	99,200
	1910	279,000	77,600
	1909	214,000	83,200
All other provinces.....	1913	667,000	111,200
	1912	671,000	123,200
	1911	557,000	102,400
	1910	515,000	92,000
	1909	516,000	74,400

Climatic and soil conditions in the several cotton-growing districts in India vary perhaps more than in any other cotton-producing country. In some parts the rainfall is abundant, while in others irrigation is employed to some extent, and in still others is depended upon entirely for moisture. The seasons also vary greatly; for example, in October the cotton crop is being harvested in the north of India, while in the south planting is in progress. As a result, cotton is being picked somewhere in the country almost throughout the year.

EGYPT.

Egypt ranks third among the countries of the world in the production of cotton. The climate and soil are peculiarly adapted to the production of high-grade varieties of cotton and the supply of moisture, coming

as it does from a usually dependable system of irrigation, can be regulated to the best advantage. The season for gathering, too, is practically ideal, not being marked by storms or rains and no unavoidable damage to the matured crop occurs.

The growth of cotton production in Egypt in modern times has been generally very gradual, and the cultivation of the superior staples, which have given the country a distinguished position in the industry, dates only from 1821. Prior to that time the production was negligible, so that the beginning of the industry itself may be properly given that date. In 1824 the exports of cotton exceeded 45,000 bales. By 1859 the crop had increased to approximately 100,000 bales. During the period of the American Civil War the curtailment of production in the United States, which stimulated cultivation in all other cotton-producing countries, effected a great change in the agricultural pursuits of Egypt. Improved methods of cotton culture were adopted and the acreage devoted to the crop largely increased. The price of cotton advanced to more than 50 cents per pound and the production in 1865 exceeded 400,000 bales. Naturally a reaction took place after the close of the war and the resumption of the culture in the United States. Following this reaction the quality of Egyptian cotton deteriorated so rapidly that spinners repeatedly complained and the planters faced the necessity of finding new and more desirable varieties. In this they were very successful, so that, at the present day, the length, strength, and color of Egyptian cottons are characteristics of great value, while the uniformity of the fiber, due to equality of growth, renders them, in manufacturing processes, subject to less waste than are many other kinds.

Table 26 shows the cotton acreage, production, and average yield per acre in Egypt for the last 19 years.

TABLE 26.—Cotton acreage, production, and yield per acre in Egypt: 1895 to 1913.

[Compiled from reports of the Egyptian Survey Department.]

YEAR.	Acreage.	PRODUCTION.	
		Total (500-pound bales).	Average per acre (lbs.).
1913.....	1,789,000	1,470,000	411
1912.....	1,787,000	1,492,000	417
1911.....	1,776,000	1,463,000	412
1910.....	1,664,000	1,506,000	453
1909.....	1,619,000	1,000,000	309
1908.....	1,703,000	1,337,000	393
1907.....	1,664,000	1,433,000	431
1906.....	1,564,000	1,377,000	440
1905.....	1,626,000	1,181,000	363
1904.....	1,491,000	1,251,000	420
1903.....	1,383,000	1,289,000	466
1902.....	1,324,000	1,157,000	437
1901.....	1,297,000	1,262,000	487
1900.....	1,277,000	1,077,000	422
1899.....	1,197,000	1,290,000	539
1898.....	1,164,000	1,107,000	476
1897.....	1,172,000	1,296,000	553
1896.....	1,091,000	1,165,000	534
1895.....	1,015,000	1,041,000	513

According to the reports of the Egyptian Government, the acreage devoted to cotton in 1913 was 1,789,000, practically no increase from the preceding

year, but the largest for any year covered by Table 26. The crop of 1913 is estimated at 1,470,000 bales of 500 pounds each, this amount being exceeded by the crops of 1910 and 1912.

Owing to the fact that irrigation is used almost exclusively in the growing of cotton in Egypt, any disarrangement in the supply of water seriously affects the production of cotton in the country. The crop of 1913 had a good start, but later in the season many complaints were heard about the shortage of water for irrigation purposes, and there was great apprehension lest serious damage would result from insufficient irrigation. Fortunately the damage from this cause was comparatively small, and the quality of the fiber, which is greatly affected by lack of sufficient moisture, was about normal.

Cotton is the money crop of Egypt, this staple furnishing the money to pay the balance of trade in international commerce. An increase in the production, accordingly, is one of the most important questions before the country. In view of the fact that agriculture depends entirely upon irrigation, various projects for extending the irrigated area have been given great consideration.

Mr. Moritz Schanz, delegate of the German Colonial Economic Committee at the International Cotton Conferences held in Egypt during the Autumn of 1912, has written a comprehensive treatise on cotton in Egypt. This article appears in the official report of the Ninth International Congress of Delegated Representatives of Master Cotton Spinners' and Manufacturers' Associations held at Scheveningen in Holland. Mr. Schanz has gone into the history of the plant in Egypt, the Egyptian methods of farming, the system of land tenure, and many other conditions relative to this staple, presenting much information of interest on the subject. The following information taken from the report presents his views on the future of cotton in Egypt and the Sudan:

The future of Egyptian cotton.—It is estimated that, by making the fullest use of the area cultivated at present, and allowing an average yield of 430 pounds per acre in Egypt, north of Assiut, about 2,000,000 bales of 500 pounds each of cotton per year could be grown, and a further 300,000 bales could be obtained by reclaiming and cultivating the large lakes near the coast and the neighboring waste desert lands. As regards Lower Egypt, with the exception of the northern edge of the Delta, the maximum irrigable area of cultivation will very shortly be reached. On the other hand, there are still larger areas, apart from the Sudan, to be found in Upper Egypt, if the available water supply can be increased. Better crops than the present ones can be obtained from the poor land tracts if improved methods of cultivation, careful choice of seed, and the general application of artificial manure are introduced.

Still, the reclamation of new culturable land is only possible within very confined limits, as Egypt is simply a narrow oasis, drawing its sustenance from the Nile, and consequently the time will arrive when, even with the highest possible perfection of the irrigation system of the Nile, the limit of the supply will be reached. So Egypt will never, even under the most favorable circumstances, be a rival to the United States of America as regards the amount of cotton produced.

If it should become possible to successfully grow in another country a cotton of equal quality to the Egyptian type, under sim-

ilar conditions of production, and this does not in any way appear impossible, a fall in the price of Egyptian cotton would occur, and a resulting economic loss would be sure to overtake Egypt; the risk of specializing on one crop to the neglect of all others has already shown itself clearly during the bad cotton seasons of 1908 and 1909.

Egypt has been heavily burdened in its agricultural production through the extremely high prices of land, which have risen excessively during the last two decades; on the other hand, it possesses, even to-day, the advantage of very low wages, and a unique position on account of its perfect system of irrigation, both of which, for the present, assure Egypt of its position in the supply of cotton.

In view of the strenuous endeavors of the government, and of all engaged in this industry, it appears certainly possible to meet the wishes of the spinners respecting the growing of definite qualities.

The future of Sudan cotton.—The industrial development of the Sudan has had to be, so far, according to all circumstances, a slow one; and even to-day one can only with difficulty forecast to what extent agriculture will develop, and at what period it will reach an important turnover. Both these items depend, even if no unforeseen circumstances occur which might cause a setback to the work of civilization that is being introduced by an excellent staff of officials, upon a large number of conditions, on which the government can only have a limited influence. * * * In the first instance, the problem of population is the most pressing one for a country which, until quite recently, has been one of the least populated on the globe. The native population increases, judging by the percentage of children, in a most astonishing manner, but; as regards immigration from other districts, only slow progress is being made, and slower still is the immigration from Europe.

The most promising prospects seem to lie in the exports from the Sudan of corn and cattle to Egypt, which have already increased, although even there the rise will only be a slow one. As to how quickly the development of cotton cultivation, with the help of artificial irrigation, will be achieved, nothing can yet be said, but the conclusion seems to be justified that the Sudan will hardly be, in the near future, a country that will produce such quantities of cotton as will have an influence on the markets of the world.

RUSSIA.

The production of cotton in the Russian empire is confined to its Asiatic provinces in Turkestan and Trans-Caucasia, although some experiments have been made to grow the staple in the European provinces of the country bordering on the Black Sea. The following table, compiled by the Cotton Committee of the Russian Department of Agriculture, gives comparative statistics of cotton produced, by geographic divisions, for the crops of 1912 and 1913.

TABLE 27.—Cotton production in Russia, by provinces: Crops of 1912 and 1913.

GEOGRAPHIC DIVISION.	COTTON PRODUCTION (BALES OF 500 POUNDS.)	
	1913	1912
Total.....	1,004,328	917,352
Turkestan.....	888,408	805,680
Ferghana.....	532,800	484,848
Samarkand.....	69,840	58,752
Bokhara.....	93,600	80,928
Trans-Caspia.....	57,600	64,080
Syr-Daria.....	86,400	70,488
Khiva.....	48,168	46,584
Trans-Caucasia.....	115,920	111,672
Erivan.....	47,520	49,824
Elizavetpol.....	52,200	46,584
Baku.....	10,800	10,008
Tiflis.....	4,320	4,320
Kutais.....	1,080	896

The estimated production of cotton from the crop of 1913 is 1,004,328 bales of 500 pounds each, compared with 917,352 bales from the crop of 1912. Of the total for 1913 Turkestan contributed 888,408 bales and Trans-Caucasia 115,920 bales. Ferghana produced more than one-half the total for the country, the other Central Asiatic provinces contributing being Bokhara, Samarkand, Trans-Caspia, Syr-Daria, and Khiva. The soil and climate of these provinces are well adapted to the cultivation of cotton. The summers are hot and long and the winters mild. As there is scarcely any rainfall during the growing season, irrigation is necessary. Any extension of the cotton-growing area depends almost entirely upon the construction and extension of irrigation plants. About one-half of the requirements of the Russian mills is supplied by Russian cotton. Efforts are being made to increase the production and a number of new irrigation projects are under construction. Some are nearing completion, while in other sections plans are being prepared for the reclamation of large areas.

