THE FUTURE DEMAND FOR AMERICAN COTTON.

By J. L. WATKINS,
Cotton Expert, Division of Statistics.

COMPARATIVE USE OF COTTON, WOOL, AND FLAX IN GREAT BRITAIN.

When cotton culture on an extensive scale was first undertaken in this country, wool and flax as a material for clothing were far more popular than cotton, at least in the Western world. For centuries millions of the inhabitants of Oriental countries had been clothed in homespun cotton, and the hand looms of India had woven calicoes and muslins of such beautiful design and exquisite texture as to challenge universal admiration.

But it was not until the planters of the United States began supplying an abundance of raw material, much cheaper than wool or flax, that European nations recognized its merits and its possibilities in textile manufacture. If we go back just a few years beyond the date of the invention of the saw gin (1793), we find that in Great Britain, which then led the world in textile manufactures, wool held the first place in the value of its textile industries, linen the second, and cotton the third. In fact, the value of cotton fabrics and yarns amounted to only about 5 per cent of the whole. Ten years later cotton took the second rank in the value of the textiles exported from Great Britain, but in another ten years it took the lead, and went on steadily gaining ground until it attained the first place, not only in respect of exports, but also in respect of the weight and value of fabrics consumed at home.[1]

A still better illustration of the consumption of cotton, wool, and flax is given by the Textile Recorder, of Manchester, England, in a table showing the relative proportion used in Great Britain. The figures are in millions of pounds, and are the average annual consumption of each fiber in the years named:

Consumption of cotton, wool, and flax in Great Britain.

[In millions of pounds.]

Year.	Cotton.	Wool.	Flax.
1799–1801	41.8	100.6	108.6
1829–1831	243.2	149.2	193.8
1859–1861	1,022.5	260.5	212.0
1869–1871	739.8	312.0	305.3
1879–1881	1,328.4	475.5	248.3
1889–1891	1,604.5	446.6	219.5
1898–1900	1,594.0	496.6	214.7

[1] Ellison's Cotton Trade of Great Britain.

An examination of these figures discloses the fact that a complete revolution has taken place in the consumption of textile fabrics since 1800. More flax was then used than either wool or cotton, but it has now dropped to the third rank, and the amount consumed is barely double that of a hundred years ago. Wool has increased nearly five times, while cotton has increased nearly thirty-nine times, and there is now more than three times as much cotton used as wool, and more than seven times as much as flax.

COMPARATIVE USE OF COTTON, WOOL, AND FLAX IN EUROPE AND IN THE UNITED STATES.

Mulhall[1] says that the factories of Europe and the United States consumed in 1894 nearly four times the weight of fiber used in 1840, the consumption (in tons) of each being as follows:

Cotton, wool, and flax used in factories of Europe and in the United States in 1840 and 1894.

[In tons.]

Year.	Cotton.	Wool.	Flax.	Total.
1840	380,000	340,000	590,000	1,310,000
1894	2,226,000	1,068,000	1,544,000	4,838,000

COMPARISON OF COTTON AND WOOL IN THE WORLD'S COMMERCE.

The figures in the above tables, significant though they are, relate to Great Britain, Europe, and the United States only. As to what is the relative proportion of cotton, wool, and flax consumed the world over, there is no means of knowing, because there are no such statistics available. But we do know approximately the quantity of each fiber that enters into the commerce of the world. As flax is practically out of the race as a successful competitor of cotton and wool, the next question of interest is, How does the competition stand between the latter two fibers? This is best illustrated by showing the total world's supply of each. But in presenting these figures it should be understood that they do not represent the world's production of either cotton or wool, but the supply that enters into the world's commerce. Nor is it necessary to go beyond the year 1870, for it was about that time that cotton production in the United States began to assume something like the importance it held prior to the civil war. The table on the next page gives the figures in decennial years, in thousands of pounds.

[1] Wealth of Nations.

Cotton and wool in the world's commerce in decennial years.

[In thousands of pounds.]

