Cotton Industry. The production of the cotton plant was very limited until the invention of the saw-gin. A number of cotton machinery improvements made prior to Whitney's invention of the gin had brought about an increasing demand in England for cotton, and there was considerable anxiety on the part of mill owners there as to whether production could be so stimulated as to cause it to keep pace with the growth of the demand. The total crop of the South in 1791 is estimated to have been 2,000,000 pounds, or 4,000 bales, of which about one tenth is supposed to have been exported to England. A shipment of eight bags had been made to Liverpool in 1784, though there are reports of small shipments prior to that date, which were probably West Indian cotton exported via Charleston. This shipment of eight bags was sold to an English firm in whose mill was employed a Samuel Slater, who in 1790 built in Pawtucket, R. I., a mill for Almy & Brown of Providence. It is supposed that the first mill built in the South was in the same year, 1790, and that it was in South Carolina. An early report states that a mill was then established in that State, driven by water and having «spinning machines with 84 spindles each.» Thus the South built its first cotton-mill probably the same year that the foundation of New England's textile industry was laid by the building of the mill for Almy & Brown.

The spinning and weaving of cotton for domestic use, or, as it was called, the making of «homespun» goods, was almost universal throughout the South at that period. It is related of Jefferson that in his own household he «employed two spinning jennies, a carding machine and a loom with flying shuttle, by which he made more than 2,000 yards of cloth which his family and servants required yearly.»

«The four southernmost States,» said Mr. Jefferson in a letter written in 1786, four years before Slater built the small mill in Pawtucket for Almy & Brown of Providence, «make a great deal of cotton. Their poor are almost entirely clothed in it in winter and summer. In winter they wear shirts of it and outer clothing of cotton and wool mixed. In summer their shirts are linen, but the outer clothing cotton. The dress of the women is almost entirely of cotton manufactured by themselves, except the richer class, and even many of them wear a great deal of 'homespun' cotton. It is as well manufactured as the calicoes of Europe.»

This domestic manufacture was very general throughout the South. The cotton for the spinning process was prepared in general by the farm laborers, who picked the seed from the lint by hand. The necessity of some improved method of ginning the cotton was so generally appreciated that many efforts were made to devise a method which would overcome the necessity of hand-picking. In 1792 Eli Whitney, a native of Massachusetts, while in Georgia, had his attention called to this need, and in 1793 he perfected the saw-gin.

In view of the discussion which has been going on for many years as to whether Whitney or Holmes is entitled to the credit for this invention, Mr. D. A. Tompkins, of Charlotte, N. C., in his 'Cotton and Cotton Oil,' gives a very complete and comprehensive history of the gin, and in closing says:

The real facts about the cotton gin are:

1. Eli Whitney, of Massachusetts, a graduate of Yale College, invented a cotton gin, consisting of spikes driven in a wooden cylinder, and having a slotted bar through which these spiked teeth passed, and having a brush to clear the spikes. He obtained a patent 14 March 1794, signed by George Washington, president; Edmund Randolph, secretary of state, and Wm. Bradford, attorney-general.

2. Hodgen Holmes, of Georgia, a resourceful and practical mechanic, invented an improved gin, using circular saws properly spaced, passing through spaces between ribs. For this invention he obtained a patent 12 May 1796, signed by George Washington, president; Timothy Pickering, secretary of state, and Chas. Lee, attorney-general.

3. Whitney's invention, consisting of a wooden cylinder carrying annular rows of wire spikes, with a slotted bar and clearing brush, was fundamental.

4. The practical application of the fundamental idea was Holmes' invention of the saw-gin, which consisted of a mandrel or shaft carrying collars separating circular saws which pass through narrow spaces between ribs.

5. Whitney went South without money, business experience or mechanical training. He received from the Southern States the following amounts:

From South Carolina	$50,000
From North Carolina (at least)	30,000
From Tennessee (about)	10,000
Royalties from Southern States	$90,000

6. In Georgia, his firm (Miller & Whitney) attempted to monopolize the ginning business. This brought on long and vexatious litigation, and the object was never successfully accomplished.