CHINA.

Cotton is produced extensively in many sections of China, but no accurate data as to the total amount are available. The greater portion is consumed locally in the homes of the people, the quantity thus consumed being largely a matter of conjecture. The Ministry of Agriculture of the Republic of China has estimated the annual production of cotton in that country for the crops of 1909, 1910, and 1911 at 4,181,333 bales of 500 pounds each, while the crop of 1912 has been estimated by another source at 5,333,000 bales. As indicated above, however, these estimates are largely conjectural. It is certain that there has been a tendency, at least in some sections, to increase the production, as the suppression of the trade in opium has made land formerly devoted to the cultivation of the poppy available for other crops. Another influence tending to increase the production has been the high price of the staple and the consequent demand from other countries for this product.

Reliable data as to the quantities of Chinese cotton exported and used in the Chinese mills are available. These amounts for the crop of 1913, however, will not be determined until after the close of the commercial year ending August 31. It is not known how much time will have been lost during the present year in the Chinese mills, which contain about 1,000,000 spindles, whose potential consumption has been estimated at 550,000 bales of 500 pounds each. Neither is it known how much cotton will be exported, but the amount for the calendar year 1912 was 215,000 bales, and for 1910, 333,000 bales. In view of the increased production, the exports of the crop of 1913 will undoubtedly be larger than in previous years. In addition, large quantities of cotton are consumed in factories engaged in making wadding for clothes. The quantity of Chinese cotton which will enter commercial channels

from the crop of 1913 is accordingly estimated at 1,200,000 bales of 500 pounds each.

BRAZIL.

The climate and soil of large areas in Brazil are suitable for the growth of cotton. The plant is indigenous to the country and the aborigines were using the lint of the wild cotton tree for various purposes when the Europeans first visited the country. Nevertheless, the cultivation of the plant received comparatively little attention until the shortage in the supply from the United States during and following the Civil War greatly increased the price of the staple. In 1860 the exports of Brazilian cotton amounted to about 50,000 bales of 500 pounds each, and this figure practically measures that country's commercial production of cotton at that time, as the domestic mill consumption was a negligible quantity. By 1872 the exports had increased to the equivalent of 346,231 such bales, which remains the maximum amount ever exported in a single year. A general decrease in the cultivation and exportation of cotton followed, and at the end of 1908 the exports had reached the low mark of 14,256 bales. This figure, however, is not indicative of the production of the country for that year, as the spinning and weaving of cotton in Brazil has developed to such an extent in the past 20 years that it is now the most important manufacturing industry in the country.¹ The mills depend almost entirely upon the home production for their raw material and consume by far the larger portion of the total quantity grown.

Great efforts are being made to increase cotton cultivation in Brazil and place it upon a stable basis. In 1912 the exports of Brazilian cotton amounted to 73,960 bales, and in 1913, to 165,008 bales. The production in 1913 has been placed at 410,000 bales. With the development of better cultural methods and the improvement of transportation facilities, the production of cotton in Brazil may be expected to show considerable increase.

PERU.

The production of cotton in Peru, while comparatively insignificant in quantity, has shown a rapid increase. In 1902 the crop amounted to 36,500 bales of 500 pounds each, and in 1909, the latest year for which accurate data are available, to 107,316 bales.¹ Of this amount, 95,411 bales were exported and 11,905 bales consumed in Peruvian mills, principally in the manufacture of the coarser grades of cloth. The value of cotton exported during the years 1909, 1910, and 1911 is given in a recent issue of the Pan-American Bulletin, and indicates that the exports for the later two years were somewhat less than in 1909. There has been some extension of the area devoted to cotton, and, in the absence of reliable information, the production in 1912 and 1913 is placed at 110,000 bales.

The principal cotton-producing districts of Peru are located near the coast and are irrigated by waters from the Andes, brought in canals from the many rivers. Rains are almost unknown in these districts, although considerable moisture is supplied in the form of dews, which are unusually heavy. The soil is rich and the average yield is not far from a bale to the acre. While Peruvian cotton is free from many of the diseases that attack the plants in other lands, considerable damage was caused in several districts by insect pests.

There are several varieties of cotton grown in the country, that from American seed amounting to nearly two-thirds of the total. The best-known variety is that designated "rough Peruvian," and grown principally in the Piura and Ica Valleys in the northwestern part of the country. It is an indigenous tree cotton, which attains a height of 12 to 15 feet and lives for a number of years. It is cut back each year, and is usually replanted in from 4 to 7 years. This variety is used for mixing with wool, and is in demand in all the wool-manufacturing countries. Small quantities of sea-island and Mit Afifi are also grown.

MEXICO.

Accurate statistics as to the annual production of cotton in Mexico are not available. The semiannual reports of the cotton mills to the Government, however, give the quantities of the several kinds of cotton consumed, and these, with the statistics of imports and exports, afford a general idea as to the production. According to the figures compiled by Mr. E. T. Craig, of Mexico City, the consumption of Mexican cotton in Mexican mills amounted to 127,000 bales of 500 pounds net for the year ending June 30, 1913, as compared with 130,000 bales for 1912, 147,000 bales for 1911, and 124,000 bales for 1910. The annual exports of cotton are negligible, while the imports range from 5,000 to 40,000 bales, most of which are American cotton. The growing conditions during the last season were better than for several years previous, but the output was restricted somewhat by the disturbed political conditions, and the production for 1913 is accordingly placed at 150,000 bales.

Cotton is cultivated in many parts of Mexico, but more than three-fourths of the total quantity is grown in the Laguna district, which includes portions of the States of Coahuila, Durango, and Chihuahua, where the production depends almost entirely upon irrigation. The staple produced in Mexico is strong and averages more than an inch in length.

When the factories are operating under normal conditions, they consume practically the entire production and draw also upon the United States for a part of their requirements.

TURKEY.

Under the stimulating effects of high prices the production of cotton in Turkey reached approximately 240,000 running bales in 1865. This was fol-

¹ Cotton Goods in Latin America, by W. A. Graham Clark, special agent of the Department of Commerce.

lowed by reaction, and between 1870 and 1895 no production worthy of mention occurred. Since 1895, however, a new impetus has been given to the industry, and the production in 1912, according to the report of Mr. G. Bie Ravndal, consul general at Constantinople, has been estimated at 200,000 bales. The principal cotton-growing section, according to this report, is in the Cilician Plain, in the vicinity of Adana. Other cotton-growing districts are in Aiden, near Smyrna, and in Armenia, Palestine, and Mesopotamia.

In view of the success attending the cultivation of cotton in the Russian Provinces of Asia, there will undoubtedly be a considerable expansion in Turkey, particularly with the introduction of modern methods of irrigation. Better transportation facilities are being provided, and some irrigation projects of magnitude are in course of construction, a large project of this character in the vicinity of ancient Babylon being nearly completed.

The weight of the Turkish bale varies considerably in the several districts, and account must be taken of this in presenting figures of production. According to information received from Mr. R. E. Prichard, of the Cotton Gazette, Liverpool, the total production of commercial cotton in the country from the crop of 1913 is 130,000 bales of 500 pounds each.

PERSIA.

The conditions surrounding the cultivation of cotton in Asiatic Russia and in Turkey are also found in Persia. The production in this country, while small, is growing. The value of cotton exported in 1911 was \$6,508,821, compared with \$8,258,237 in 1912. Irrigation is used for supplying the moisture, and as new land is brought under water advancement will be made in this culture. The production of commercial cotton from the crop of 1913 has been placed at 140,000 bales. The cotton produced is similar in character to that grown in Trans-Caucasia and in Turkestan, and is mostly exported to Russia, with which country transportation facilities have been provided.

OTHER COUNTRIES.

Cotton for mill consumption is also grown in a number of other countries and consideration must be given these in presenting a summary of the world's production. The conditions of soil and climate in some of these countries are so suited to cotton production that the handicaps of insufficient experienced labor and of inadequate transportation facilities will be overcome, and thus will be added to the world's supply of cotton the production of large areas as yet undeveloped. However, because of local conditions, many of them must ever remain of small importance from the standpoint of the quantity of cotton produced.

The West Indies furnished more than 70 per cent of the total British supply of cotton during the period from 1786 to 1790. While the total quantity was

never large, the production in these islands fell off greatly after this date, although in recent years there has been somewhat of a revival in this culture. The relative increase may be great, but the total production will never reach large proportions.

Colombia and Venezuela produce cotton to a limited extent, a large part of the total being used in the mills located in these countries.

Argentina contains large areas suited to the cultivation of cotton, but the total production is very small. According to the report of the British minister at Buenos Aires, the lack of cheap labor is a great obstacle to the cultivation of cotton, and, in spite of the efforts and encouragement of the Government, only 3,060 acres were planted in cotton in the Chaco territory. It does not appear that any large increase can be expected for years to come.

Uruguay, according to a statement in the August, 1913, issue of the Pan-American Bulletin, has taken up the cultivation of cotton. There were 9,372 bales of cotton exported from Paysandu, a port on the Uruguay River. This represents only a part of the cotton exported from Uruguay, as most of the districts send their cotton to Montevideo by railroad.

In Korea the Japanese Government is fostering the cultivation of cotton. The Daily Consular Report of June 25, 1913, contains a statement to the effect that the acreage in cotton in 1913 was 35,000, as against 15,000 the previous year. While the production at present is unimportant, it is probable that there will be a material increase in this country. Practically all of the cotton is grown in Chonla Province in the vicinity of Mopko.

Siam and French Indo-China are producing cotton on a larger scale than formerly. A part of the production is used in the mills located in these countries.

The Dutch East Indies and the Philippines grow some cotton, but it is improbable that the amounts will ever attain large proportions.

Australia has made some experiments in growing cotton, and large sections of the country appear to be suitable to this culture.

Greece has produced more than 10,000 bales annually for a number of years. With the annexation of the Turkish provinces, it is likely that the annual production will be several times this amount.

Bulgaria, Servia, Italy, and Spain all produce small quantities of cotton, but the totals reported are inconsequential.

