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PROCEEDINGS  
OF THE  
SECOND INTERNATIONAL CONFERENCE  
OF  
AGRICULTURAL ECONOMISTS

HELD AT  
CORNELL UNIVERSITY,  
ITHACA; NEW YORK,  
AUGUST 18 TO AUGUST 29, 1930

*The Collegiate Press*  
GEORGE BANTA PUBLISHING COMPANY  
MENASHA, WISCONSIN

1930

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## WORLD PRODUCTION AND PRICE OF MERINO AND CROSSBRED WOOL

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THE purpose of this paper is to indicate the trend in the number of sheep in the world as related to the total and to the qualitative production of wool, and the trend in and the existing relation between the actual and relative production and prices of merino and crossbred wool since 1888 and finally on the basis of the foregoing analysis to conclude with a few remarks on the probable future trend and outlook of the sheep and wool industry.

By world production of wool is implied the total production in 10 important wool producing countries. These countries comprise Australia, New Zealand, Union of South Africa, Argentina and Uruguay in the Southern Hemisphere and the United States, Canada, the United Kingdom, France and Germany in the Northern Hemisphere. The production of wool in these countries constitutes more than 75 per cent of the total world production inclusive of carpet wool and more than 90 per cent exclusive of carpet wool production.

The world production of carpet wool has not been considered mainly because of the fact that in many respects it can be regarded as a separate commodity and as distinct from merino and crossbred wool, in that it is used largely in the manufacture of carpets and rugs, and does not enter into the manufacture of clothing materials to any extent, and also because of the fact that data relating to world production of carpet wool are very incomplete and are largely made up of a series of estimates, which if included in the total world production estimate, would tend to overshadow existing cyclical fluctuations and production and price relationships.

### THE PRESENT SITUATION

The 1929-30 wool season, which has just ended has been a disastrous one to all those concerned in the industry and in only a few instances since 1888 has a depression of like severity been experienced.

The losses sustained by the principal wool producing countries, because of the depreciation in the value of the commodity, have

been unparalleled. The countries that are predominantly merino have suffered the most, since the price of merino wool declined much more than the price of crossbred wool.

The factor which has led up to the present production-price situation is not one of annual production since the total production of wool in the world is not subject to wide annual fluctuations. The cause will largely have to be looked for in the cumulative effect of a consistent increase in wool production for a number of seasons in which the rate of increase in production was greater than the rate of increase in consumption.

This was essentially the development during the past five or six seasons during which period the trend in the actual and relative prices of wool was generally downward and in which the last or the 1929-30 season proved to be the most reactionary and disastrous in its effects.

The present world wide depression affected wool prices adversely, as it did that of other commodities. The main cause of the depression in the wool industry and of the abnormally low prices for wool, however, was primarily due to a periodic over-production of wool, in which the production for the last few seasons constituted the probable termination of the peak of the wool production cycle.

#### TREND IN WORLD SHEEP NUMBERS AND ITS RELATION TO THE SHEEP CYCLE AND WOOL PRODUCTION

The long-time trend in the number of merino and crossbred sheep in the world since 1886, as shown in figure 1, was slightly downward. The decline is attributable to the persistent decrease in the number of sheep in the Northern Hemisphere. The number of woolled sheep in the world was highest about 1910 when it reached 344,200,000 head, but it did not differ from the number during the peaks of 1892 and 1928 by more than 22,000,000. The lowest number was reached in 1922 when there were 266,000,000 sheep or 19,800,000 less than the former low point in 1902.

The trend in the number of sheep in the Southern Hemisphere was slightly upward. In 1892, 66.0 per cent of the total number of sheep in the world were in the Southern Hemisphere; in 1910, 69.4 per cent; and in 1928, 72.0 per cent.

