

L = 2nd Prize

B++

Actually contains more information than No. 1, but he has not digested it so satisfactorily.

Note. This seems to be the only essay which has attempted to deal with "future possibilities" in any detail.

1934

1934

Part II

Future prospects - geographical possibilities of future expansion - slump of 1930 a dependable test - Russell Smith on production near Northern limits - importance of cheap labour - Empire fields compared - African handicaps - Uganda and Northern Nigeria - irrigation, its economic importance - extension of cultivable area - spread of irrigation in Egypt, India, Sudan - limitations - irrigation and population - prospects of successful extension in India and the Sudan - conclusion.

F.L.M. Dawson, [REDACTED]

London, N.W.7.

Attending Mill Hill School.

---

"Discuss the past and present production of cotton in the British Empire, and indicate the geographical possibilities of future expansion."

---

SUMMARY.

Part 1

Cotton, ideal material for clothing - an expensive fabric before the nineteenth century - period of mechanical invention - British inventions create demand for raw material - complementary American invention of saw-gin completes revolution in textile industry - early Empire sources of supply - their insufficiency - rise of U.S.A. as a cotton producer - U.S.A. establishes practical monopoly - effect of American Civil War on other producers - rise of Egypt and India as exporters - disadvantages of a single source of supply - formation of British Cotton Growing Association, 1902 - growth of Empire supplies to 1914 - the Great War and boom of 1920 - formation of Empire Cotton Growing Corporation, 1920 - period of steady expansion, 1920 - 1927 - slump of 1930 - recovery in sight.

Part 11

Future prospects - geographical possibilities of future expansion - slump of 1930 a dependable test - Russell Smith on production near Northern limits - importance of cheap labour - Empire fields compared - African handicaps - Uganda and Northern Nigeria - irrigation, its economic importance - extension of cultivable area - spread of irrigation in Egypt, India, Sudan - limitations - irrigation and population - prospects of successful extension in India and the Sudan - conclusion.

444



Part 1

The past and present production of cotton in the British Empire.

Cotton an expensive fabric before the nineteenth century.

Cotton, as a material for clothing, in the West, has superseded linen and leather, and is now more extensively used than all other fibres, including wool. It is the universal clothing of the Asiatic and African races. Its versatility has enabled it to be successfully substituted as a material for articles in which hitherto, wool and linen, and even silk, have been exclusively used. It is now the cheapest of all cloths. The reason is that the natural characters and method of occurrence of the raw material peculiarly fit it for manufacture by machinery, while they render its preparation by hand-labour troublesome and often unprofitable. It is easy, therefore, to appreciate the fact that before machinery was used for textile manufacture - that is, before the Industrial Revolution - cotton was one of the most expensive of all fabrics. It is indeed possible that the weaving of this fibre might have been discontinued as unprofitable, but for the fact that it possessed qualities so well adapted to purposes of clothing that the rich were willing to give for it, prices that rendered its manufacture by hand profitable. These excellent qualities have now been brought within the reach of the poorest by the invention of textile machinery.

The Period of Mechanical Invention.

The first textile machines were invented in the latter half of the eighteenth century, between 1761, when Kay put the Flying Shuttle on the market, and 1793, the year of the construction of the first sawgin by Eli Whitney. The first power-loom, operated by a bull, was at work in Cartwright's

parsonage by 1785, and steam was applied to it later in the same year.

But speed in manufacture was not viewed as an unmixed blessing, for it created unemployment, and was of little practical use, if the raw material was lacking wherewith to feed the spinning-jennies<sup>100</sup> and the looms. The introduction of machinery for ginning cotton in 1793 and onwards, by cheapening the cost of production of the raw material, completed the cycle of inventions which brought about the revolution in the textile industry, a revolution at once rapid and successful.

#### Early Empire Sources of Cotton Supply.

During the period of mechanical invention, America was permanently lost to the British Isles, but at the beginning of the period, by the treaty of Paris, the Empire had greatly extended its possessions in the West Indies, and had established a firm footing in the sub-continent of India, where the natives had cultivated cotton<sup>100</sup> for their own use from very early times. It is therefore not surprising, that before 1793, Great Britain considered that her supply of cotton from these and other sources - Brazil supplied her regularly with a large quantity - was assured and sufficient.

In the period 1786-90, Britain imported about 25,000,000 lbs. of raw cotton, and obtained her supplies in the proportion of about 71% from the West Indies, 20% from Mediterranean lands, 8% from Brazil, and less than 1% from the U.S.A. and India. The export from the U.S.A. was only 275 bales in 1792: so far was it from being anticipated<sup>100</sup> that America would become an extensive producer, that a treaty negotiated with the U.S.A. in 1792, contained a clause prohibiting the export of American cotton to the United Kingdom. The American ambassador who accepted this clause, doubtless expressed a belief common to both

442

713



countries that the U.S.A. could produce only small quantities of cotton, of negligible commercial significance. The Senate, however, more farseeing, struck out the clause. It is a curious reflection on this diplomatic episode, that almost immediately afterwards, Great Britain became heavily dependent on the U.S.A. for cotton supplies, and has never ceased to be dependent upon her, even to the present time. <sup>100</sup>  
American Monopoly of the Supply.