Practically all of the African subdivisions produce some cotton, the largest amounts of commercial cotton being produced in Uganda, German East Africa, and Nigeria. The British, French, and German cotton-growing associations, as well as a number of other organizations, have furnished seed, erected ginneries, and otherwise encouraged the production of cotton in the several dependencies. Notwithstanding these endeavors, the increase in the quantity of cotton available for export has been disappointingly small.

CONSUMPTION, EXPORTS, IMPORTS, AND STOCKS OF COTTON.

Statistics concerning the quantity of cotton consumed, imported, exported, and on hand, and the number of active consuming cotton spindles are now collected monthly by the Bureau of the Census. This work is done in compliance with an act of Congress, approved July 22, 1912. Prior to the enactment of this law the bureau collected the statistics of cotton consumed and cotton on hand for periods ending with August, October, December, and February. These statistics are auxiliary to those of cotton ginned, and their purpose is to furnish reliable information as to the movement of cotton, which will be of value to the producer in disposing of his cotton and in planning for the succeeding crop, as well as to the manufacturer in purchasing his supplies.

To present complete statistics regarding stocks of cotton, it would be necessary to canvass all agencies which handle cotton. There are approximately 2,000,000 growers, 25,000 ginners, 2,600 public storage places, and 2,100 cotton-consuming establishments. In addition, there are numerous transportation companies, local buyers, merchants, and others who handle more or less cotton during the season. It is manifestly impracticable to obtain monthly reports from so many agencies, and the Bureau of the Census has therefore adopted the plan of securing individual

reports of the quantity of cotton consumed during each month and of stocks on hand in manufacturing establishments and in independent warehouses, compresses, and other public storage places at the end of the month. The Bureau of Foreign and Domestic Commerce, of this department, compiles and furnishes to the Bureau of the Census the statistics of imports and exports of cotton.

Statistics of cotton consumed, exported, and on hand have been collected since 1906. Table 28 summarizes these statistics for years ending August 31, showing, separately, the quantity of cotton consumed and on hand in manufacturing establishments for cotton-growing states and for all other states. The segregation of stocks shown in this and succeeding tables is based upon the location of the cotton and not upon the ownership nor the locality of growth. For instance, cotton in warehouses connected with the mills is classed as in manufacturing establishments, while cotton in independent warehouses and other public storage places comprises all cotton stored in such establishments, regardless of its ownership. Owing to the fact that figures expressing the number of bales of linters included in some of the items are not available, the amounts given in the table include both cotton and linters.

TABLE 28.—DISTRIBUTION OF THE COTTON SUPPLY FOR YEARS ENDING AUGUST 31: 1906 TO 1913.

[Quantities are given in running bales, except that round bales are counted as half bales, and foreign cotton in equivalent 500-pound bales. Linters are included.]

	1913	1912	1911	1910	1909	1908	1907	1906
Aggregate.....	16,225,734	17,896,226	13,873,423	12,188,021	15,312,885	13,358,707	15,025,720	13,047,219
Cotton exported.....	8,800,966	10,681,758	7,781,414	6,339,028	8,574,024	7,573,349	8,503,265	6,763,011
Cotton consumed, total.....	5,736,330	5,367,583	4,704,978	4,798,953	5,240,719	4,539,090	4,984,036	4,000,279
In cotton-growing states.....	2,960,518	2,712,223	2,328,487	2,292,333	2,553,797	2,187,096	2,410,993	2,373,577
In all other states.....	2,825,812	2,655,360	2,376,491	2,506,620	2,686,922	2,351,994	2,573,943	2,535,702
Cotton destroyed by fire.....	40,000	70,000	12,000	10,000	14,557	10,210	22,952	25,760
Cotton on hand at end of year.....	1,598,438	1,776,885	1,375,031	1,040,040	1,483,585	1,236,058	1,514,567	1,349,139
In manufacturing establishments, total.....	778,158	870,646	542,191	533,232	907,097	594,184	1,016,738	680,471
In cotton-growing states.....	234,509	241,611	101,114	121,349	186,458	112,471	311,307	181,060
In all other states.....	543,649	629,035	441,077	411,883	720,639	481,713	705,431	496,411
In independent warehouses and other public storage places.....	495,280	556,239	432,840	306,808	325,099	444,626	388,919	668,668
Elsewhere (estimated).....	325,000	350,000	400,000	200,000	251,389	197,248	108,910	

MONTHLY REPORTS OF COTTON AND LINTERS CONSUMED, IMPORTED, EXPORTED, AND ON HAND.

The collection of monthly reports of cotton consumed, imported, exported, and on hand, and of active consuming cotton spindles, authorized in the act approved July 22, 1912, was inaugurated with September, 1912. Table 29 presents statistics of cotton and linters consumed during each month and on hand in manufacturing establishments and public storage places at the end of each month from September, 1912, to March, 1914, inclusive.

The quantity of cotton consumed, as shown in the table, varies considerably from month to month. The

large amounts for October and for January, however, may be accounted for, in part, by the larger number of working days in those months and by the fact that a number of establishments—among them some of the largest in the country—reported for a four-week or a five-week period, so that the figures for these months cover a five-weeks' consumption in the case of a considerable number of establishments. This latter condition has been called to the attention of the mills, with the result that the reports for practically all establishments now relate to the calendar months. Consumption of cotton, both in the cotton-growing states and in all other states shows a general increase during the period covered by the table.

TABLE 29.—COTTON AND LINTERS CONSUMED AND ON HAND IN MANUFACTURING ESTABLISHMENTS AND IN PUBLIC STORAGE PLACES, BY MONTHS: SEPTEMBER, 1912, TO MARCH, 1914, INCLUSIVE.

[Quantities are given in running bales, except that round bales are counted as half bales, and foreign cotton in equivalent 500-pound bales.]

MONTH.	Year.	COTTON.					LINTERS.						
		Consumed.			On hand.		Consumed.			On hand.			
		Total.	In cotton states.	In all other states.	In manufacturing establishments.		Total.	In cotton states.	In all other states.	In manufacturing establishments.		In independent warehouses, etc.	
					In cotton states.	In all other states.				In cotton states.	In all other states.		
September.....	1913	442,435	240,935	201,500	196,522	418,059	1,295,155	27,697	9,172	13,525	13,196	39,295	24,681
	1912	411,582	214,993	196,589	197,264	475,219	1,376,078	24,579	8,548	16,031	8,050	33,373	10,268
October.....	1913	511,923	263,235	248,688	564,393	458,622	2,509,658	31,355	10,701	20,654	12,397	37,086	38,057
	1912	483,878	243,405	240,473	441,578	441,578	2,805,864	29,182	10,053	19,129	9,273	28,471	15,451
November.....	1913	456,356	244,546	211,810	816,337	610,301	3,260,714	26,242	9,389	16,853	16,307	42,516	34,541
	1912	448,800	233,885	214,915	749,206	545,814	3,337,527	26,711	9,423	17,288	13,834	32,158	33,188
December.....	1913	456,262	238,140	218,113	936,285	792,274	3,312,853	21,993	7,888	14,105	20,863	53,717	44,302
	1912	422,569	216,818	205,751	921,522	721,873	3,199,207	22,706	8,360	14,346	19,184	42,626	36,157
January.....	1914	517,299	269,460	247,839	905,419	859,142	2,839,700	23,611	8,468	15,143	23,718	63,499	40,923
	1913	509,694	262,321	247,373	895,049	941,497	2,622,010	24,049	9,183	14,866	22,663	53,784	35,038
February.....	1914	455,231	243,182	212,049	848,686	863,682	2,313,974	22,398	7,562	14,836	26,185	67,624	54,721
	1913	448,095	232,198	215,897	871,177	1,022,879	2,217,619	23,118	7,763	15,355	25,830	61,505	33,280
March.....	1914	493,354	260,797	232,557	806,423	872,816	1,834,008	24,720	7,830	16,890	26,873	76,753	57,538
	1913	462,455	242,863	219,592	824,163	1,014,305	1,790,526	23,118	7,350	15,768	25,410	67,644	40,790
April.....	1913	478,506	254,223	224,283	721,521	981,786	1,340,605	25,484	7,104	18,380	24,787	68,296	46,268
May.....	1913	481,993	253,546	228,447	590,560	828,627	895,573	27,327	7,843	19,484	21,811	63,823	43,281
June.....	1913	441,157	235,721	205,436	471,767	731,703	609,360	25,355	7,372	17,983	20,826	61,019	40,877
July.....	1913	462,242	240,969	221,273	345,152	612,409	381,739	24,750	7,486	17,264	17,815	54,578	29,148
August.....	1913	432,350	230,801	201,549	19,134	498,520	467,902	26,630	8,290	18,340	15,325	45,129	27,378

Stocks of cotton on hand naturally increased during the ginning season, reaching their highest point for the manufacturing establishments in cotton-growing states in December and in all other states in March, while the quantity in independent warehouses and other public storage places was largest at the close of December. These statistics do not show the quantity of cotton and linters held "elsewhere," that is, cotton and linters other than in manufacturing establishments and in public storage places.

ACTIVE COTTON SPINDLES.

Table 30 shows, for each month since September, 1912, the number of active cotton spindles in the United States, in the cotton-growing states, and in all other states. The figures include all spindles operated at any time during the month, and therefore do not represent the average number. The number of active cotton spindles has shown for each month a gain over the preceding month, this being the case in the cotton-growing states and for the country as a whole.

TABLE 30.—ACTIVE CONSUMING COTTON SPINDLES, BY MONTHS: SEPTEMBER, 1912, TO MARCH, 1914.