The cyclical movement in the number of sheep closely corresponds to that of most of the 10 countries, although the trends in

Table 1. Estimated Number of Sheep in 10 Important Wool Producing Countries of the Northern and Southern Hemispheres and the Estimated World Total, 1886-1930\*

Year	Southern hemisphere	Northern hemisphere	World total
	(millions of sheep)	(millions of sheep)	(millions of sheep)
1886.....	174.4	120.3	294.7
1887.....	186.8	116.8	303.6
1888.....	188.5	114.0	302.5
1889.....	196.0	112.5	308.5
1890.....	209.9	115.6	325.5
1891.....	224.2	115.7	339.9
1892.....	224.9	115.7	340.6
1893.....	223.1	114.9	338.0
1894.....	224.7	110.7	335.4
1895.....	217.0	107.8	324.8
1896.....	214.5	104.4	318.9
1897.....	206.9	102.2	309.1
1898.....	202.0	103.0	305.0
1899.....	194.1	104.7	298.8
1900.....	192.1	108.9	301.0
1901.....	195.3	109.5	304.8
1902.....	178.0	107.8	285.8
1903.....	181.3	104.8	286.1
1904.....	192.3	100.5	292.8
1905.....	205.6	98.7	304.3
1906.....	218.7	100.1	318.8
1907.....	227.9	102.6	330.5
1908.....	233.6	104.9	338.5
1909.....	238.1	106.9	345.0
1910.....	239.0	105.2	344.2
1911.....	232.1	103.8	335.9
1912.....	221.3	97.7	319.0
1913.....	216.4	93.1	309.5
1914.....	200.8	88.3	289.1
1915.....	184.9	84.9	269.8
1916.....	190.4	84.0	274.4
1917.....	197.7	82.0	279.7
1918.....	200.6	83.8	284.4
1919.....	189.0	84.0	273.0
1920.....	186.5	82.9	269.4
1921.....	191.9	82.1	274.0
1922.....	186.9	79.1	266.0
1923.....	189.4	79.2	268.6
1924.....	202.8	80.7	283.5
1925.....	219.8	82.7	302.5
1926.....	226.6	85.3	311.9
1927.....	226.9	87.9	314.8
1928.....	232.0	90.1	322.1
1929.....	—	92.3	—
1930.....	—	—	—

\* The countries included are Australia, New Zealand, Union of South Africa, Argentina, and Uruguay in the Southern Hemisphere, and the United States, Canada, the United Kingdom, France, and Germany in the Northern Hemisphere.

the individual countries were dissimilar. The trends and cyclical fluctuations in Australia and the United States were approximately identical with the trend and cyclical fluctuations of the world. In the Union of South Africa and New Zealand the trend was decidedly upward but a more or less distinct cyclical movement could nevertheless be established, while the trend in the River Plate and in the European countries was downward, but a cyclical movement

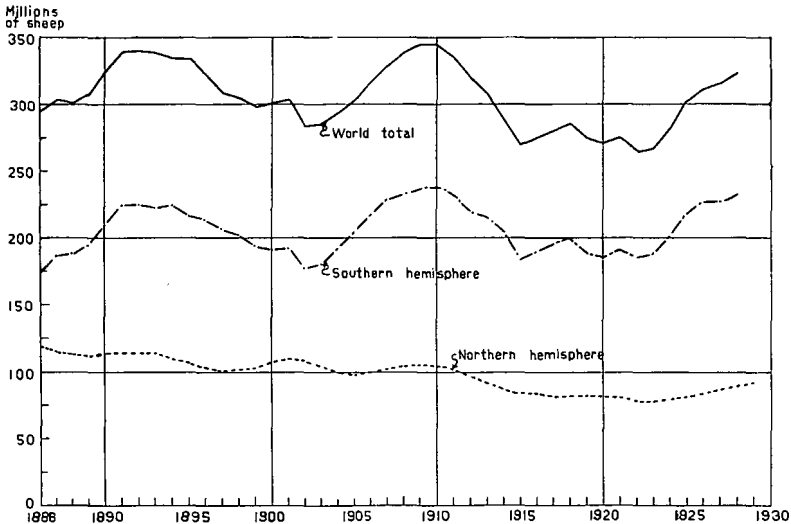


FIGURE 1. ESTIMATED NUMBER OF SHEEP IN 10 IMPORTANT WOOL PRODUCING COUNTRIES OF THE NORTHERN AND SOUTHERN HEMISPHERES AND THE ESTIMATED WORLD TOTAL, 1886-1930

*The countries included are Australia, New Zealand, Union of South Africa, Argentina, and Uruguay in the Southern Hemisphere, and the United States, Canada, the United Kingdom, France, and Germany in the Northern Hemisphere.*

was also apparent even if it existed in some cases only, in that it arrested a further decline during a period when the world trend was upward.

The net result or the summation of the trends and the cyclical movements in the number of sheep in the different countries indicates that although the total number did not increase or decrease to any extent since 1886 the variations in the total number from time to time nevertheless became more pronounced.