With the invention of the saw-gin the growth of the cotton business of the South became very rapid. The production advanced from 2,000,000 pounds in 1790 to 10,000,000 pounds in 1796, and to 40,000,000 pounds in 1800, while the yield of 1810 was 80,000,000 pounds, and that of 1820, 160,000,000 pounds. The rapid increase in the demand for cotton and the profitableness of its cultivation caused a concentration of the energy and capital of the South in cotton planting, and industrial interests which had been flourishing declined. According to Donnell's 'History of Cotton' the tariff on cotton goods was largely increased in 1816, the measure being strongly supported by the South on the ground that it would promote the consumption of its cotton, and opposed by some of the northern States because of their large shipping interests. From a crop of about 400,000 bales in 1820, production rapidly increased, the growth of this industry probably surpassing in extent and wide-reaching importance any other crop in Europe or America. The energy of the South was turned into cotton-raising with such vigor that production gradually increased more rapidly than the world's consumptive demand. Other agricultural interests were not, however, neglected. Diversified farming was the rule, and the South was more nearly self-supporting in the way of foodstuffs, such as corn, bacon, etc., than it has ever been since, notwithstanding the very marked growth in diversified farming during the last few years. In general, cotton prices were well maintained for 40 years, though gradually tending down-

ward at the beginning of the century. In 1801 the average New York price was 44 cents a pound, and from this it slowly declined (often with an upward spurt of a year or two) to 13½ cents in 1839. With prices ranging from 13 cents to 44 cents per pound, and averaging for 40 years, from 1800 to 1839, a fraction over 17 cents per pound, cotton cultivation was so profitable that it is not to be wondered at that the people of the South concentrated their efforts more and more on cotton cultivation, to the neglect of industrial interests. By 1840 cotton production had advanced beyond the requirements of consumption, and there commenced a period of extremely low prices, the cotton States suffering very much from this decline. In that year the average of New York prices dropped to 9 cents, and this was followed by a continuous decline until 1844–5, when the average was 5.63 cents — the lowest average price for a year ever known to the cotton trade. Moreover, in 1844–5 the seed was without market value, while now the sale of seed adds largely to the value of the crop, and transportation is likewise very much cheaper than at that period. In 1847 the crop was short, and prices advanced sharply, only to drop back to 8 cents, and then to 7½ cents. These excessively low prices brought about a revival of public interest in other pursuits than cotton cultivation, and the natural tendency of the people to industrial matters, which had long been dormant, was again aroused, and for some years there was a very active spirit manifested in the building of railroads and the development of manufactures. In 1850 a period of much higher prices began, and for the next 10 years the average was about 12 cents a pound. The wonderful prosperity which cotton production at the prices prevailing up to 1860 brought about, except for the decade from 1840 to 1849, is illustrated in the statement that though the South had only one third of the total population of the country, and only one fourth of its white population, the assessed value of its property was, according to the census of 1860, $5,200,000,000, out of a total of $12,000,000,000 for the entire country, or 43⅓ per cent. With the coming of the War the cotton trade was completely demoralized, and the small amount produced during that period could only get to the markets by running the blockade. Prices rapidly advanced until in 1863–4 the New York average was 101½ cents. When the War ended the world was almost bare of cotton, the demand was pressing, and prices continued very high. But the South was bankrupt. It had but little capital on which to operate, its planters were burdened with debt, their houses and fences destroyed, their labor system disorganized; and in this condition they were in no position to buy or to produce foodstuffs and live stock. Money-lenders, however, seeing the world-hunger for cotton, were ready to make advances on mortgages on unplanted cotton, but not on other crops. Most of them were factors or commission merchants, who would agree to advance money or to grant credit at their stores for merchandise of all kinds against every acre planted in cotton. Under these circumstances diversified agriculture had to be abandoned, and the planter was forced to buy western corn and bacon, and devote all his time to raising cotton. By the time he had paid nearly double the cash values for his supplies, and had paid commission, storage, and drayage, and insurance on his cotton when marketed, the planter usually ended the year in debt to his factor. The profits of the factor, though, were sufficiently large to justify him in continuing his credit, and by doing so the average farmer was kept in debt from year to year, though, of course, the better class of farmers gradually worked their way to an improved financial condition. The negroes and the tenant class of whites could borrow money on cotton in the same way, and thus developed a tenant system for raising cotton, which prevented any attention being given to the improvement of the land. Year after year the farmer was forced into cotton-raising to the exclusion of everything else, until it became a common saying that "the South kept its corn-crib and smoke-house in the West." By 1880, although still heavily in debt, southern farmers had commenced to give more attention to the cultivation of grain and to raising early fruits and vegetables. The agricultural progress made by the South since that year has been very remarkable, but, despite the great increase in the production of corn and of foodstuffs, the yield of corn in the central Cotton States per capita does not yet equal the average prior to 1860, while the possibilities of wheat cultivation, shown notably in Virginia, Tennessee, Kentucky, and Texas, have yet hardly begun to be touched.