MONTH.	Year.	ACTIVE COTTON SPINDLES (NUMBER).			MONTH.	Year.	ACTIVE COTTON SPINDLES (NUMBER).		
		Total.	In cotton-growing states.	In all other states.			Total.	In cotton-growing states.	In all other states.
September.....	1913	30,634,381	12,009,006	18,625,375	February.....	1914	31,139,730	12,306,311	18,833,419
	1912	29,775,039	11,502,636	18,272,403		1913	30,536,486	11,757,852	18,778,634
October.....	1913	30,855,360	12,080,706	18,774,654	March.....	1914	31,083,858	12,352,972	18,730,886
	1912	30,030,733	11,582,060	18,448,673		1913	30,575,028	11,853,142	18,721,886
November.....	1913	30,949,337	12,090,701	18,858,636	April.....	1913	30,572,108	11,911,333	18,660,775
	1912	30,072,579	11,610,173	18,462,406	May.....	1913	30,556,177	11,918,309	18,637,868
December.....	1913	31,004,716	12,152,883	18,851,833	June.....	1913	30,046,121	11,954,524	18,091,597
	1912	30,153,747	11,619,899	18,533,848	July.....	1913	30,022,654	11,969,736	18,052,918
January.....	1914	31,098,178	12,256,338	18,841,840	August.....	1913	30,602,282	11,973,633	18,628,649
	1913	30,359,843	11,740,465	18,619,378					

IMPORTS AND EXPORTS OF COTTON.

Foreign cotton imported into the United States is frequently transhipped at intermediate points, and, in some instances, is counted as imported from the country of transshipment. There has been a demand

for information regarding the country of production, and the Bureau of Foreign and Domestic Commerce has accordingly arranged to furnish this information. The following table shows the monthly imports of cotton, by country of production, from September, 1912, to March, 1914, inclusive.

COTTON PRODUCTION: 1913.

TABLE 31.—TOTAL IMPORTS OF COTTON, BY COUNTRIES OF PRODUCTION, FOR EACH MONTH FROM SEPTEMBER, 1912, TO MARCH, 1914, INCLUSIVE.

MONTH.	Year.	IMPORTS OF FOREIGN COTTON (EQUIVALENT 500-POUND BALES).							MONTH.	Year.	IMPORTS OF FOREIGN COTTON (EQUIVALENT 500-POUND BALES).						
		Total.	Produced in—								Total.	Produced in—					
			Egypt.	China.	Peru.	India.	Mexico.	All other countries.				Egypt.	China.	Peru.	India.	Mexico.	All other countries.
September.....	1913	7,449	4,000	413	1,328	719	983	6	February.....	1914	20,771	11,361	3,602	1,426	951	3,361	70
	1912	8,930	7,710	106	630	433	21	30		1913	34,039	29,899	2,457	1,367	316	316	.....
October.....	1913	5,509	2,119	751	1,419	266	1,014	.....	March.....	1914	30,863	17,155	5,049	886	70	7,556	147
	1912	10,571	6,522	3,042	567	345	58	37		1913	27,889	23,028	1,051	946	2,505	97	262
November.....	1913	7,281	2,404	282	1,523	157	2,398	17	April.....	1913	20,776	16,377	3,082	797	.....	.....	520
	1912	9,432	7,905	471	867	151	3	55	May.....	1913	13,820	11,764	518	461	1	.....	1,076
December.....	1913	15,815	11,888	67	1,224	655	1,635	246	June.....	1913	8,019	6,622	617	572	.....	.....	208
	1912	24,346	21,548	1,730	1,481	.....	72	15	July.....	1913	9,496	7,049	1,303	906	80	.....	158
January.....	1914	19,624	11,341	508	883	155	6,708	29	August.....	1913	7,785	5,553	832	557	814	29	.....
	1913	52,022	47,098	3,132	1,586	44	100	2									

A large proportion of the foreign cotton imported into the United States is Egyptian, 83.9 per cent of the total for the year ending August 31 being produced in that country. Almost one-half of the remainder was Chinese, with smaller amounts of Peruvian, Indian, and Mexican, the quantity of the last named being

largely increased by the transportation of seed cotton from Lower California to California for ginning.

The following table presents, by months, from September, 1912, to March, 1914, the total exports of domestic cotton and linters, and shows, separately, the quantities taken by the most important countries:

TABLE 32.—EXPORTS OF DOMESTIC COTTON AND LINTERS, BY COUNTRIES TO WHICH EXPORTED, BY MONTHS: SEPTEMBER, 1912, TO MARCH, 1914, INCLUSIVE.

MONTH.	Year.	EXPORTS OF DOMESTIC COTTON AND LINTERS (RUNNING BALES) TO—						Linters included in exports.
		Total.	United Kingdom.	Germany.	France.	Italy.	All other countries.	
September.....	1913	930,328	376,426	290,805	131,950	45,290	85,857	3,062
	1912	729,859	345,260	163,449	103,060	36,901	81,159	(1)
October.....	1913	1,517,891	514,105	465,525	279,469	54,282	204,510	9,457
	1912	1,515,746	638,780	430,744	239,515	63,606	143,101	(1)
November.....	1913	1,501,259	530,355	516,853	183,494	67,994	202,563	27,005
	1912	1,734,687	764,928	464,058	263,582	51,756	190,363	(1)
December.....	1913	1,230,830	473,028	326,938	146,074	80,621	204,169	21,249
	1912	1,391,394	610,386	384,345	165,573	57,056	174,034	(1)
January.....	1914	1,052,272	437,231	308,116	78,574	54,824	173,527	24,697
	1913	900,931	355,837	240,087	97,813	49,871	157,318	(1)
February.....	1914	751,013	328,794	212,599	74,785	36,473	98,362	39,325
	1913	530,911	166,726	159,817	26,991	47,450	129,927	(1)
March.....	1914	695,310	264,999	219,948	70,447	43,130	96,786	39,619
	1913	372,073	97,185	128,019	14,561	44,847	87,461	(1)
April.....	1913	534,596	208,963	133,024	19,899	38,338	134,372	(1)
May.....	1913	408,966	164,871	126,574	23,643	41,440	112,438	(1)
June.....	1913	223,921	88,906	60,804	7,935	27,077	39,199	(1)
July.....	1913	140,710	39,898	40,548	7,132	24,589	28,543	(1)
August.....	1913	257,172	77,488	72,928	52,933	13,568	40,255	(1)

¹ Not available.

STOCKS OF COTTON IN FOREIGN COUNTRIES.

The importance of cotton in the industrial world has created a widespread demand for information as to the supply of the staple. To meet this demand there are a number of individuals and associations engaged in compiling and publishing statistics on this subject. As a rule, the statistics of stocks are limited to the holdings in the more important cotton centers and to

cotton afloat, although some authorities publish data as to cotton on hand at the mills.

The International Federation of Master Cotton Spinners' and Manufacturers' Associations, which includes leading organizations of cotton manufacturers in the important cotton-spinning countries, collects information direct from the mills as to actual stocks of cotton on hand at the close of August and of Feb-

COTTON PRODUCTION: 1913.

Liverpool, England, has long been the world's greatest market and clearing house for cotton, and the receipts at this port include cotton from all of the producing countries. Accordingly the cotton situation has a special interest in this city, and a number of publications relating to cotton are issued. Among others, the Liverpool Cotton Association compiles and publishes reports regarding the movement of

cotton. The reports include statistics of stocks on hand at Liverpool and at other ports, of cotton afloat, and of takings by the British and continental mills. Table 34, which shows cotton on hand at Liverpool, London, Bremen, Havre, Bombay, and Alexandria, and cotton afloat to the United Kingdom and to the continent, has been compiled principally from the reports of this association.

TABLE 34.—STOCKS OF COTTON ON HAND AT SELECTED PORTS AND COTTON AFLOAT TO GREAT BRITAIN AND TO THE CONTINENT ON THE FRIDAY NEAREST MARCH 1: 1910 TO 1914.

PORT AND YEAR.	Total.	American.	Bra- zilian.	Egyp- tian.	Peru- vian.	All other.	PORT AND YEAR.	Total.	American.	Bra- zilian.	Egyp- tian.	Peru- vian.	All other.
STOCKS OF COTTON HELD ON THE FRIDAY NEAREST MARCH 1 (RUNNING BALES).							STOCKS OF COTTON HELD ON THE FRIDAY NEAREST MARCH 1 (RUNNING BALES)—continued.						
Europe:							Bombay:						
Liverpool—							1914.....	698,000	.....	.....	.....	.....	698,000
1914.....	1,149,420	908,330	100,220	74,240	37,120	29,510	1913.....	655,000	.....	.....	.....	.....	655,000
1913.....	1,402,220	1,252,520	42,470	68,980	26,130	12,120	1912.....	604,000	.....	.....	.....	.....	604,000
1912.....	1,113,140	1,004,400	16,270	58,350	21,020	13,100	1911.....	442,000	.....	.....	.....	.....	442,000
1911.....	1,299,190	1,180,920	31,830	70,160	6,200	10,080	1910.....	549,000	.....	.....	.....	.....	549,000
1910.....	933,810	864,310	9,200	28,400	2,800	29,100	Alexandria:						
London—							1914.....	360,000	.....	.....	360,000	.....	.....
1914.....	4,775	.....	.....	.....	.....	4,775	1913.....	297,000	.....	.....	297,000	.....	.....
1913.....	8,379	.....	.....	.....	.....	8,379	1912.....	284,000	.....	.....	284,000	.....	.....
1912.....	3,168	.....	.....	.....	.....	3,168	1911.....	256,000	.....	.....	256,000	.....	.....
Bremen—							COTTON AFLOAT ON THE FRIDAY NEAREST MARCH 1 (RUNNING BALES).						
1914.....	567,000	560,000	.....	.....	.....	7,000	To Great Britain:						
1913.....	505,000	503,000	.....	.....	.....	2,000	1914.....	333,000	281,000	15,000	24,000	6,000	7,000
1912.....	525,800	524,000	.....	.....	.....	1,800	1913.....	181,000	131,000	6,000	18,000	15,000	11,000
Havre—							1912.....	410,000	362,000	2,000	35,000	6,000	5,000
1914.....	416,500	407,000	.....	.....	.....	9,500	1911.....	173,000	141,000	4,000	18,000	4,000	6,000
1913.....	448,800	442,300	.....	.....	.....	6,500	To the Continent:						
1912.....	339,700	333,100	.....	.....	.....	6,600	1914.....	488,000	289,000	.....	10,000	.....	189,000
Other continental ports—							1913.....	346,000	239,000	.....	12,000	.....	95,000
1914.....	114,890	81,990	.....	3,070	.....	29,830	1912.....	716,000	628,000	.....	9,000	.....	79,000
1913.....	112,010	85,550	.....	4,200	.....	22,260	1911.....	559,000	375,000	.....	17,000	.....	167,000
1912.....	63,430	44,900	.....	3,400	.....	15,130							

THE COLLECTION OF STATISTICS OF COTTON.