The fluctuation in the number of sheep in the world divides itself into two phases. The first is the phase in which the number of sheep was relatively high and which is characterized by the

peak years of 1892, 1910 and 1928, the time interval between the respective peaks being about 18 years. The second is the phase in which the numbers were relatively low and approximately stationary for about 8 years, which occurred during the periods 1897-1905 and 1915-1923. The time interval between the periods of relatively low sheep numbers, if the years 1901 and 1919 be taken as the median of each stationary period, is also about 18 years.

The peaks and low points in the number of sheep in the world alternated with each other at regular intervals of about 9 years, as follows, beginning with the peak year: 1892, 1901, 1910, 1919, and 1928.

As the average duration of a complete sheep cycle is approximately 9 years there appears to be a paradox in that the complete cycle as exemplified by the world sheep cycle is twice this length, or of 18 years duration from peak to peak, the first cycle running from 1892 to 1910 and the second from 1910 to 1928. The reason for this is explained mainly by the fact that there are two distinct types of wool producing sheep, the merino and the crossbred which, if they could be segregated as to numbers, would clearly indicate the normal behavior of a sheep cycle, and each type of sheep would alternately predominate in a complete 9-year cycle. This is shown in figure 2, which represents the relative production of merino and crossbred wool from 1888-89 to date.

The alternation of the 9-year merino sheep cycle with the 9-year crossbred sheep cycle is not apparent in all the 10 countries, because the persistent upward or downward trend in the number of sheep, or the relatively small importance of the merino and crossbred in some countries would necessarily obscure any existing cyclical movements.

Without analyzing the different factors that affected the number of sheep and the relative importance of the merino and crossbred in the different countries, it is interesting to note that the sum total of these effects resulted in a world cycle which in most respects is comparable to that of the United States and to a lesser extent to that of Australia.

The average weight per fleece has an important bearing on the total wool production and the trend in the average weight will largely determine the trend in the total world production. The sheep has become increasingly productive since 1890. The average

weight per fleece was approximately 5.6 pounds in 1890. By 1930 it had increased to about 7.6 pounds. This is an increase of approximately two pounds in 40 years or one-half pound every ten years.

WORLD WOOL PRODUCTION

The production of wool in the world has been upward and the trend can best be represented by a straight line (figure 2). The

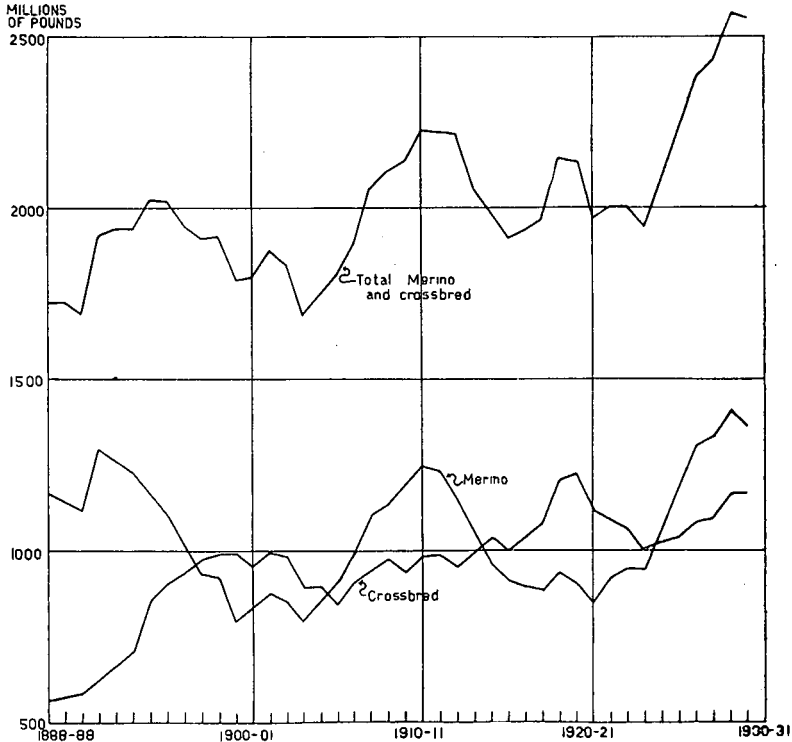


FIGURE 2. WORLD PRODUCTION OF MERINO AND CROSSBRED WOOL, 1888-89 to 1929-30

variation in the total production from time to time is due to a distinct cyclical movement which consists of a major and a minor cycle which are superimposed, so to speak, upon one another.