In the period above referred to, Guiana contributed a little to the supply, but Egypt, (not then in the Empire) nothing at all. A hundred years later, in the period 1886-88, the import of raw cotton to Great Britain increased seventyfold and totalled 1,750,000,000, pounds. The U.S.A. contributed 73% of this quantity, while the proportion of supplies from Empire countries had become almost negligible. It was made up as follows: East Indies 12%, Egypt 9½%. Brazil supplied the remainder.

The new sawgin, combined with the abundance of cheap slave labour, a suitable climate, <sup>100</sup> a vast cultivable area, and a productive soil, gave the U.S.A. a predominance which has not only remained unchallenged, but is so overwhelming, that it has, in practice, enabled the U.S.A. to control, to a considerable extent, the cotton production of the world.  
The Effects of the American Civil War, 1861-5.

The American monopoly might have been even more complete, but for the effect on other producers of the American Civil War, when, as the result of a severe cotton famine, Lancashire was reduced to great straits and the danger of a single source of supply terribly exemplified. The stimulus imparted by the cutting-off of U.S.A. supplies during this war, <sup>100</sup> is reflected in the statistics of production of India and Egypt. In 1859, the cotton production of India was 1,300,000 bales; at the beginning of the twentieth century

it exceeded 3,000,000 bales. In Egypt, from 87,000 bales in 1850, production rose to well over the million bales in 1904. About the beginning of the twentieth century the commercial cotton crop of the world was estimated at sixteen million bales, and the proportions were as follows: U.S.A. 68.75%, India 18.75%, Egypt 6.25%, all other countries 6.25%. In sharp contrast to these figures are the United Kingdom import figures for 1913. The U.S.A. contribution and that of Brazil were 73% and 3% respectively, while Egypt contributed 19% and India only  $2\frac{1}{2}\%$ .

While India had achieved pride of place as the largest old-world producer, its products were not suited to the requirements of the British manufacturer. The staple was short and the cotton exported was badly ginned and much adulterated. Methods of cultivation were primitive, and the yield per acre low.

The rise of Egypt is a notable event at this period. Egypt produced no cotton for export until 1823, from which date she gradually increased her output. Under intelligent French guidance and by means of irrigation, there was developed what is admittedly <sup>now become</sup> the finest cotton field in the world. In contrast with India, the cultivation was scientific, the yield per acre the highest in the world, and the quality the finest.

#### Formation of the British Cotton Growing Association.

But our ~~title~~ to Egypt was not very clear, and the production in the West Indies had suffered serious decline as a result of competition with sugar. The other Empire countries were undeveloped and produced very small quantities. In these circumstances, grave anxiety was felt in Lancashire about future supplies. The danger of a single source had been emphasised from time to time ever since 1865, and for various reasons not less important than those which first

and  
British

1917

744D



made this question prominent. In 1902, the British Cotton Growing Association was formed. Its influence steadily increased. In 1903-4, as a result of a corner in cotton, ~~its importance~~ to the industry and country was fully realised. Its capital was increased in the latter year to £500,000, and on the 27th August, 1904, the Association received a Royal Charter. From that date began a new era for cotton growing throughout the Empire.

Cotton Production in the Empire up to 1914.

The organising activities of the Association, together with those of the Imperial Department of Agriculture had far-reaching effects and produced results which are best followed in the statistics: the gross production in India increased from 4,000,000 bales in 1904-5 to well over 6,000,000 in 1913-14. The quality for export had greatly improved and a larger quantity of longer staple cotton was produced. In the same period the gross production in Egypt had risen from 850,000 to 970,000 bales.

In the West Indies, a fall in the price of sugar greatly helped the revival of cotton growing, and in 1905-6 as much as 3,000 bales were exported, mainly of the finest sea-island fibre. In Africa, where numerous territories were assigned to Britain in the treaties of 1890-1, some development had taken place. The exports rose, in West Africa, from 3,000 bales in 1904 to 6,000 in 1906, mostly from Nigeria. In 1904, Uganda exported 43 and British East Africa 177 bales of cotton, and 570 bales were produced in Nyasaland. In 1906, the Sudan had 20,000 acres under cotton, mostly raingrown. The great future before this country for cotton growing had not then been anticipated, even by Lord Cromer.