In the meantime the cotton crop has steadily increased, advancing from 5,456,000 bales in 1881–2 to 11,274,000 bales in 1898–9 — the largest crop ever produced, though the crop of 1900–1 of 10,383,000 bales yielded larger aggregate returns to the farmers, the total value of that crop having been $494,567,000.

According to the table of consumption of cotton in 20 years, it will be noted, the takings of northern mills have increased from 1,573,997 to 1,966,897, while the consumption of southern mills has increased from 221,337 to 1,620,931 bales. In 1880 the consumption at southern mills represented about 12 per cent of the total consumed in the whole country, but in 1900–1 the consumption of southern mills had increased to more than 45 per cent of the total consumed in the country. The actual consumption by northern mills since 1880 has increased very slowly and with many fluctuations, while that by southern mills has steadiiy progressed from 221,000 bales in that year, or less than one seventh as much as at northern mills, to over 1,600,000 bales, as against 1,960,000 bales at northern mills in 1900–1. With this progress in the number of bales consumed has come a tendency of southern mills to turn their attention to the finer goods. Moreover in the last decade the number of spindles in the South increased from 1,500,000 to more than 5,000,000. The South practically controls the trade in cheap goods from this country in China, and with the development of our commerce with that country southern mills may be expected to enjoy even a greater share of the trade than at present, while the campaign for diversification of products of the mills is likely to give the southern mills greater importance than ever and lead to the consumption in this country of a greater proportion of American-grown cotton.

Summing up in tabular form the statistics of the cotton crop since 1840 we have:

COTTON SINCE 1840.

Year	Crop Bales	Cons'mp'tn in U. S. Bales	Exports Bales	Average Price per lb. Middling Uplands in N. Y. Cents
1840–41	1,634,954	267,850	1,313,500	9.50
1841–42	1,683,574	267,850	1,465,500	7.85
1842–43	2,378,875	325,129	2,010,000	7.25
1843–44	2,030,409	346,750	1,629,500	7.73
1844–45	2,394,503	389,000	2,083,700	5.63
1845–46	2,100,537	422,600	1,666,700	7.87
1846–47	1,778,651	428,000	1,241,200	11.21
1847–48	2,439,786	616,044	1,858,000	8.03
1848–49	2,866,938	642,485	2,228,000	7.55
1849–50	2,223,718	613,498	1,590,200	12.34
1850–51	2,454,442	485,614	1,988,710	12.14
1851–52	3,126,310	689,603	2,443,646	9.50
1852–53	3,416,214	803,725	2,528,400	11.02
1853–54	3,074,979	737,236	2,319,148	10.97
1854–55	2,982,634	706,417	2,244,209	10.39
1855–56	3,665,557	777,739	2,954,606	10.30
1856–57	3,093,737	819,936	2,252,657	13.51
1857–58	3,257,339	595,562	2,590,455	12.23
1858–59	4,018,914	927,651	3,021,403	12.08
1859–60	4,861,292	978,043	3,774,173	11.00
1860–61	3,849,469	843,740	3,127,568	13.01
1861–62	War Period	War Period	War Period	31.29
1862–63				67.21
1863–64				101.50
1864–65				83.38
1865–66	2,269,316	666,100	1,554,664	42.30
1866–67	2,097,254	770,030	1,557,054	31.59
1867–68	2,519,554	906,636	1,655,816	24.85
1868–69	2,366,467	926,374	1,465,880	29.01
1869–70	3,122,551	865,160	2,206,480	23.98
1870–71	4,352,317	1,110,196	3,169,009	16.95
1871–72	2,974,351	1,237,330	1,957,314	20.48
1872–73	3,930,508	1,201,127	2,679,986	18.15
1873–74	4,170,388	1,305,943	2,840,981	17.00
1874–75	3,832,991	1,193,005	2,684,708	15.00
1875–76	4,632,313	1,351,870	3,234,244	13.00
1876–77	4,474,069	1,428,013	3,030,835	11.73
1877–78	4,773,865	1,489,022	3,360,254	11.28
1878–79	5,074,155	1,558,329	3,481,004	10.83
1879–80	5,761,252	1,789,978	3,885,003	12.02
1880–81	6,605,750	1,938,937	4,589,346	11.34
1881–82	5,456,048	1,964,535	3,582,622	12.16
1882–83	6,949,756	2,073,096	4,766,597	10.63
1883–84	5,713,200	1,876,683	3,916,581	10.64
1884–85	5,706,165	1,753,125	3,947,972	10.54
1885–86	6,575,691	2,162,544	4,336,203	9.44
1886–87	6,505,087	2,111,532	4,445,302	10.25
1887–88	7,046,833	2,257,247	4,627,502	10.27
1888-89	6,938,290	2,314,091	4,742,347	10.71
1889–90	7,307,281	2,390,959	4,955,931	11.53
1890–91	8,652,597	2,632,023	5,847,191	9.03
1891–92	9,035,379	2,876,846	5,933,437	7.64
1892–93	6,700,365	2,481,015	4,402,890	8.24
1893–94	7,549,817	2,319,688	5,287,887	7.67
1894–95	9,901,251	2,946,677	6,926,025	6.50
1895–96	7,157,346	2,504,972	4,751,384	8.16
1896–97	8,757,964	2,847,351	6,088,521	7.72
1897–98	11,199,994	3,443,581	7,674,065	6.22
1898–99	11,274,840	3,589,494	7,454,000	6.00
1899–00	9,436,416	3,665,412	5,935,499	8.69
1900–01	10,383,422	3,587,828	6,641,281	6.67