Since 1888-89 the major cycle has shown three distinct peaks or levels of high production, occurring respectively in about 1894-95, 1910-11 and 1928-29. The minor cycle has two less distinct peaks which alternate with the peaks of the major cycle and occur



in 1901-02 and 1919-20. The peaks of the major cycle as well as those of the minor cycle are about 17 to 19 years apart.

The total production increased from 1,729,600,000 pounds in 1888-89 to 2,528,300,000 pounds in 1929-30, an increase of

Table 2. World Production of Merino and Crossbred Wool, 1888-89 to 1929-30

Season (beginning September 1)	World production of wool		
	Merino	Crossbred	Total Merino and Crossbred
	(millions of pounds)	(millions of pounds)	(millions of pounds)
1888-89.....	1,161.6	568.0	1,729.6
1889-90.....	1,149.8	575.0	1,724.8
1890-91.....	1,110.1	583.9	1,694.0
1891-92.....	1,294.5	619.3	1,913.8
1892-93.....	1,268.8	667.3	1,936.1
1893-94.....	1,228.3	707.8	1,936.1
1894-95.....	1,165.5	854.7	2,020.2
1895-96.....	1,110.1	909.8	2,019.9
1896-97.....	1,012.1	933.5	1,945.6
1897-98.....	934.8	976.4	1,911.2
1898-99.....	925.9	990.9	1,916.8
1899-1900.....	796.0	991.2	1,787.2
1900-01.....	836.3	956.8	1,793.1
1901-02.....	875.7	997.4	1,873.1
1902-03.....	851.6	982.8	1,834.4
1903-04.....	793.7	895.4	1,689.1
1904-05.....	853.4	896.6	1,750.0
1905-06.....	914.4	843.1	1,807.5
1906-07.....	992.5	903.9	1,896.4
1907-08.....	1,103.2	949.3	2,052.5
1908-09.....	1,132.8	972.8	2,105.6
1909-10.....	1,192.5	939.9	2,132.4
1910-11.....	1,243.9	981.6	2,225.5
1911-12.....	1,234.9	983.0	2,217.9
1912-13.....	1,150.3	963.2	2,113.5
1913-14.....	1,066.5	993.8	2,060.3
1914-15.....	956.1	1,033.4	1,989.5
1915-16.....	914.3	999.8	1,914.1
1916-17.....	895.4	1,039.9	1,935.3
1917-18.....	884.4	1,076.0	1,960.4
1918-19.....	936.3	1,206.7	2,143.0
1919-20.....	911.8	1,222.3	2,134.1
1920-21.....	849.6	1,117.5	1,967.1
1921-22.....	917.9	1,089.4	2,007.3
1922-23.....	945.7	1,061.8	2,007.5
1923-24.....	944.9	998.6	1,943.5
1924-25.....	1,054.0	1,020.5	2,074.5
1925-26.....	1,178.9	1,039.3	2,218.4
1926-27.....	1,306.0	1,078.5	2,384.5
1927-28.....	1,331.3	1,095.2	2,426.5
1928-29.....	1,406.2	1,163.2	2,569.4
1929-30.....	1,364.1	1,164.2	2,528.3

798,700,000 pounds or 46.2 per cent in 42 years. The long-time increase, however, is brought out more clearly by comparing the different peak periods. The average production per season for the two seasons 1894-95 and 1895-96 was 2,020,000,000 pounds; for the seasons 1910-11 and 1911-12, 2,222,000,000 pounds; and for the seasons 1928-29 and 1929-30, 2,549,000,000 pounds, or successive increases from peak to peak of 202,000,000 pounds, and 327,000,000 pounds, or 10.0 per cent and 14.7 per cent respectively. The average production during the two minor peaks was as follows: During the seasons 1901-02 and 1902-03, 1,854,000,000 pounds, and during the seasons 1918-19 and 1919-20, 2,131,000,000 pounds; an increase of 285,000,000 pounds or 15.4 per cent.