Year.	Cotton.	Wool.
1870	2,483,600	1,295,000
1880	3,605,200	1,626,000
1890	5,228,000	2,456,774
1900	6,796,500	2,685,105

It will be seen that from 1870 to 1880 the commercial supply of cotton increased 45 per cent, while that of wool increased 26 per cent. In the next decade there was a gain of 45 per cent in cotton and 51 per cent in wool. In the last decade, from 1890 to 1900, the gain in cotton was 30 per cent and that in wool only 9 per cent. Taking the entire period of thirty years, from 1870 to 1900, the increase in the supply of cotton was 174 per cent and in that of wool 107 per cent.

FACTORS IN THE INCREASE OF PRODUCTION AND CONSUMPTION OF COTTON.

Having shown the relative position held by the three leading fibers that supply the world with raw material for its clothing, and having noticed the extraordinary expansion in the production and consumption of cotton, the questions naturally occur: To what is it due? Is cotton taking the place of wool and flax and other fibers?

COTTON AS A COMPETITOR OF LINEN.

At the annual meeting of the Belfast Linen Merchants' Association, held at Belfast in 1900 (Belfast is the center of the great linen industry of Great Britain), the president of the association said that he found on looking up the returns of the imports into Belfast that in the year 1880 the imports of cotton yarns amounted to 1,426 tons, and in the year 1899 the amount was 6,271 tons; that if flax spinners would only realize that every pound of cotton meant a corresponding decrease in flax cultivation, it would be more forcibly brought home to them that the efforts which the association had made to secure protection against adulteration of their products were more vital to their interests than anything else. This is a virtual admission that the 6,271 tons of cotton yarns imported into Belfast were used for "adulteration," or mixing with linen, and hence displaced linen yarns to that extent.

The "Decline and fall of the linen shirt" is the very significant title of an editorial that recently appeared in the Irish Textile Journal, a publication devoted to the British linen trade. There was once a time, it says, that the people of Brittany were found to have a linen standard by which the different grades of society could be recognized at sight, and a well-filled linen chest was reckoned as a leading item in family

wealth. But the decay of the linen trade has been rapid enough to be within the remembrance of those still engaged in the business, and leading shirt makers could furnish a deplorable list of influential people who have, to their knowledge, given up buying full linen shirts. According to this authority, the Rothschilds used to order, on occasion, a supply at prices up to 30 shillings a shirt, whereas those now required for the Duke of York, and other royalties, are turned out at Belfast with only fronts and cuffs of linen, the bodies of cotton. This advocate of the linen trade has no fault to find with cotton, "as cotton," but pities the manufacturer for allowing linen to slip off the backs of men without some effort to keep it in its former place.

COTTON AS A COMPETITOR OF WOOL.

In regard to the wool industry, the condition of affairs seems to be even worse than with that of linen. In fact, the situation has become so acute that the wool growers have taken a hand in the struggle, and an organization has been perfected for the purpose of appealing to Congress to enact legislation compelling the manufacturer to brand his goods so as to distinguish cotton-mixed fabrics from all-wool fabrics. Of course, all industries have their periods of depression, the cotton industry as well as others, but that of wool seems to have been undergoing a prolonged depression such as has not affected other branches of trade. This depression is not confined to this country, but extends to Great Britain and the manufacturing districts of France and Germany as well.

In Great Britain many firms have gone out of business, and in France some have changed their machinery to that for the manufacture of cotton.

Various reasons are assigned for this unfortunate state of affairs, such as overproduction, high prices of raw materials, etc., but all authorities agree that one of the principal causes is the competition of cotton. "The use of cotton goods as a substitute for woolens," says the Bulletin of the National Association of Wool Manufacturers (December, 1900), "has been increasing of late years. The advance which the cotton manufacturer has made in the direction of imitating various makes of woolens has been very great in ten years. So also has been the use of cotton in connection with wool. Even with cotton at 10 cents a pound the difference between its cost and that of wool at 50 cents a pound is so great in these days as to encourage the use of more or less cotton in fabrics which will not command prices which allow a fair return provided the material used were all wool." "The extension of woolen mills can not be advanced as a cause of the depression in the woolen and worsted industry," says the Textile World (April, 1901), "for there has been no increase in machinery such as we have seen in the cotton industry; the growth of our woolen and worsted mills has

not kept pace with the growth of the country's population."[1] One of the causes of the trouble, according to this journal, is the increased use of cotton where formerly wool was the material required, the advance in the arts of coloring and designing cotton fabrics having made this substitution of cotton possible.