Cotton now leads all other fibers as a textile material. The position attained by this staple and its manufactures in the industrial and commercial world renders reliable information regarding it of great importance. The international trade in no other single article equals that in cotton and the products made from it. In its various stages—from the seed to the completed fabric—it furnishes employment to a considerable portion of the entire human race. It affects not only those who are engaged directly in producing, handling, and consuming the fiber and its products, but also large numbers who touch it, so to speak, as merchants, bankers, manufacturers of fertilizers and ginning machinery, and, in fact, some of those engaged in almost any line of endeavor.

While statistics of the imports and exports of cotton and of cotton manufactures have been collected for many years, it is only within comparatively recent years that any government has taken an active interest in the collection of statistics as to production, consumption, and stocks. The decennial censuses taken in the United States have since 1840 included reports on the production of cotton, and since 1880, of the acreage devoted to the crop, as returned by the planters; but the totals as thus obtained were never ready for publication until the crops to which they related had been marketed and consumed. Beginning with 1866, the United States Government, through the Department of Agriculture (at that time the Bureau of Agriculture), has each year issued reports of the acreage and production of cotton. These estimates, based on the statements of a large number of persons with more or less information regarding local conditions, frequently conflicted materially with the reports compiled by private enterprise, and were not received with that degree of confidence necessary to give steadiness to the cotton market or to guide the planter and the manufacturer in their operations. Thus, while the Government was making these efforts to supply impartial and guiding information, there yet remained a feeling of uncertainty and the need of a more direct and comprehensive method of determining the size of the crop and the rapidity of its movement.

In 1880 the Census Bureau attempted to obtain information of the production of cotton by a canvass of the ginneries, but the organization work was not so complete as it might have been, and records of the number of bales ginned by many of the ginneries were not available. The results were therefore incomplete and unsatisfactory. Another effort in 1900 to determine

the production of cotton in this manner proved satisfactory to such extent that Congress, in the act establishing the permanent Census Bureau, authorized the compilation and publication of the number of bales of cotton ginned to specified dates during each ginning season and for the crop. The number of these reports has since been increased, so that now 10 reports of cotton ginned are collected and published each year—practically semimonthly reports during the ginning season.

Prior to the inauguration of this work by the Bureau of the Census in 1900, the methods employed by the Government and by the several private concerns engaged in compiling reports of the cotton production during the season were essentially the same. All of them consisted in comparing, revising, composing, and compiling the judgments, opinions, and conjectures of a greater or less number of correspondents or agents in various parts of the cotton-growing states. Obviously any improvement in such a method must consist in increasing the number of agents and in the growing skill of these agents in judging the crop in their respective territories at the time of making their reports. It is equally obvious that no degree of improvement possible to this method could free its reports from the element of doubt.

More accurate, because based upon the actual movement of cotton, and yet not determining the approximate size of the crop until the close of the cotton year, were the reports of commercial associations, such as the New Orleans Cotton Exchange. These associations secured, and do yet secure, reliable information of cotton arriving at ports and at selected interior points, of the overland movement to the Northern states and to Canada, and of the takings of the southern mills. The figures published by these associations, though reliable, were at best partial and merely indicative. They indicated perchance a larger or a smaller crop, or perhaps a more rapid or a slower movement of the crop, and this element of doubt, arising from the very incompleteness of the reports, was used to its extreme possibilities by some of those who operated in the cotton market. That unknown quantity of cotton held at unselected points and by the growers themselves, which, in trade parlance, had not come "into sight," was so considerable as to leave room for wild speculation. To illustrate: The report of the New Orleans Cotton Exchange, that 11,575,304 bales had come into sight to the close of January, 1914, betrays the inadequacy of this infor-

mation for judging the size of the crop when compared with the census report of January 23, showing that, prior to January 16, 13,589,171 bales had been ginned from the crop grown in 1913.

Thus the methods employed by the Bureau of the Census in determining the production of cotton before the close of the cotton year bear the relation to all other methods which accuracy, certainty, and confidence bear to conjecture, uncertainty, and doubt.

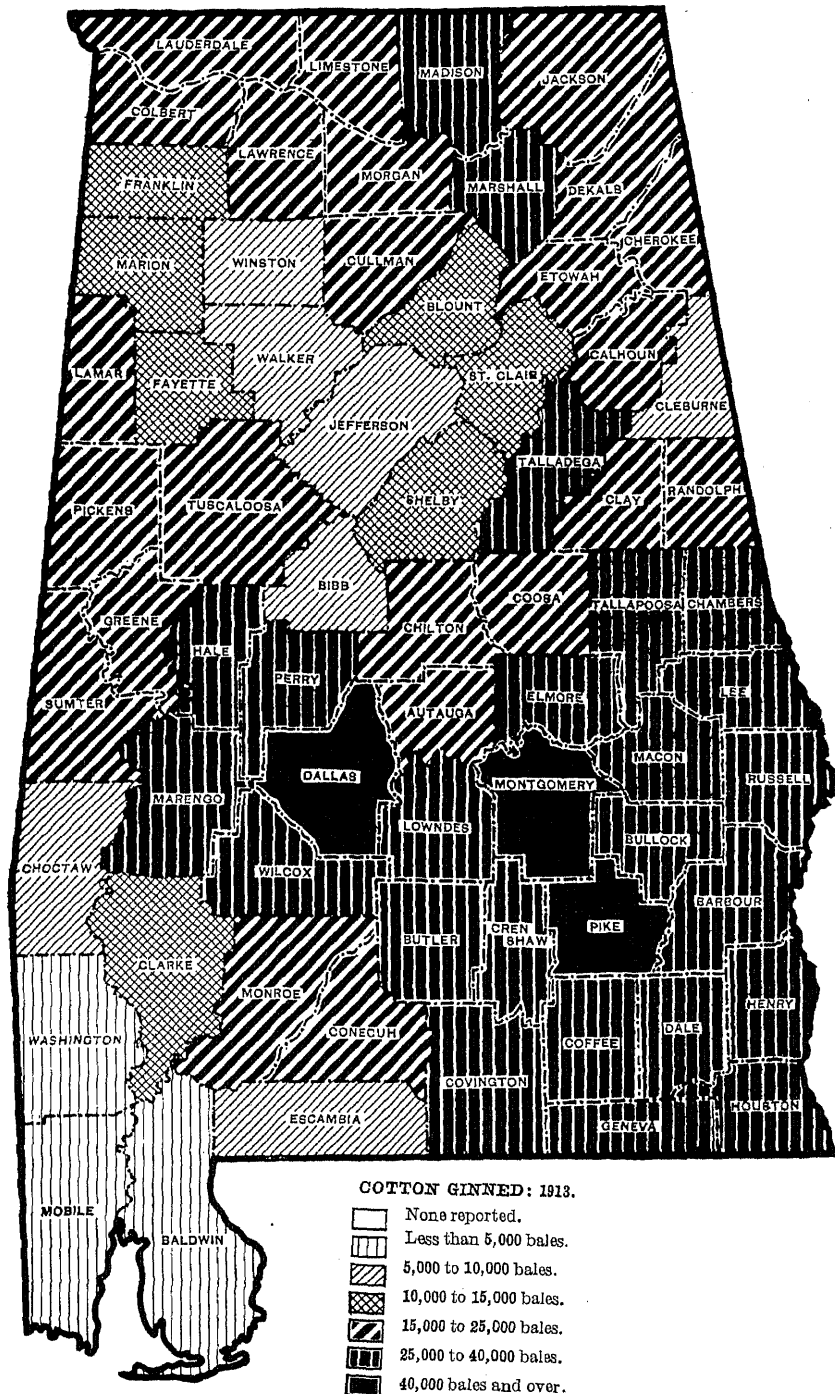
The success attending this bureau's compilation of the reports of cotton ginned resulted in Congress authorizing, in 1905, the collection of reports regarding the supply and distribution of cotton for years ending August 31. Since then this authorization was enlarged by the joint resolution approved March 2, 1909, and the act of July 22, 1912, so that, at the present time, reports are collected and published showing the consumption, imports, exports, and stocks

of cotton, and the number of active consuming cotton spindles for each calendar month.

There is a demand for the collection in other important cotton-producing and cotton-consuming countries of information regarding this staple similar to that compiled and published by this bureau for the United States. Such arrangements have been made in India. Beginning with the crop of 1914, the Indian Government will collect information as to the production of cotton in that country by canvassing the pressing establishments. This method should result in the compilation and promulgation of accurate reports regarding the production of cotton in that country. The Governments of Egypt and of Russia are giving the subject of cotton statistics more attention than formerly and it is probable that systems for determining the production of cotton by a canvass of the gineries or the presses will be instituted.