The rate of increase in wool production during any particular phase of the cycle was most marked from 1923-24 to 1928-29. This period constitutes the first half of the third major cycle since 1888 and the production increased from 1,944,000,000 pounds to 2,569,000,000 pounds or an average increase for the 5 seasons of about 125,000,000 pounds. At no time during the last 42 years and probably at no time before then has wool production increased at such a rate during a five year period.

The production for the 1929-30 season was somewhat less than the record production of the former season and this strongly suggests that the downward trend in world wool production has already begun.

The major and minor cycles referred to previously as comprising the total wool production cycle are characteristically those of merino and crossbred wool. They alternate with each other at regular intervals. The former is more pronounced and shows greater cyclical fluctuations than the latter.

#### THE MERINO CYCLE

The trend in the production of merino wool was practically constant throughout the period 1888-89, 1929-30. For the first 20 years, however, it was somewhat downward and for the last 20 years slightly upward. The peaks or high levels of production in the merino wool cycle were concurrent with those of the world cycle except during the peak of the '90's, because of the rapid increase in the production of crossbred wool. The time interval

between the peaks is from 18 to 19 years and they alternate regularly with the periods of low production in 1900 and 1919.

The average production per season for the three seasons 1891-92, 1892-93, and 1893-94 was 1,264,000,000 pounds, and for the three seasons 1927-28, 1928-29, and 1929-30, 1,367,000,000 pounds; an average increase of 100,000,000 or 8.2 per cent in 37 years. During the last 42 years the world production of merino wool fluctuated between 800 and 1,300 million pounds. The increase in world wool production since 1919-20 is solely due to the unprecedented increase of merino wool, since during these 10 years the production of crossbred wool remained constant.

The trend in the relative proportion of merino wool in the world's clip was downward and was most marked from 1890 to 1900. During the seasons 1891-92, 1910-11 and 1928-29 the proportion of merino wool in the total world's clip was 67.6 per cent, 55.9 per cent and 54.7 per cent respectively while in 1899-1900 and 1919-20 it amounted to 44.5 and 42.7 per cent.

The 1928-29 season is the probable termination of the third peak in the merino cycle since 1888 and the actual production of merino wool in the 1929-30 season has decreased about 40,000,000 pounds.

At present the only important merino wool producing countries are Australia, the Union of South Africa, and the United States. In 1929-30 these three countries produced about 92 per cent of the total merino wool production to which Australia contributed 54 per cent, the Union of South Africa 22 per cent, and the United States 16 per cent. In 1891-92 the percentage contribution of merino wool from these three countries to the world total was only 67.6 per cent of which Australia produced 47 per cent, the Union of South Africa 8 per cent, and the United States 13 per cent. The production of merino wool in the River Plate during the 1891-92 season constituted 23.9 per cent of the world total.

The decrease in the actual and relative production of merino wool first became evident in some of the European countries and was due to the increased competition from the Southern Hemisphere. In the early '80's New Zealand began to change from merino to crossbred due to the developing export trade in mutton and lamb.

The relative production of wool in the Argentine underwent a radical change from 1890 to 1900 changing from a merino wool

to a crossbred wool-mutton-lamb basis. Uruguay was the last country to permanently change to an essentially crossbred wool producing country and the change took place soon after 1912.

It is, therefore, evident that although the trend in the world production of merino wool during the last 42 years was practically constant, the trend in the three leading countries was decidedly upward and the production increased from 875 million pounds in 1891-92 to 1,008 million in 1910-11 and to 1,291 million in 1928-29.