COTTON AS A COMPETITOR OF SILK.

Nor has cotton spared its opulent and disdainful rival, silk. For a long time it has been known that silk manufacturers have used cotton for mixing with certain kinds of satin and other silk fabrics, but we are now told by a correspondent of the American Cotton and Wool Reporter (October 24, 1901) that it has become a notorious fact that some of the foreign-made silks are heavily weighted and so mixed with mercerized cotton that it is difficult sometimes to find the silk. Not only is cotton being extensively mixed with silk, but fabrics made from mercerized cotton yarns have entered the markets in competition with a certain class of silk goods. "The manufacture of mercerized cotton fabrics," says the Irish Textile Journal (March, 1900), "has, during the past two years, reached such proportions that these goods have taken apparently a permanent position among the textile standards, and it is reasonable to presume that the position they occupy will be held for many years, or until some other fiber modification will have been discovered that will come closer to silk.[2] At the time mercerized threads were noticed," continues this journal, "the general opinion was that the new article would find only limited application among a few unimportant classes of goods, but as the properties became better known other openings were found, so that to-day there is hardly a fabric where silk is employed but that mercerized cotton can, to a certain extent, displace it—from draperies and hangings, linings, etc., to neckwear and hosiery."

SOURCES OF SUPPLY OTHER THAN THE UNITED STATES.

So much for the competition of cotton with its three rival fibers, wool, linen, and silk, and the great revolution that has been wrought in the textile industries. And for this revolution, resulting in such a great reduction in the price of clothing, the world is, as we shall presently see, largely indebted to the cotton planters of the United

[1] The per capita consumption of raw wool in the United States in 1870 was 5.43 pounds, and in 1900, 5.72 pounds, an increase of less than 6 per cent. The per capita consumption of raw cotton in 1870 was 12.82 pounds, and in 1900, 22.57 pounds, an increase of 76 per cent. (Statistical Abstract of the United States.)

[2] The announcement is very recently made that a German chemist has invented a method of making an artificial silk from raw cotton which, it is said, far exceeds the ordinary mercerized cotton. The product, which is manufactured near Aix la Chapelle, is reported to be brilliant in color and finish, of considerable textile strength, and sells for about 60 per cent of the value of real silk. (American Wool and Cotton Reporter, November 7, 1901.)

States. We do not forget the world's indebtedness to that splendid galaxy of English inventors, Hargreaves, Arkwright, Crompton, Cartwright, Watt, and Roberts, and to our own Eli Whitney; nor do we overlook the ceaseless enterprise of British spinners and the indomitable push of British merchants. But while they invented wonderful labor-saving machines, wove their cotton into the best and cheapest of fabrics, and sent them into the remotest markets of the earth, the Southern planter was felling the forests of Alabama, Mississippi, Arkansas, and Texas, opening up new plantations on river side and prairie, and sending to market ever-increasing supplies of the fleecy staple. Nor has there ever been a time, excepting the four years of the civil war, that they did not keep the spinners of the world abundantly supplied with the very best raw material, and at reasonable prices.

COTTON SUPPLY FROM WEST INDIES AND BRAZIL.

About the time of the invention of the saw gin (1793) European spinners obtained their supplies of raw cotton from the West Indies, Turkey (Smyrna), and Brazil.[1] But the chief source of supply was the West Indies, those islands furnishing about 71 per cent, Turkey 20 per cent, and Brazil about 8 per cent. However, the supply from the West Indies began to diminish almost from the date that American cotton assumed importance in the Liverpool market, and by 1816–1820 the contribution from this source amounted to less than 7 per cent of the total supply. After 1836–1840 the supply from the West Indies became insignificant, and has remained so up to the present time, not even the high prices of the civil war stimulating production to any appreciable extent.