A study of the foregoing figures will show that there has been slight increase in price followed by fall in price. In the summer of 1903 the rate went up to 13c. There has also been a steady increase in the cotton crop, with occasional deviations by reason of unfavorable seasons. The average total value of the crop and the average yield per acre since 1875 have been as follows:

COTTON AVERAGES, 1875–1901.

Year	Acres	Total Value of Crop	Net Lb. Per Acre	Bale Per Acre
1875–76.....	11,635,000	$399,445,168	177	0.39⅞
1876–77.....	11,500,000	252,602,340	171½	0.39
1877–78.....	11,825,000	255,768,165	181¾	0.40⅜
1878–79.....	12,240,000	236,586,031	185¼	0.41½
1879–80.....	12,680,000	313,696,452	206¼	0.45½
1880–81.....	16,123,000	356,524,911	188½	0.41
1881–82.....	16,851,000	304,298,744	145⅝	0.32⅜
1882–83.....	16,276,000	327,938,137	200⅝	0.42⅝
1883–84.....	16,780,000	288,803,902	157½	0.34
1884–85.....	17,426,000	297,253,972	150½	0.33
1885–86.....	18,379,444	313,723,080	165½	0.36
1886–87.....	18,581,012	298,504,215	162½	0.35
1887–88.....	18,961,897	336,433,653	173½	0.37
1888–89.....	19,362,073	344,069,801	167⅞	0.35¾
1889–90.....	19,979,040	373,161,831	173¾	0.36½
1890–91.....	20,583,935	429,792,047	200⅜	0.42
1891–92.....	20,555,387	391,424,716	209⅝	0.44
1892–93.....	18,057,924	284,279,066	176	0.37
1893–94.....	19,684,000	294,495,711	182	0.38
1894–95.....	21,454,000	288,918,504	223	0.46
1895–96.....	18,882,000	292,234,437	181	0.38
1896–97.....	22,341,000	327,547,854	187	0.39
1897–98.....	24,071,000	338,432,458	224	0.47
1898–99.....	23,572,000	282,772,987	232	0.48
1899–00.....	22,583,055	363,773,836	210	0.44
1900–01.....	23,805,629	494,567,549	222	0.43

In 26 years, from 1875–6 to 1900–1, cotton brought into the South more than $8,600,000,000. This sum is so vast that the profits out of it ought to have been enough to enrich greatly the whole section. Unfortunately, however, the system given an impetus by the abject poverty following the War, of putting all energies into the single crop and turning to other sections for provisions and grain, left but little surplus money out of the cotton crop for the cotton farmer during the first part of the period mentioned. The West and the North drained the South of several hundred million dollars every year, because it depended upon them for all of its manufactured goods as well as for the bulk of its foodstuffs. During the past 10 or 12 years, however, diversified farming has become more general, and the raising of home supplies, the development of truck farming and the building of factories of many kinds are combining to

SIXTY YEARS OF COTTON MANUFACTURE.