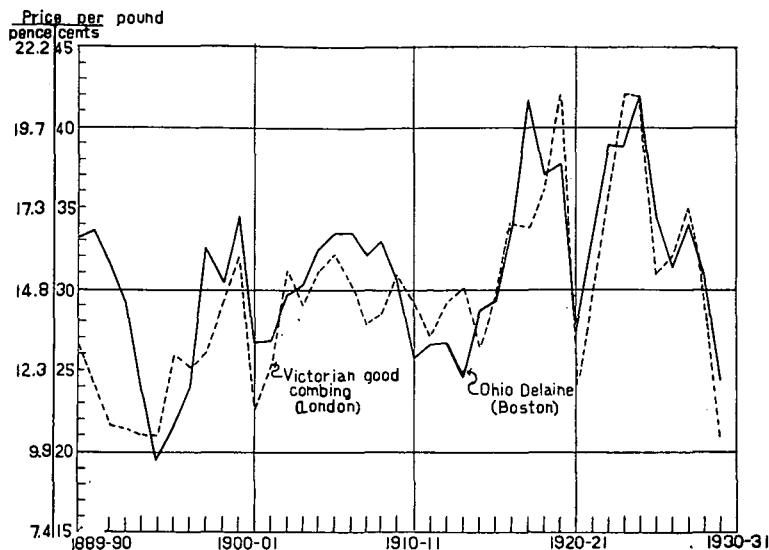


FIGURE 3. DEFLATED AVERAGE PRICES OF MERINO WOOL AT LONDON AND BOSTON, 1889-90 to 1929-30

### THE CROSSBRED WOOL CYCLE

The secular fluctuations in the production of crossbred wool are not so evident as in the case of merino wool. The trend in production was positive, and this accounts for a similar trend in the total world production. The production of crossbred wool has doubled since 1890, but the rate of increase was greatest from 1890 to 1900. The periods of relatively high production were from about 1899-1900 to 1901-02 and again from 1918-19 to 1920-21. During this period the average production increased from 982,000,000 pounds to 1,182,000,000 pounds, an increase of 200,000,000 pounds or 20.4 per cent.

### ACTUAL AND RELATIVE PRICES OF MERINO AND CROSSBRED WOOL

The trend in merino and crossbred wool prices in London and Boston since 1888-89 was upward, but more so in Boston than in in

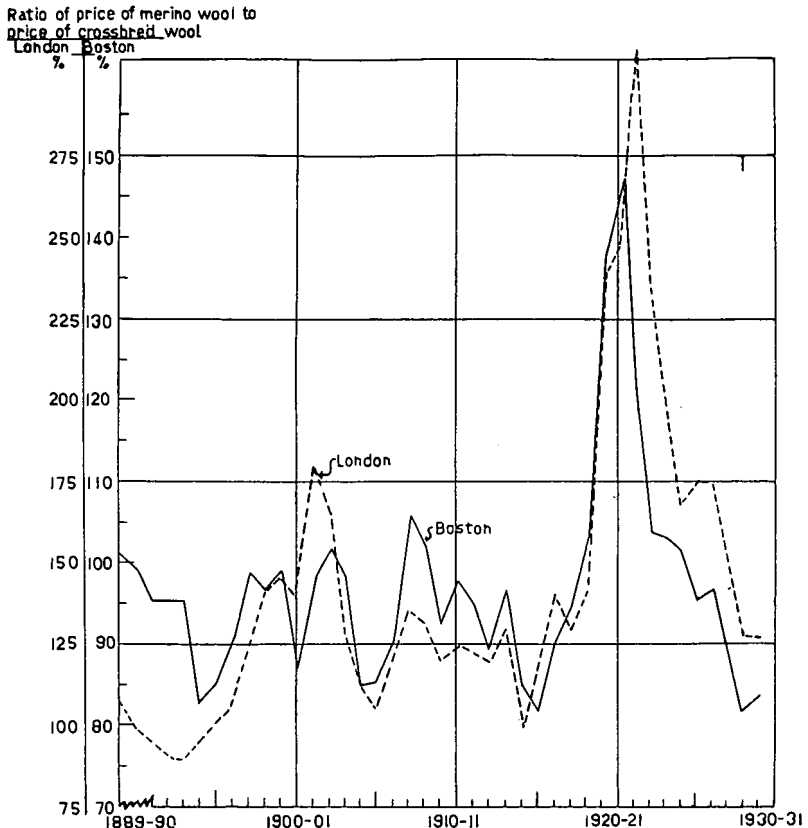


FIGURE 4. PRICE RATIO OF MERINO WOOL TO CROSSBRED WOOL AT LONDON AND BOSTON, 1889-90 TO 1929-30

Based upon average price of Ohio Delaine (Merino) and Kentucky  $\frac{1}{4}$  blood (crossbred) at Boston, and upon average price of Victorian good combing Merino and medium crossbred at London.

London. The trend in crossbred wool prices in London was somewhat down but in Boston the reverse tendency is shown. The trend in the relative prices of merino and crossbred wool in London, therefore, was also up, but no marked trend is observed with

respect to the relative prices of the different grades at Boston (figures 3 and 4).<sup>1</sup>

The respective trends in the relative prices of foreign and domestic wools correspond to the respective trends in the total relative production and domestic relative production of merino and crossbred wool. In the former case there is an inverse relation while in the latter case the trends were neither up nor down.