The supplies from Brazil gained ground until 1826–1830, but during the subsequent thirty years fell behind, and in 1856–1860 averaged only about the same as in 1816–1820. The civil war increased the crop considerably, but the increase was lost on the return of a lower range of values in 1876–1880.[2] In 1893 the exports from Brazil amounted to 165,000 bales, and in 1900 to only 108,000. During other recent years the exports have been very much smaller (see Table A, p. 200). This is perhaps largely due to the fact that the domestic consumption is increasing, as cotton manufacturing has made considerable progress in that country in recent years.

COTTON SUPPLY FROM EAST INDIES.

As to the contribution of the East Indies to the world's supply of cotton, a country that for a long time was considered a dangerous rival of the United States, Mr. Thomas Ellison, an eminent statistician

[1] It is a somewhat noteworthy coincidence that about this time, or a little prior thereto, cotton in small quantities began to come into the Liverpool market from the United States and the East Indies.

[2] Ellison's Cotton Trade of Great Britain.

of Liverpool, tells us that up to the time of our civil war it was the current opinion, both in England and in India, that the cotton crop of that country was equal to some 5,000,000 to 6,000,000 bales of American weight; some authorities, indeed, went so far as to estimate the yield at 10,000,000 bales. But the fact that the extraordinarily high prices current during the civil war failed to raise the import into Europe to more than 1,374,000 bales against 949,000 in 1861, was a proof that the crop could never at any time have reached one-half of the smallest previous estimates. Mr. Ellison doubted (this was in 1886) whether the crop ever exceeded 2,500,000 bales. The records show that Mr. Ellison was very nearly correct, for, so far as known, the crops of that country, as indicated by the exports and domestic mill consumption, have rarely ever exceeded 3,000,000 bales of 400 pounds, and the average annual crops are far below these figures. Among the noteworthy changes that have taken place in the cotton trade of the East is the decline of the exports of raw cotton from the East Indies. In 1871–1872 the exports to Europe amounted to over 2,000,000 bales of 400 pounds, in 1889–1890 to 1,510,000 bales of 500 pounds (see Table A, p. 200), and in 1900–1901 to only 848,000 bales of 400 pounds. It is a quite noticeable fact that in recent years Italy, Belgium, Austria-Hungary, France, and the United Kingdom have each been taking less and less East Indian cotton. The falling off of imports into the United Kingdom is remarkable. Not very many years ago English spinners consumed over a half million bales,[1] but now the consumption is almost insignificant (see Table C, p. 206). And every pound of East Indian cotton displaced means its replacement by a pound of American cotton of better quality.

To what extent the decline in the exports of cotton from India to Europe is due to the increase in domestic consumption and to exports to Japan (which country has of late largely increased its purchases of Indian cotton), and to what extent it is due to the cheapness and superiority of American cotton, is an interesting subject for investigation. It can only be partially due to increased home consumption, because in some years there have been ample surplus stocks for export. The director-general of statistics to the government of India, in the Review of the Trade of India, a few years ago, attributed this decline to the fall in the price of American cotton caused by unusually large crops, and this explanation seems undoubtedly correct.

COTTON SUPPLY FROM EGYPT.

The cotton supply from Egypt has gradually increased from the date of its introduction in Lower Egypt in 1820, but the great development of cotton culture in that country began with the cotton famine of 1861–1865. In 1860 the Government reduced the export duty from

[1] In 1883 the amount consumed was 404,000 bales and in 1876, 502,000.

10 to 1 per cent, and this also stimulated the culture, and the annual average export for the decade 1861–1870 was 310,000 bales of 400 pounds. Unlike other cotton-growing countries, Egypt did not reduce its production upon the resumption of shipments from America after the civil war, but has steadily increased its output, as shown in Bulletin No. 33, Office of Experiment Stations, U. S. Dept. Agr., "The cotton plant." The exports have increased from 265,000 bales in 1870 to 1,132,000 bales of 500 pounds in 1900. (See Table A.)