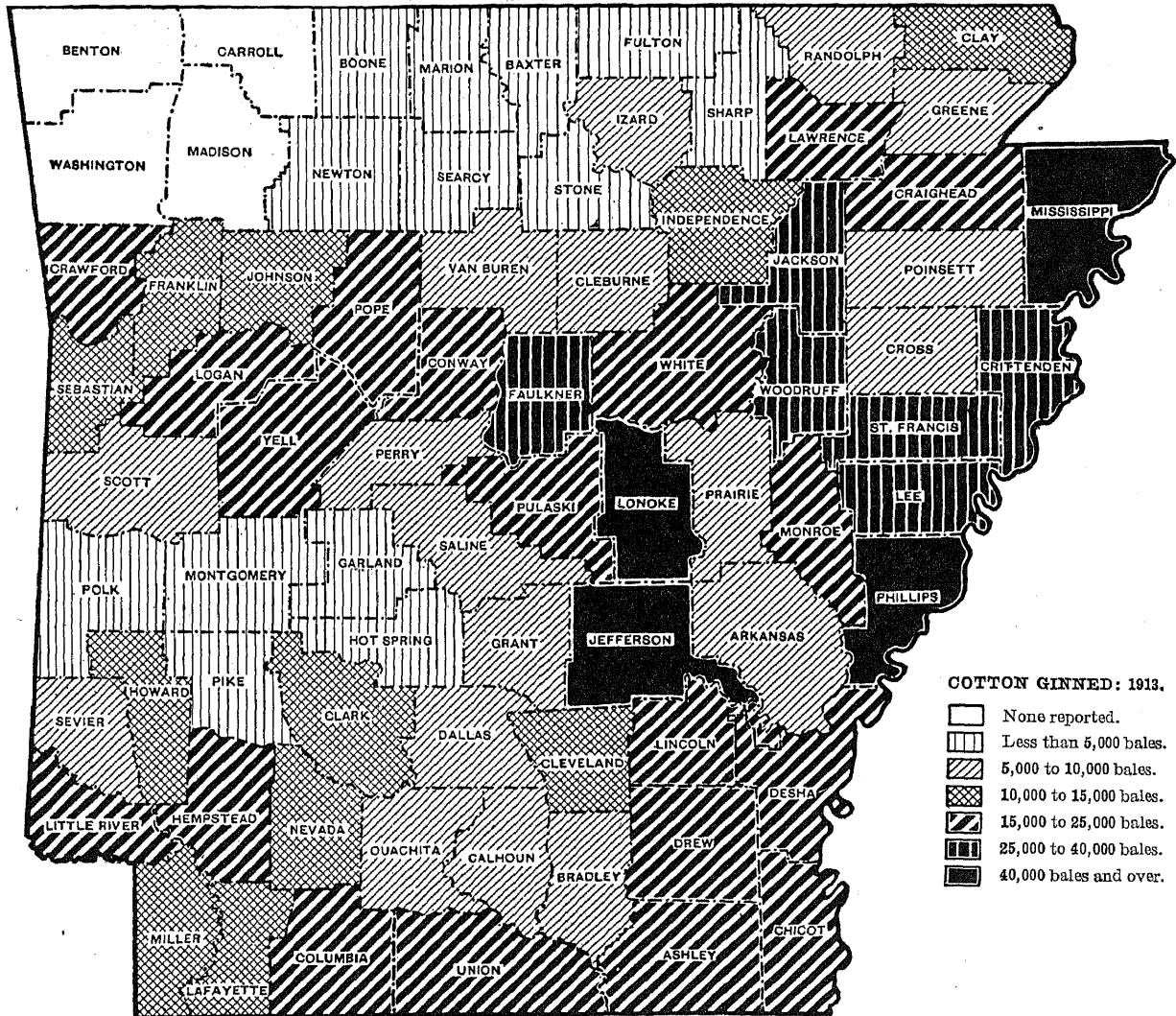
ALABAMA.

[See table on page 35.]



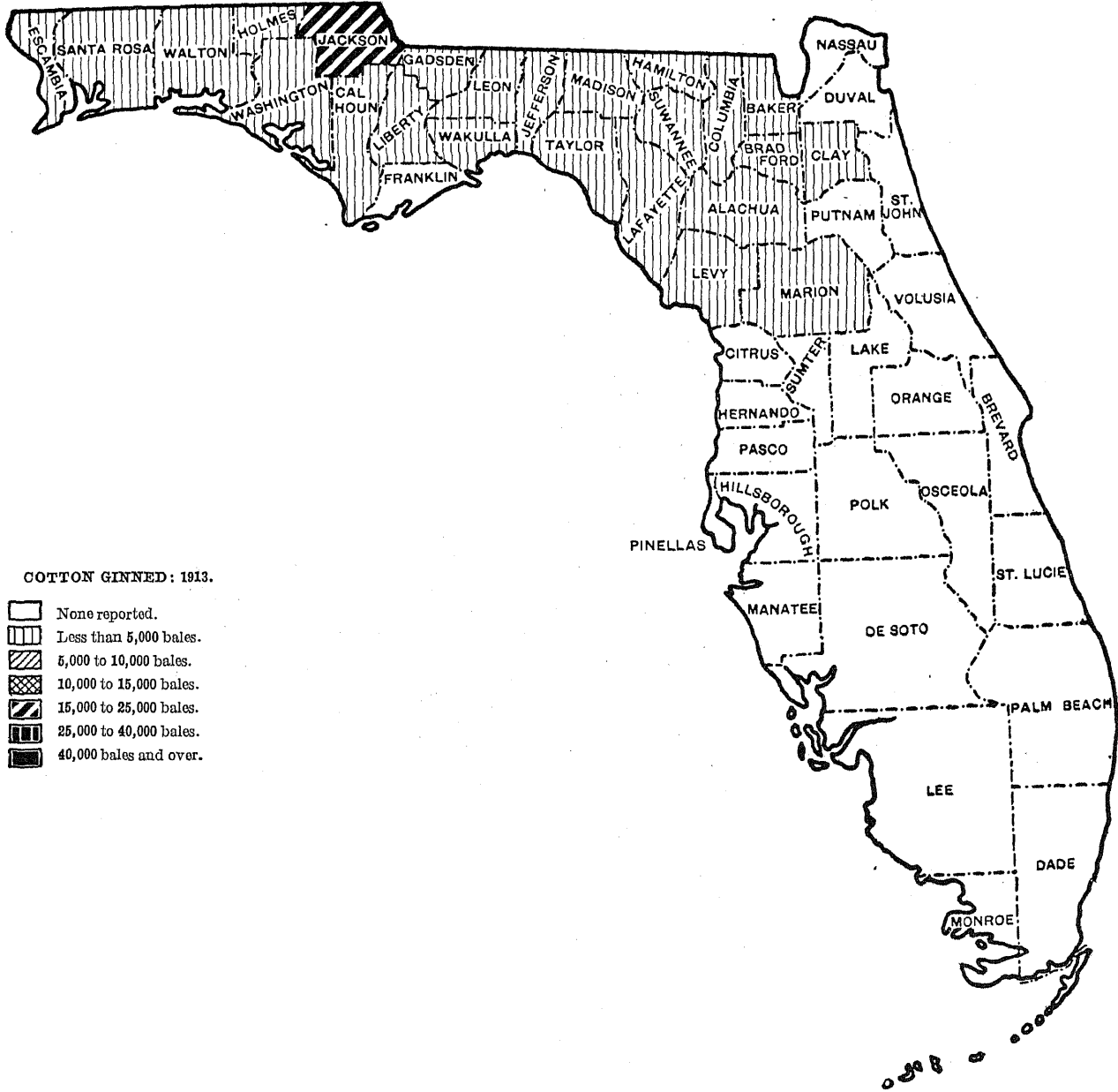
ARKANSAS.

[See table on page 36.]



FLORIDA.

[See table on page 37.]

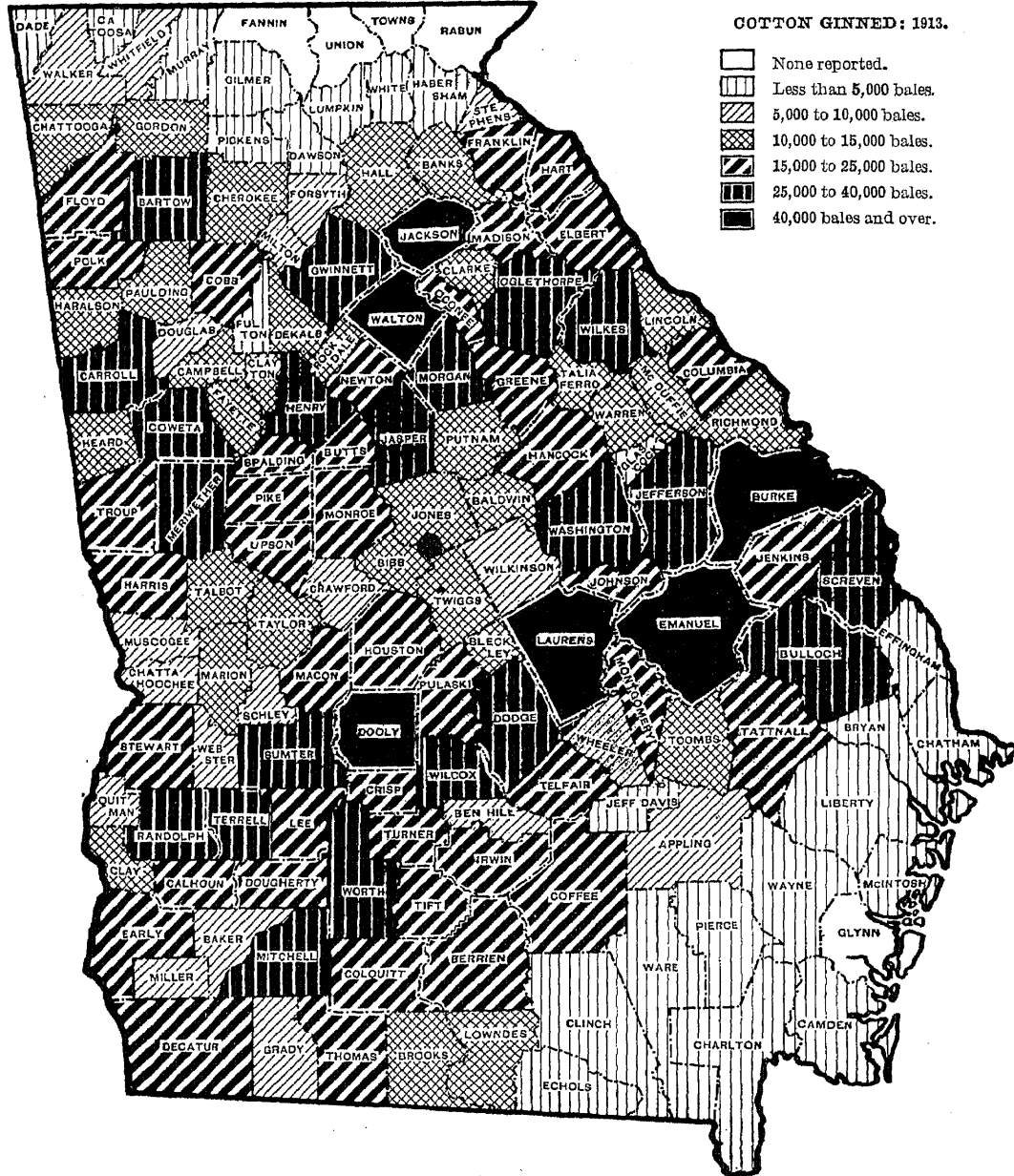


COTTON GINNED: 1913.