A general relationship is observed between production and prices and relative production and relative prices. The seasonal variation in actual and relative prices is only partly explained by the effect of the total and relative production of the current and probably the few preceding seasons, since other factors have an effect on price.

The factors other than production that influence price are not treated in the present paper.

The price of wool from 1889-90 to 1894-95 declined and the average price of merino wool at London fell from 27.0 cents to 21.3 cents, and in Boston from 33.1 to 19.5 cents (table 3).<sup>2</sup> The change in the tariff schedule which placed wool on the free list from August, 1894 to July, 1897 was probably the major factor that caused domestic prices to decline more than foreign prices.

The relative price of merino wool also decreased in both countries from 1889-90 to 1894-95. In London the ratio of the price of merino to crossbred wool decreased from 108.7 per cent to 93.0 per cent and in Boston from 101.5 per cent to 83.0 per cent (figure 4, and table 4).

The total world production and the production of merino wool during this period of general price decline was relatively high.

After 1894-95 actual and relative prices of wool increased while actual and relative production decreased. In 1899-1900 a speculative boom was experienced on account of a fear of an actual shortage of merino wool, and merino wool prices rose to extreme levels, but a reaction set in the following season causing all prices to decline. The prices of all grades increased during the next five seasons and the demand for crossbred wool in 1904-05 and 1905-06 caused the relative prices of merino wools to be low. After 1906-07 foreign and domestic prices declined more or less con-

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<sup>1</sup> Prices are given for merino wool only (table 3).

<sup>2</sup> Prices in London as given in table 3, converted to cents.

Table 3. Deflated Average Price of Merino Wool at London and Boston, 1889-90 to 1929-30

Season (beginning September 1)	Deflated average price per pound	
	Victorian good combing (London)	Ohio Delaine (Boston)
	(pence)	(cents)
1889-90.....	13.4	33.1
1890-91.....	12.1	33.5
1891-92.....	10.8	31.4
1892-93.....	10.6	29.0
1893-94.....	10.5	23.7
1894-95.....	10.5	19.5
1895-96.....	12.9	21.4
1896-97.....	12.6	24.0
1897-98.....	13.1	32.4
1898-99.....	14.4	30.6
1899-1900.....	16.0	34.6
1900-01.....	11.2	26.8
1901-02.....	12.7	26.7
1902-03.....	15.5	29.6
1903-04.....	14.6	30.3
1904-05.....	15.6	32.5
1905-06.....	16.1	33.5
1906-07.....	15.2	33.5
1907-08.....	13.8	32.0
1908-09.....	14.3	32.9
1909-10.....	15.6	30.5
1910-11.....	14.6	25.6
1911-12.....	13.5	26.6
1912-13.....	14.6	26.7
1913-14.....	15.1	24.5
1914-15.....	13.2	28.7
1915-16.....	14.9	29.2
1916-17.....	17.0	33.9
1917-18.....	16.8	41.4
1918-19.....	18.1	37.1
1919-20.....	21.0	37.7
1920-21.....	12.0	27.4
1921-22.....	14.8	33.1
1922-23.....	18.5	38.8
1923-24.....	21.0	38.7
1924-25.....	20.8	41.9
1925-26.....	15.4	34.2
1926-27.....	16.0	31.3
1927-28.....	17.5	34.1
1928-29.....	14.6	30.8
1929-30.....	10.4	24.3

tinuously to the beginning of the war, and the price of merino wool declined more than that of crossbred wool.

During this general decline in prices from about 1907-08 to 1913-14 the total production of wool and the production of merino

Table 4. Price Ratio of Merino Wool to Crossbred Wool at London and Boston, 1889-90 to 1929-30