But the Egyptian cotton can hardly be considered a rival of the upland staple of America. It is more like our sea-island cotton, although not as fine, and is used for fabrics requiring a smooth finish and silky luster. Moreover, most of it is of a light brownish hue, and among spinners is considered a specialty. Perhaps the best evidence of this lies in the fact that our own spinners annually import large quantities of Egyptian cotton. The imports in 1900–1901 amounted to 69,471 bales of 500 pounds.

UNITED STATES LEADING COUNTRY IN PRODUCTION AND CONSUMPTION.

The extraordinary expansion that has taken place in the cotton industry within the past twenty-five or thirty years, and even within the past ten or twelve years, is well illustrated in the tables, A and B:

A.—*The world's commercial cotton crop, 1860–1901.*

[In thousands of bales of 500 pounds.]

Commercial year.	Crop of the United States.[a]	Imports into Europe from all countries, excepting United States.						Total crop.	Proportion.	
		Brazil.	Egypt.	Turkey, etc.	Peru, West Indies, etc.	East Indies.	Total.		United States.	All other countries.
1860	3,849	38	108	17	18	442	623	4,472	86	14
1865	[b]522	120	439	191	67	1,053	1,870	2,392	22	78
1870	3,122	174	303	109	63	845	1,494	4,616	68	32
1875	3,832	173	442	70	55	1,136	1,876	5,708	67	33
1880	5,761	63	467	19	26	859	1,434	7,195	80	20
1885	5,706	79	646	52	23	755	1,555	7,261	79	21
1890	7,311	94	631	24	34	1,510	2,293	9,604	76	24
1895	9,901	38	982	36	22	660	1,738	11,639	85	15
1896	7,161	34	974	33	25	853	1,919	9,080	79	21
1897	8,533	48	1,106	26	26	642	1,848	10,381	82	18
1898	10,898	39	1,125	2	36	543	1,745	12,643	86	14
1899	11,189	23	1,243	18	30	607	1,921	13,110	85	15
1900	9,143	108	1,022	49	27	242	1,448	10,591	86	14
1901	10,486	31	1,224	30	23	695	2,003	12,489	84	16

[a] Commercial bales.

[b] Imports into Europe; all other figures for the United States are the actual crops.

B.—*The world's consumption of cotton, 1860–1900.*

[In thousands of bales of 500 pounds.]

Year.	Great Britain.	Continent of Europe.	United States.	India.	All other countries.	Total.
1860	2,091	1,379	807	52	No data.	4,329
1870	2,411	1,570	892	94	No data.	4,967
1875	2,540	1,922	1,155	157	No data.	5,774
1880	2,858	2,365	1,694	297	No data.	7,214
1885	2,903	2,772	1,822	504	No data.	8,001
1890	3,384	3,631	2,367	924	150	10,456
1891	3,181	3,640	2,576	914	160	10,471
1892	2,866	3,692	2,551	918	220	10,247
1893	3,233	3,848	2,264	959	250	10,554
1894	3,250	4,030	2,743	1,074	300	11,397
1895	3,276	4,160	2,572	1,105	419	11,532
1896	3,224	4,368	2,738	1,004	546	11,880
1897	3,432	4,628	2,962	1,141	726	12,889
1898	3,519	4,784	3,553	1,314	845	14,015
1899	3,334	4,576	3,856	1,140	867	13,773
1900	3,269	4,576	3,727	1,254	778	13,604