- None reported.
- Less than 5,000 bales.
- 5,000 to 10,000 bales.
- 10,000 to 15,000 bales.
- 15,000 to 25,000 bales.
- 25,000 to 40,000 bales.
- 40,000 bales and over.

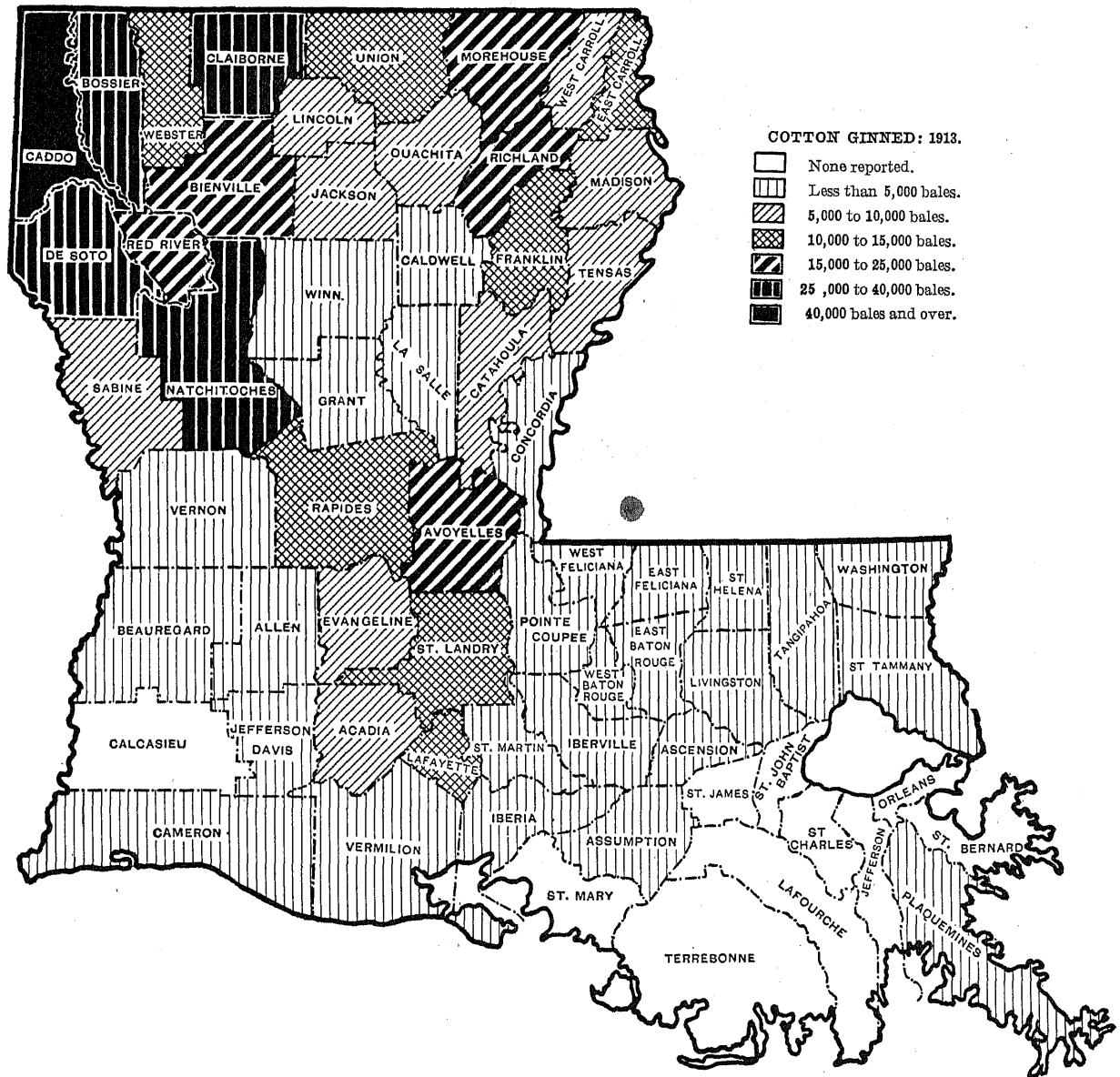
GEORGIA.

[See table on page 37.]



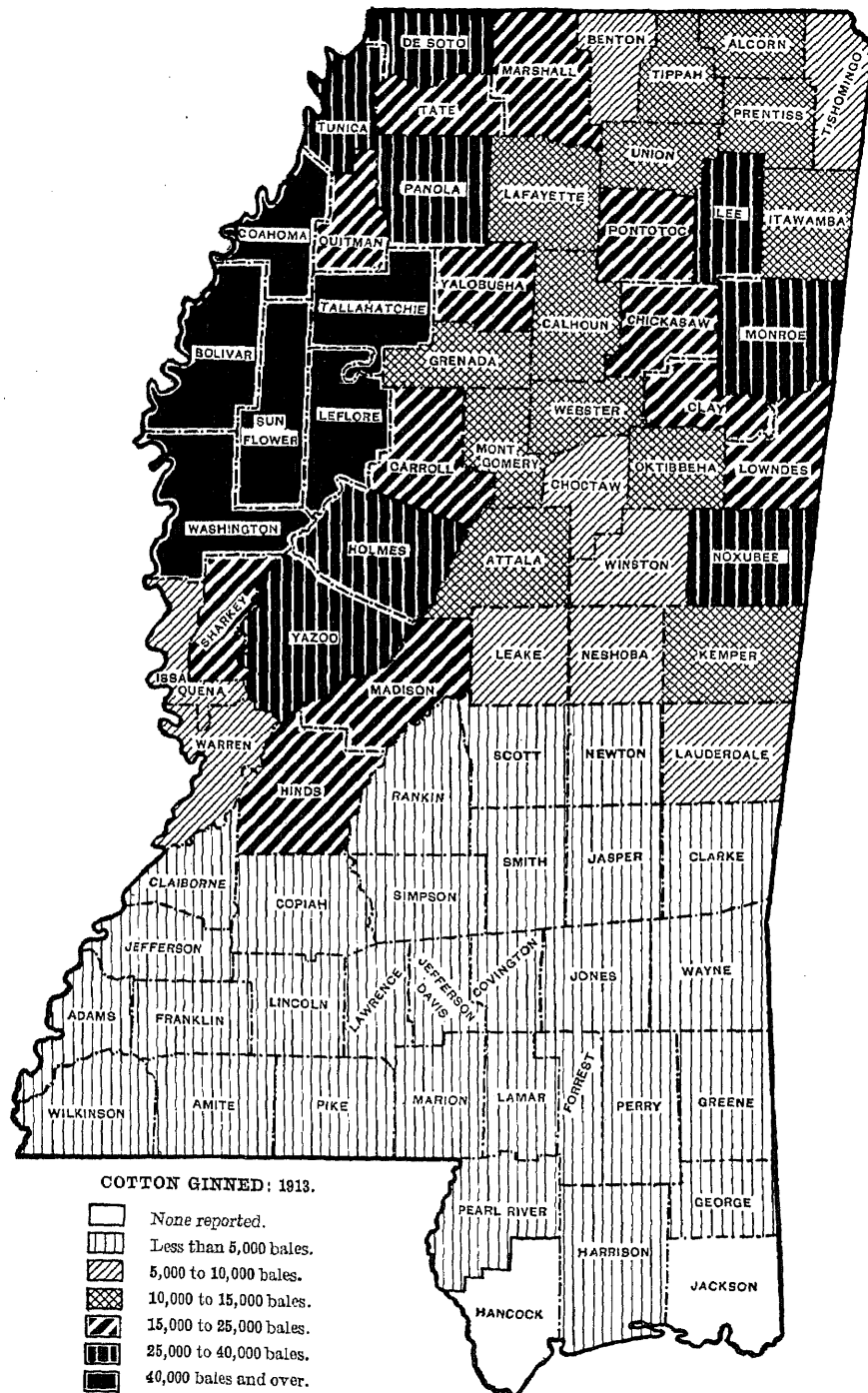
LOUISIANA.

[See table on page 39.]