Many difficulties retarded progress in these countries; the chief of these were transport and labour, but development

from this period was rapid, and in the pre-war season of 1913-14, the figures stood as follows: West Indies, 5,000 bales; Nigeria, etc., 12,000; Uganda, 29,000; Nyasaland, 6,000; the Sudan 8,000; Malta and Cyprus 5,000 bales: a remarkable achievement in a short time.

The proportion of the American crop in the world's supply had fallen from 63% at the beginning of the century to 57% just before the Great War; the consumption of cotton had steadily increased up to 1914, and the supply kept pace with it, lagging but a little behind, as is reflected in the prices, which rose from 5.66 pence per pound in 1904 to 7.52 pence in 1914.

#### Period of the Great War.

The period of the Great War is one of confusion. The first effect was a slump, which, in turn, caused restriction of cultivation. As the war went on, however, demand steadily recovered, and as production was low, it rapidly overtook the supply, with the result that a period of high prices succeeded. The demand could only be met by a progressive increase in the cost of production. Prices soared to 2/8d. and 10/- per pound for American and the best Egyptian respectively at the height of the speculative boom of 1919-20. This boom was short-lived, and by 1921 prices had fallen. It was the subsequent slump, and not the boom, which influenced production, and from 1921 it declined. In 1924 the supply had fallen by seven million bales as compared with 1914.

#### Period of Steady Expansion, 1920-27.

American costs of cultivation had risen owing to the high level of wages and the reduction in the yield as a result of the ravages of the boll weevil. Strong incentives were therefore supplied to the growing of cotton in empire countries where labour was plentiful and cheap. The need for extended production induced the British



R.J. Peake,  
in "Cotton",  
p. 50.

Government to grant the Empire Cotton Growing Corporation, founded in 1920, the sum of a million sterling. "This has enabled the Corporation not only to give valuable assistance in co-ordinating the scientific and agricultural development work being done in cotton in all parts of the Empire, but also to render direct assistance, especially in the provision of expert staff in many of the new fields throughout the Empire."

From the second decade of the century, cotton cultivation has been sedulously encouraged in various parts of the Empire with the result that Empire countries have, on the whole, maintained a steady increase in production, which in the aggregate, amounted to eight million bales, or 29% of the world's cotton crops. Of these, two million are of the first grade, fine Sea Island, comprising 67% of the supply, two million of the second grade, medium American, comprising 11%, and four million of the third grade, which amounts to 60% of the world's supply of this quality.

Encyc. Brit.  
14th Edn.  
"Cotton"  
Table 1. Classification of  
World's  
cotton crops.

These figures are arrived at from averages taken over a period of years up to 1927-28.

#### The Slump of 1925-33.

By 1925, America had succeeded in controlling the boll weevil and had greatly increased her acreage under cotton. The expansion of her production in 1923-5 was the signal for a fall in prices which began in 1925-6, and the world crop in consequence shrank from 31,500,000 bales in 1926-7 to 25,500,000 in 1927-8. The slump, which affected the prices of all commodities, disorganised the cotton growing industry and became most pronounced in 1930-31. It did not however, affect all countries equally, and was most severely felt in those countries where the cost of production was relatively high. The production in India fell from 5,800,000 bales in 1928-9 to 5,125,000 bales in 1929-30,

1897

7/10

and continued to sink until 1931-2, when the low ebb figure of 4,025,000 bales was registered. But there has been a recovery since, and the figure 4,500,000 bales was returned for 1932-3, and a larger output is expected for 1934. It is noteworthy that India produces each year a larger proportion of longer stapled cotton, which now approximates to one third of the total. The crop of Egypt, remarkable for a diminution in yield per acre, was reduced from 1,075,000 bales in 1928-9 to 980,000 in 1931-2 and to 860,000 in 1932-3.

The deeper and continued depression in Sea Island cotton reduced the normal crop of 5,000 bales in the West Indies to less than half of that quantity, at which figure the production still stands.

In the new Empire fields, the crop had fallen in 1931, to 395,000 bales, but recovery is even more noticeable than in the case of India; in 1932 it expanded to 503,000 bales, and in 1933 reached the record figure of 518,000 bales, notwithstanding a setback in the Sudan.

The production in all Empire countries has not yet regained the level of 1926-27, but further recovery is probable. As sales of new crops in America are to be restricted, and as consumption appears to be once more increasing, future prospects in the cotton fields of the Empire are much improved and the question of the geographical possibilities of future expansion has become of more than ordinary interest.

#### Part 11.

##### Geographical Possibilities of Future Expansion.

The slump of 1930-33 serves a useful purpose. It furnishes a test more dependable than any that could have been devised for answering the question, Which countries deserve consideration for future expansion? For, we may assume generally, that those least affected and quick to



recover have proved themselves, and may therefore be depended upon for regular supplies in the future. These proved countries, with Uganda the one outstanding exception, lie in the sub-tropical region north of the Equator, and the result of the test therefore confirms Russell Smith, who considers that cotton tends to be more productive towards its northern limit.