Since 1870 the increased consumption on the Continent, in the United States, and in India has been enormous. It has also been very large in Great Britain, though much less than in the United States and Germany. Indeed, the United States is now the largest cotton-consuming country in the world, having in 1898 taken the lead from Great Britain, which had held the supremacy in the cotton industry for over a century. (See Table B.) Undoubtedly this expansion could never have taken place (outside of India) except for the continually increasing crops of the Southern States. We are supplying the world with more than 85 per cent of the cotton it manufactures into clothing (see Table A), and Mr. Ellison declared some years ago, when our crops were very much smaller than now, that the cotton crops of the United States provide the raw material for more than half the calico used by the entire human race, from which he inferred that there was a great deal more nakedness in the world prior to the development of the cotton industry in the South than there is at the present time. Mr. Wu Ting-fang, the Chinese minister to this country, in a recent interview stated that until within the past few years his people made all the material for their own shirts, but owing to the cleverness of American manufacturers, China was being supplied with shirt stuffs superior to its own. Consequently, these goods have crowded out those of China, and not only do the well-to-do, but the poor also, wear American shirtings, and no matter how far you travel into the interior, you will see natives, who never laid eyes on a foreigner, clad in shirting from the United States.

In further illustration of the demand for American cotton, the following figures are presented with the view of showing the comparative

consumption in each foreign country in 1870 and 1900. The figures are in uniform bales of 500 pounds each:

Exports of cotton from the United States in 1870 and 1900.

[In bales of 500 pounds.]

Exports to—	1870.	1900.
Austria-Hungary (for 1871)	4,330	44,919
Belgium	3,452	148,319
Denmark (for 1869)	212	31,990
France	306,293	736,092
Germany	173,552	1,619,173
Italy	14,549	443,951
Netherlands	17,050	74,635
Portugal (for 1871)	346	18,472
Russia	30,341	54,950
Spain	55,409	246,619
Norway and Sweden	13,774	14,773
United Kingdom	1,298,332	2,302,090
All other Europe	1,620	400
Total Europe	1,919,260	5,736,376
British North America	3,122	109,983
Mexico	13,219	18,522
South America	177	219
Japan		323,202
All other countries (for 1871)	1,263	12,826
Total	1,937,041	6,201,128

It will be observed that without a single exception every foreign country has increased its consumption of American cotton, and some of them to astonishing proportions. This is true particularly of Germany, Italy, France, Belgium, and Spain. The percentage of increase has not been so great in the United Kingdom, but within the thirty years it amounts to 77 per cent, and, considering the magnitude of its spinning industries, this is gratifying enough. But the most astonishing development of our trade in raw cotton has taken place in the Far East. In 1870 we did not ship a pound of cotton to that part of the world, but since then cotton manufacturing has made such progress in Japan that in 1900 her spinners took 323,202 bales of American cotton. East India and China are also beginning to appreciate the merits of our cotton, and within the past four years shipments have been made to both of these countries.

Much has been said about the increase in the culture of cotton in Asiatic Russia and the consequent falling off in the exports of American cotton to that country; and it is true that we formerly exported directly to Russian ports some 300,000 bales per annum. But in spite of the fact that in July, 1900, the Russian Government raised the import

duty on raw cotton to $28.87 per bale of 500 pounds, or almost the value of the cotton, we still furnish that country with about half the cotton used in her mills. The exports, as shown by the United States Treasury Department, do not indicate this, for the reason that Russian spinners for some cause or other prefer to buy their supplies of American cotton from Liverpool brokers. Besides the shipments from Liverpool by water,[1] Government statistics[2] show that in 1900 there were imported into the Empire by overland routes, via Alexandrova, Sosnovice, Wirballen, Mlavo, and Graievo, 109,615 bales of cotton of 500 pounds, nearly, if not quite, all of which was grown in the United States.

THE INCREASE IN THE WORLD'S CONSUMPTION OF COTTON.

The consumption of cotton has increased so greatly within the past quarter of a century that there would appear to be no limit to its future possibilities. It is estimated that of the world's population of 1,500,000,000, about 500,000,000 regularly wear clothes, about 750,000,000 are partially clothed, and 250,000,000 habitually go almost naked, and that to clothe the entire population of the world would require 42,000,000 bales of 500 pounds each.[3] It therefore seems more than likely that the cotton industry will go on expanding until the whole of the inhabited earth is clothed with the products of its looms. This is not an unreasonable conclusion when we consider the fact that cotton is the cheapest material for clothing known to man. In the meantime it may come to pass that the world's area suitable for cotton culture may have to be seriously reckoned with, just as was the case during the civil war.