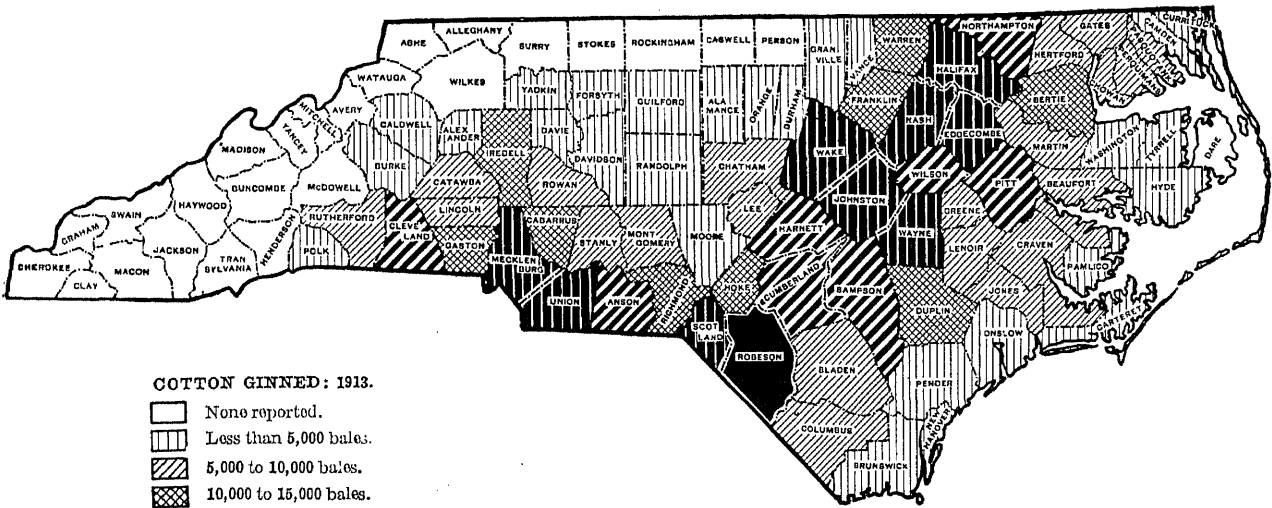
MISSISSIPPI.

[See table on page 40.]



NORTH CAROLINA.

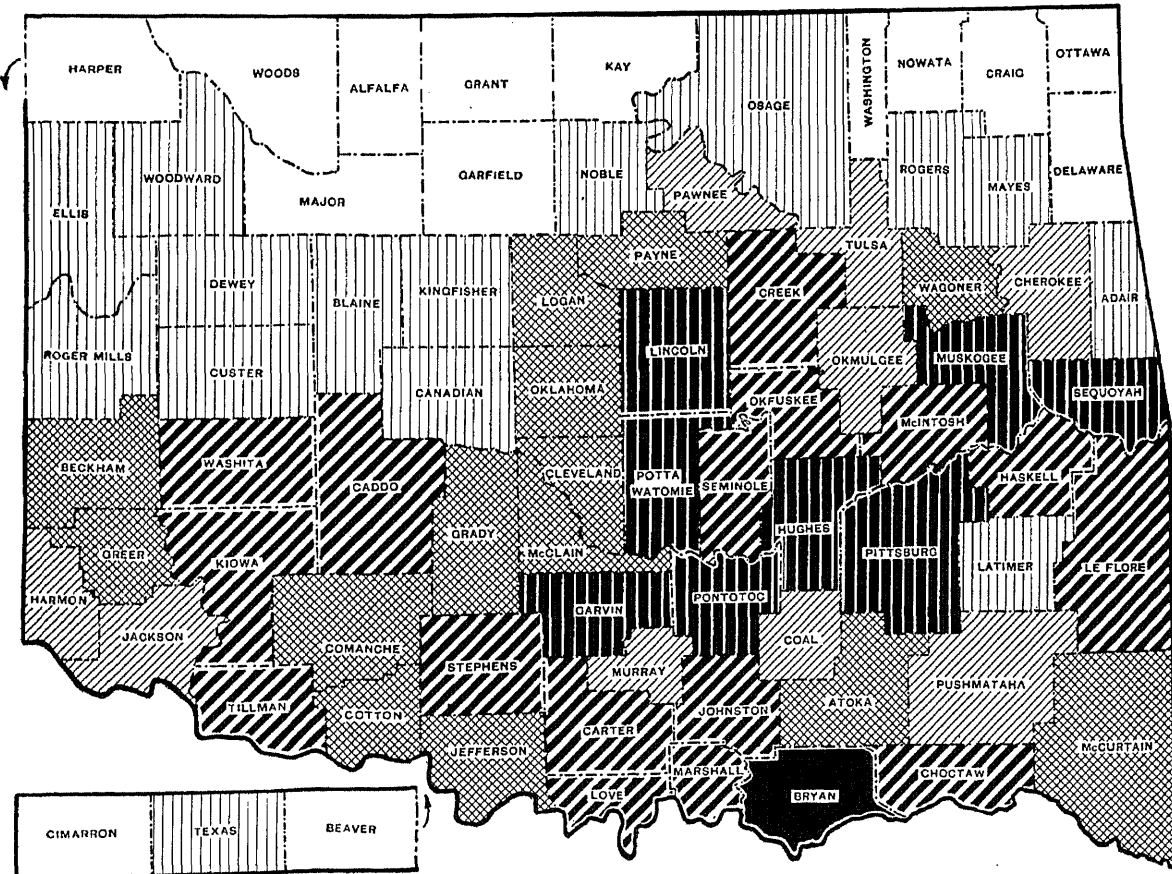
[See table on page 41.]



- COTTON GINNED: 1913.**
- None reported.
 - Less than 5,000 bales.
 - 5,000 to 10,000 bales.
 - 10,000 to 15,000 bales.
 - 15,000 to 25,000 bales.
 - 25,000 to 40,000 bales.
 - 40,000 bales and over.

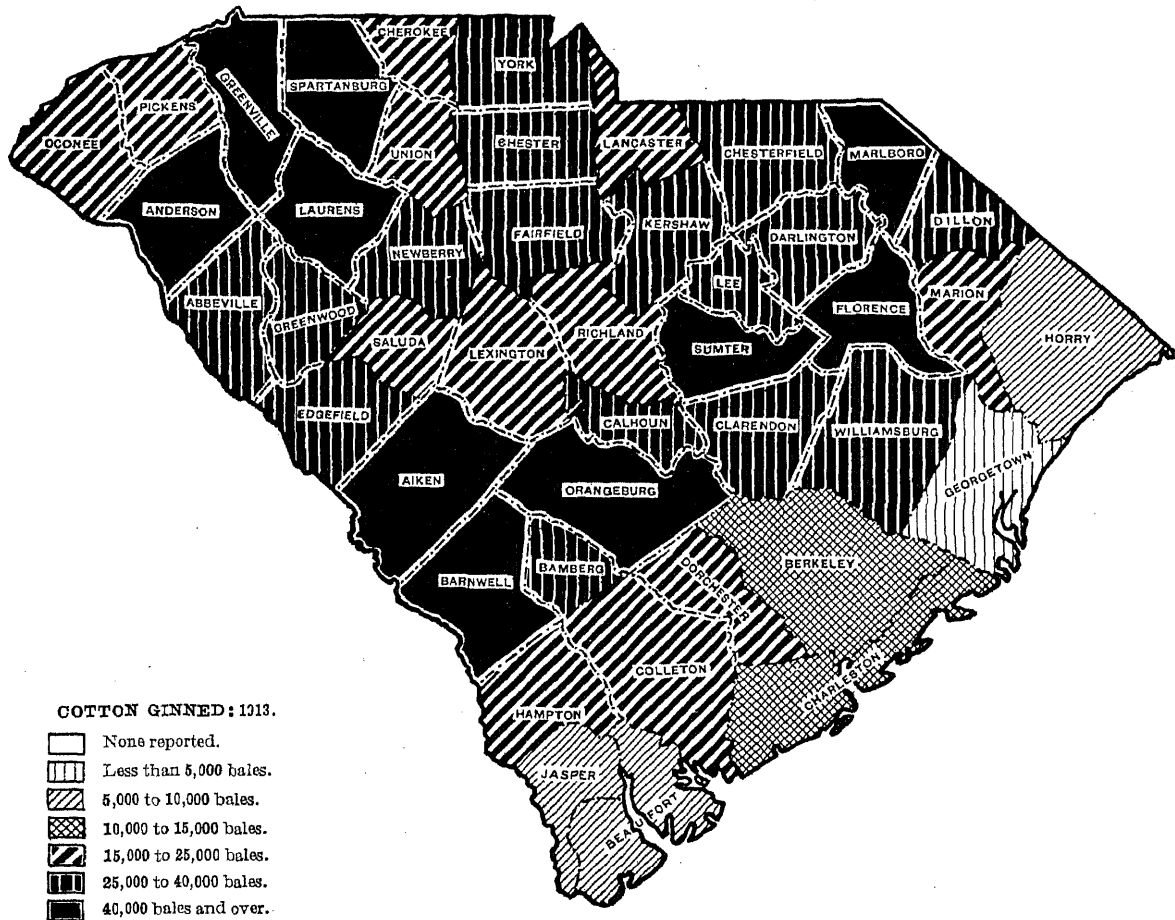
OKLAHOMA.

[See table on page 42.]



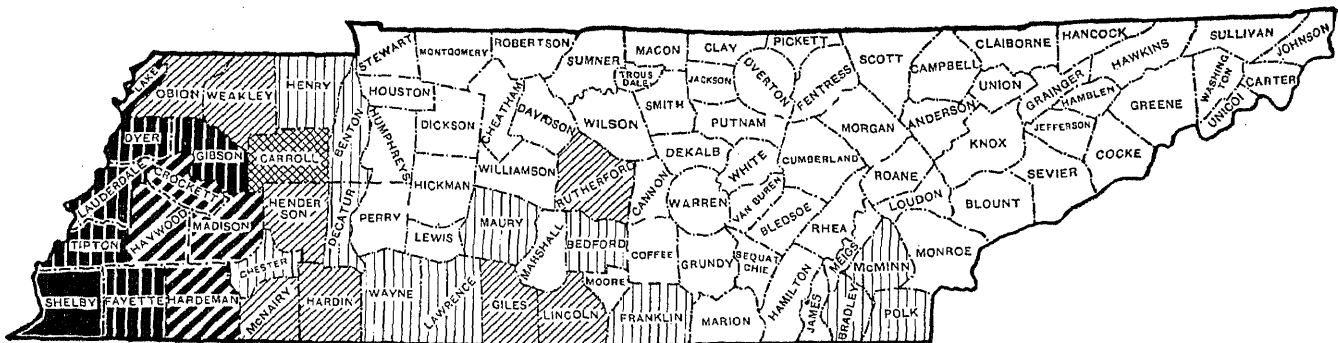
SOUTH CAROLINA.

[See table on page 43.]



TENNESSEE.

[See table on page 44.]



TEXAS.

[See table on page 44.]