The countries towards the Southern limits have indeed, with some exceptions, greatly increased their production in 1933, notably Tanganyika (whose prospects recent reports consider favourable), and Australia. The bridging of the Zambesi, by improving communications with the coast, greatly improves the prospects of Nyasaland, which are generally considered to be excellent; but all these countries are at a disadvantage for another reason: a suitable native labour force capable of developing into peasant proprietors and agriculturists does not at present exist in any of them. Australia has only white labour, which is expensive; Tanganyika, Nyasaland, Rhodesia, and South Africa, in this respect, compare unfavourably with India and Egypt among the old fields, and with Uganda, Northern Nigeria, and the Sudan, among the new. But if they do not offer the best promise for early expansion, their potentialities are great, and should mechanised production become practicable, the vast savannah regions of Rhodesia, South Africa, and, in Australia, Queensland, offer immense possibilities. Nevertheless, variable rainfall, the locust menace, unnavigable rivers and distant ports, are to be reckoned generally as African handicaps, and these appear to affect, in greater degree, the Southern provinces.

Uganda and Northern Nigeria.

Uganda is a country of promise and performance, and has just produced a record crop, while the cotton grown is of

2457

714D

good quality. Uganda shares with the Sudan the distinction among the new fields of being the largest African exporter of cotton; the industry is firmly established and future expansion is indicated by Uganda's progressive figures. This appreciation of Uganda's future applies to that part of Kenya which adjoins, <sup>100</sup>as the conditions are similar, though for some reason the natives in Kenya show less enthusiasm.

Northern Nigeria has a cotton tradition and an intelligent and large population, but so far, its performance has not fulfilled its promise. It has an immense area capable of development, and the possibilities of the Lake Chad region and other tracts have been highly appraised by Mr. G. Chisholm. Recent reports indicate that greater progress will be made by the encouragement of mixed crops.

#### Irrigation and Expansion.

Cotton was entirely raingrown until the example of Egypt showed that it could be brought nearer perfection by irrigation than had hitherto been <sup>100</sup>deemed possible. In addition, it proved that valuable crops could be raised from land which was formerly worthless desert: irrigation has greatly expanded the cultivable area of cotton lands, not only in Egypt, but also in India and the Sudan. Great engineering schemes have recently been completed in the latter two countries, and satisfactory dividend returns have encouraged further gigantic undertakings. Attention has been drawn to the limitations of irrigation, and Vera Anstey has sounded a warning note, suggesting that irrigation may be carried too far, but the advantages offered by irrigation have proved themselves, and they make for both <sup>100</sup>quality and regularity in the supply.

In the Sudan, the Makwar barrage has opened up to irrigation a field of much promise in the Gezira, and the Sukkur



barrage is expected to expand the cotton acreage in Sind from 300,000 to a maximum of one million acres.

Only 5% of the Sudan crop is raingrown, but the scope for raingrown cotton crops there, is almost unlimited; a vast territory where the rainfall is ample is available and awaits development.

It should be noted that the irrigated cotton lands of these countries attract and support a population which steadily increases.

<sup>100</sup> India, therefore (particularly Sind, and the Punjab) and the Sudan, offer as good possibilities of future expansion as are to be found elsewhere in the Empire. Egypt and Iraq are omitted from consideration, as these countries can hardly now be included in the Empire.

#### Conclusion.

Extension is largely an economic question: in the long run, the cheapest producer is likely to control both extension and price. But so far statistics are not procurable for comparison of the costs of production of the various producing countries. The difficulties are great but if they could be surmounted valuable data will become available, which, by <sup>100</sup>indicating where expenditure on development will give the best results, will provide the surest guide for profitable future extension.

2919 words.

-----oOo-----

The enumeration of the words in this essay excludes those in the title, sub-titles, summary and headings.

7/1/10

P.T.O

Books consulted include the following :-

- G. Chisholm, "Handbook of Commercial Geography."
- J. Russell Smith, "Industrial and Commercial Geography."
- J. Macfarlane, "Economic Geography."
- L. Dudley Stamp, "Intermediate Commercial Geography,"  
Parts I, and II.
- V. Anstey, "Trade of the Indian Ocean."
- Encyclopædia Britannica, Articles on Cotton,  
9th, 11th, 12th, 13th, and 14th Eds.
- Peake, "Cotton."
- V. Anstey, "Economic Development of India."
- Reports of the British Cotton Growing Association, 1932-33.
- Reports of the Empire Cotton Growing Corporation, 1932-33-34.

7/1/34