EFFORT TO DISCOVER NEW SOURCES OF COTTON SUPPLY.

We are told by Mr. Ellison that for some years prior to the outbreak of the civil war it had been foreseen that sooner or later a serious labor disturbance at the South was inevitable, and in view of the calamity which such an event would bring upon English spinners, every effort was made to discover new sources of cotton supply. But although the powerful association formed for the promotion of this end searched every nook and corner of the cotton zone, and sent seed to every one in the four continents willing to make experiments, they entirely failed to accomplish the object they had in view. The high prices caused by the "famine" brought increased supplies from Brazil, Turkey, India, and China, but with the return of ante-war values the

[1] In 1900 the exports from Great Britain to Russia amounted to 200,410 bales of 500 pounds, most of which was American.

[2] Commerce and Navigation of the Russian Empire.

[3] Report of the Industrial Commission, Vol. VI.

imports into Europe fell back almost to the level at which they stood in 1860–1861,[1] and with the exception of Egypt there has been no substantial increase in the supplies from any country since 1865; hence European spinners are to-day more than ever dependent upon the planters of the United States.

COMPETITORS OF THE UNITED STATES IN COTTON PRODUCTION.

But when the requirements of the world reach from 35,000,000 to 40,000,000 bales, will the Southern States be equal to the emergency, as they were after the civil war? Will they continue meanwhile to retain supremacy in cotton production? We have every reason to believe that they will. Their most dangerous rivals are India, Russia, Brazil, and Egypt.

INDIA.—India has already been put to the test, and, besides, her own mills are now taking a large and increasing proportion of her crops.[2]

RUSSIA.—Russia is making rapid progress in cotton production in her trans-Caspian provinces, but considerably more than half her mill consumption is still of foreign growth, and it will be a long time before she can become entirely independent of a foreign supply. As for any surplus being marketed from that region, the possibility is too remote to be considered.

BRAZIL.—Cotton culture in Brazil could be greatly extended but for the lack of sufficient labor; moreover, her planters find more profit in coffee culture.

EGYPT.—It is estimated that when the irrigation works now under construction on the Lower Nile are completed a little more than 1,000,000 acres will be reclaimed and brought under cultivation, most of which will be devoted to cotton. This will increase the crop to about 2,000,000 bales of 500 pounds. Even should the entire available area in Upper and Lower Egypt[3] be devoted to cotton, at the present rate of production the crop could not exceed 3,750,000 to 4,000,000 bales of 500 pounds. This is the limit of production in Egypt. Under ordinary conditions (for necessarily a large area must always be planted in grain and other food crops), and after the irrigation works are completed and put in operation, Egypt can not supply the world with more than about 2,000,000 bales of 500 pounds.

AFRICA.—Africa is an inviting field for the growth of cotton, and experiments are being made by the French and Germans in the Soudan,

[1] Cotton Trade of Great Britain.

[2] The average annual consumption is about 1,500,000 bales, or fully one-half the crop.

[3] Estimated, including lands to be reclaimed, at 5,750,000 acres, which is about 1,000,000 acres less than is usually devoted to cotton in Texas.

but on a very small scale, and the English are endeavoring to introduce it in Sierra Leone. But whatever may be the possibilities of growing cotton in this part of the world, it is yet an unsettled wilderness, and it will be many years, perhaps a century or more, before any substantial progress can be made toward the production of cotton on a large scale.

SUPREMACY OF THE UNITED STATES IN FUTURE COTTON PRODUCTION.

Where, then, are the spinners of the world to look for an increase in the supply of raw cotton?

In a letter of recent date, in answer to the inquiry, What are the possibilities of cotton culture in Texas? Governor Sayers says:

> I have to express the opinion that not exceeding one-third, if so much, of the strictly cotton area of Texas is now under cultivation, and that if the assurance could be given that for ten years in succession the price of cotton at the gin would average 8 cents per pound the annual product of the State would within that time reach fully 10,000,000 bales. This is not an exaggerated statement, nor is it based upon the cultivation of cotton exclusively in such area, proper allowance being made for the diversification of crops.