Year	Capital Employed	Number of Spindles	Cotton Consumed Reduced to Bales of 400 Lbs.	Hands Employed	Wages Paid	Value of Products
1830.....	$44,914,941	1,246,503	184,000	62,208	$12,155,723	$32,036,760
1840.....	51,102,350	2,284,631	340,000	72,119	14,000,000	46,350,453
1850.....	74,500,931	3,633,693	721,393	92,286	17,276,112	65,501,687
1860.....	98,585,269	5,035,798	1,056,762	122,028	23,940,108	115,681,774
1870.....	140,706,291	6,621,571	995,770	135,369	39,044,132	177,489,739
1880.....	208,280,346	10,768,516	1,875,859	174,659	42,040,510	192,090,110
1890.....	354,020,843	14,088,103	2,794,864	221,585	69,489,272	267,981,724
1900.....	460,842,772	19,008,352	3,639,495	297,929	85,126,310	332,806,156

keep at home the money which formerly went North and West.

The destruction by the War of the industrial interests which were developing in the South prevented the taking up by that section of manufacturing undertakings until about 1879–80, when there were marked signs of a tendency toward the building of cotton mills in the South. In the North, on the contrary, the cotton-mill business developed very rapidly in the decade following the War. Of late years the chief increase has been in the South. The number of spindles in the whole country at present is estimated at about 21,000,000, and the South has 6,500,000. The progress of cotton manufacturing in the United States by census years since 1830 is shown in the table on preceding page.

The consumption of cotton in northern and southern mills, as reported by the New Orleans Cotton Exchange, has been as follows:

CONSUMPTION OF COTTON IN AMERICAN MILLS IN THE NORTH AND SOUTH.

Crop Years	Northern Mills	Southern Mills
1900–01	1,966,897	1,620,931
1899–00	2,068,300	1,597,112
1898–99	2,190,095	1,399,399
1897–98	2,211,740	1,231,841
1896–97	1,804,680	1,042,671
1895–96	1,600,271	904,701
1894–95	2,083,839	862,838
1893–94	1,601,173	718,515
1892–93	1,687,286	743,348
1891–92	2,190,766	686,080
1890–91	2,027,362	604,661
1889–90	1,799,258	546,894
1888–89	1,785,979	479,781
1887–88	1,804,993	456,090
1886–87	1,710,080	401,452
1880	1,573,997	221,337
1870	806,690	90,000
1860	786,521	178,107
1850	475,702	87,067

The cotton production of the United States, which is now averaging over 10,000,000 bales, or about three fourths of the world's supply, can be indefinitely extended to meet the increasing consumptive requirements of the world. Hon. Charles W. Dabney, late assistant secretary of agriculture, in a careful study of the cotton potentialities of the South, has indicated that this section can, whenever the demand justifies it, produce as much as 50,000,000 bales of cotton without intrenching on the area necessary for diversified agriculture, and that by intensive farming it may some day be possible even to double this. Supplying, as the South now does, about 75 per cent of the world's cotton crop, and thus holding almost a monopoly of this important staple, southern mills, notwithstanding the very rapid growth of recent years, consume only about 15 per cent of the crop. There are about 105,000,000 cotton spindles in the world, of which the United States has about 21,000,000. The consumption of cotton in this country is now about 3,500,000 bales a year, or 35 per cent of the average crop of late years. It has been estimated that the capital invested in the cotton-manufacturing business of the world, which, as stated, depends for at least three fourths of its supply of raw material upon the South, aggregates not less than $2,000,000,000, of which this country has probably about $500,000,000.

There is practically no limit to the possible extension of cotton-growing and cotton-manufacturing in the United States. With the power to increase its cotton crop to 50,000,000 bales, should the world ever demand such a yield, and with every natural advantage for manufacturing, the limit of profitable cotton-mill business in the United States will not be reached until its own mills consume its own production. The increase in the textile industry must naturally centre mainly in the South. Consult: Young, 'The American Cotton Industry' (1903).

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