Season (beginning September 1)	London <sup>1</sup>	Boston <sup>2</sup>
1889-90	108.7	101.5
1890-91	99.0	99.6
1891-92	96.8	95.8
1892-93	91.6	95.8
1893-94	89.2	95.7
1894-95	93.0	83.0
1895-96	101.1	85.5
1896-97	105.8	91.6
1897-98	120.0	99.1
1898-99	140.3	96.8
1899-1900	145.5	99.6
1900-01	138.8	87.7
1901-02	181.4	98.6
1902-03	166.2	102.1
1903-04	127.7	98.5
1904-05	112.2	85.8
1905-06	105.4	86.0
1906-07	111.6	91.1
1907-08	135.9	106.7
1908-09	132.0	102.7
1909-10	120.0	92.4
1910-11	124.8	98.4
1911-12	124.5	95.6
1912-13	122.4	89.9
1913-14	129.3	97.2
1914-15	99.4	86.0
1915-16	119.1	82.3
1916-17	141.1	90.8
1917-18	128.5	95.1
1918-19	141.4	104.8
1919-20	234.1	139.3
1920-21	245.9	148.0
1921-22	306.5	122.0
1922-23	235.0	104.5
1923-24	196.4	104.2
1924-25	168.9	102.6
1925-26	174.3	96.5
1926-27	174.5	97.8
1927-28	149.1	90.9
1928-29	127.6	82.3
1929-30	126.1	84.9

<sup>1</sup> Per cent which average price of Victorian good combing was of average price of medium crossbred at London.

<sup>2</sup> Per cent which average price of Ohio Delaine was of average price of Kentucky  $\frac{1}{4}$  blood at Boston.

wool was relatively high. At the commencement of the war, relative prices and even actual prices of merino wool decreased, which was due to the greater initial demand for crossbred wool for military purposes. The war caused the price of all grades of wool to



rise to extreme levels. After the war there was a relative shortage of merino wool and a great demand for it for the manufacture of civilian clothes, and this caused prices to rise still further. The large stocks of crossbred wool on hand caused crossbred wool prices to decline. This resulted in the spread between the prices of merino and crossbred wool becoming increasingly greater. The 1919-20 season was a record one with respect to prices but the average prices the following season declined by approximately 45 per cent and continued to decline in 1921-22. The average price of crossbred wool in London during this season was 9.6 cents in terms of the 1913 dollar, or about one-third the average price of merino wool.

After the depression in 1920-21 prices improved and another record season in prices was experienced in 1924-25 which was fully comparable to the high prices of 1919-20. Relative prices from 1920-21 to 1924-25 declined, however, but this was largely due to the relative increase in the price of crossbred wool.

After the 1924-25 season, the trend in actual and relative prices was downward. The price of merino wool in London fell from 42.2 cents in 1924-25 to 21.1 cents in 1929-30, while in Boston it decreased from 41.9 cents to 24.3 cents, or a decline of approximately 50 per cent and 42 per cent respectively. Relative prices for foreign wools decreased from 168.9 per cent to 126.1 and for domestic wools from 102.6 per cent to 84.9 per cent.

Domestic prices are normally above wholesale prices mainly due to the tariff on wool. The price of wool during the last few years has declined much more than wholesale prices. The index number of wholesale prices in 1929-30 was 132 and that of merino wool 117. The index number of wholesale prices in the United Kingdom for the season 1929-30 was 125 and the index number of the average price of merino wool was 96.

Present prices of merino wool in terms of purchasing power are about as low as they ever were, since 1888-89, and in the United States they are lower than that of any other season except during a few seasons when wool was admitted free of duty.

#### SUMMARY AND CONCLUSION

The trend in the production of wool has already started to go down. This trend is likely to continue for a number of seasons. For the next few seasons world production will not be greatly

different from the record clips of the last few seasons, since the seasonal production does not show a great variability. The ratio of the price of merino to crossbred wool was lowest in 1928-29. This ratio has increased somewhat during the last season and will continue to do so for a number of seasons. The production of crossbred wool is increasing relative to that of merino wool. The probable production in the future will depend upon whether the increase in crossbred wool production will be more than the decrease in merino wool production.

If the regularity of the wool production cycle continues, within about five or six seasons the third minor peak, which characterizes a relatively high proportion of crossbred to total wool will be reached. Actual and relative prices of merino wools will increase and be particularly high at that time.

There are some indications which need not be elaborated here, that the present cycle has been overextended and that certain forces were favorable which led to the abnormal increase in wool production which would otherwise not have eventuated. It is probable that the abnormal price situation during and after the war had much to do with this. If this contention is correct, then the rate in the decrease will probably be greater than would otherwise be the case.

The phenomenal increase in the production of merino wool has not been due to the expansion of new areas or to the increased production in semi-arid regions, but it occurred in areas where competition from other agricultural enterprises was potentially the greatest. Under the present price situation these areas are likely to show the greatest change in production, within the next few seasons.