Oklahoma and the Indian Territory are each much larger in area than South Carolina,[1] and this State in 1897 and 1898 produced over 1,000,000 bales of cotton. Under favorable conditions, therefore, these Territories could safely be counted on to supply 2,500,000 bales.

The Atlantic States—Virginia, the Carolinas, Georgia, and Florida—could increase their yield by 1,000,000 bales, and the Gulf States, exclusive of Texas and including Arkansas, Tennessee, and Missouri, could swell their production 1,500,000 bales.

In addition to the above, there are large areas suitable for cotton culture in southern California, Arizona, Nevada, Utah, Kansas, and Kentucky. So that, if the time should come when the spinners of the world require, say, 40,000,000 bales, the United States should be able to supply 25,000,000, or over 60 per cent of the whole, provided, always, that there was a sufficiency of labor and that other conditions were favorable.

We are therefore led to the conclusion that for many years to come the Southern States will continue to hold the supremacy as the producers of the best and cheapest clothing material in the world.

SOURCES OF COTTON RECEIPTS AND PROGRESS OF COTTON CONSUMPTION.

The tables following are introduced to show the sources of receipts of cotton at Liverpool, the greatest cotton market of the world, and

[1] The land surface area of Oklahoma is 38,830 square miles, that of Indian Territory 31,000, and that of South Carolina 30,170.

the progress of cotton consumption since 1790, or about the time of the invention of the cotton gin:

C.—*Imports of raw cotton into Great Britain from various countries.*

[In thousands of pounds.]

Countries.	1870.	1875.	1880.	1885.	1890.	1895.	1900.
United States	716,249	841,333	1,224,282	1,050,546	1,316,757	1,394,797	1,365,299
Egypt	143,710	163,912	152,607	177,516	181,266	284,856	312,449
East Indies	341,537	385,686	207,061	145,130	238,747	51,721	36,832
Brazil	64,235	71,860	24,190	36,070	27,935	13,903	30,292
Peru			4,995	4,061	7,911	8,288	8,031
Chile			643	1,560	1,166	376	[a]1,707
Turkey, in Europe and Asia	[b]11,511	[b]5,836	560	1,915	1,096	716	1,134
Venezuela and Colombia	[c]4,767	[c]4,196	6,615	1,204	317	71	669
British West Indies[d]	2,314	663	686	334	578	467	436
Australasia			494	389	115	137	38
All other countries	55,045	18,866	6,532	7,091	17,608	1,711	3,320
Total	1,339,368	1,492,352	1,628,665	1,425,816	1,793,496	1,757,043	1,760,207

[a] Including the Pacific coast of Patagonia.
[b] Mediterranean, exclusive of Egypt.
[c] Venezuela and Granada.
[d] And British Guiana.

D.—*Consumption of cotton in Great Britain, Continent of Europe, and the United States, 1790–1900.*

[In thousands of bales of 500 pounds each.]

Year.	Proportion.				Per cent.			
	Great Britain.	Continent.	United States.	Total.	Great Britain.	Continent.	United States.	Total.
1790	56	60	4	120	46.6	50.0	3.4	100
1800	100	80	32	212	47.2	37.7	15.1	100
1810	196	100	40	336	58.3	29.8	11.9	100
1820	258	152	64	474	54.4	32.1	13.5	100
1830	495	275	147	917	54.0	30.0	16.0	100
1840	917	506	272	1,695	54.2	29.8	16.0	100
1850	1,176	801	614	2,591	45.4	30.9	23.7	100
1860	2,091	1,379	807	4,277	48.9	32.2	18.9	100
1870	2,411	1,570	892	4,873	49.5	32.2	18.3	100
1880	2,858	2,365	1,694	6,917	41.3	34.2	24.5	100
1890	3,384	3,631	2,367	9,382	36.1	38.7	25.2	100
1900	3,269	4,576	3,727	11,572	28.3	39.5	32.2	100