

The world production of wool is of the order of 3,300 million pounds, or, on a clean wool basis, very roughly, 2,300 million pounds, and the amount entering international trade has not increased by more than 20 per cent. during the last twenty years. It might have been thought that with the pronounced falling prices of wool the competition of substitutes would have become more difficult, yet we have the following world figures for production of artificial fibre :—

					lb.
1913	..	..	..	..	27,000,000
1922	..	..	..	..	78,000,000
1927	..	..	..	..	270,000,000
1932	..	..	..	..	499,000,000

It will thus be seen that artificial fibres are a definite factor in the situation as regards demand for wool, and no reminder is needed of the relation of a decreased demand, which is out of all proportion to the relative effect on prices.

It is not necessary that we should be stamped by the competition of artificial fibres. The situation is summed up by Mr. W. Hunter, in an address to the Bradford Textile Society :—

It is probable that endeavour will be made to embody in the artificial fibre of the future the properties associated with those of wool rather than those of silk.

The main difficulty is to confer true elasticity upon such a fibre, and no simple derivative of cellulose is likely to possess this property in the required degree, although it may be possible ultimately to produce a fibre with crimp and felting power.

A new chemical basis, essentially different from that of present-day artificial silks, is necessary to obtain such elasticity.

It is therefore seen that, as yet, artificial wool has not arrived, and it is surely the business of the scientist in the wool industries to see that the position of the natural fibre in the textile market remains unassailable.

Science, as applied to wool-production and utilization, is, as yet, young, and has much prejudice to face and much to learn before it can attain its maximum usefulness. This is true of all the older industries in which there is already a vigorous practical art. The penetration of scientific methods into the tanning industry, for example, took a long time; similarly, the application of scientific methods to the dairying industry is of comparatively recent growth. The case is different with the newer industries, such as the electrical, artificial fibre, motor and radio industries, which have developed freely as straightforward applied sciences. In the older industries, the age of "scientific practice" has now definitely dawned, however.

With closer settlement and smaller holdings, there are less big farmers who can carry out the large-scale breeding practice to produce finer and more even wools with improved carcass. Moreover, even for large farmers producing a clip possibly superior to that of their smaller or less informed neighbours there is still the influence of the trend of the whole industry and the competition of substitute materials organized on a large industrial scale, with controlled production as regards both quantity and type. **Consequently some corporate and integrated action by the whole industry is necessary in both research and dissemination of reliable information to producers.**

The following extract from a report by Dr. S. G. Barker, Wool Industries Research Association, Torrington, Leeds, deals with this same point :—

History will probably label the last decade as the era of cellulose. This was an inevitable consequence following the War where nitro-cellulose and cellulose derivatives formed a large proportion of our munitions. Naturally, when it comes to beating "swords into ploughshares," &c., during peace-time, methods were sought for the utilization of the cellulose products which had been so prolifically produced during the war period.

Thus we find that rayon, cellulose films, imitation leather-cloth, and the like came into being as commercial entities, cellulose, with its many derivatives, being exploited in every possible direction.

If one-hundredth part of the money that has been spent on exploitation of cellulose had been devoted to research on methods for exploitation of wool there would have been a very different story to tell to-day.

We may now consider the question as to whether New Zealand wool has deteriorated or become less suitable for the general market. As has been stated above, exact statistics are not readily available. An analysis of the 1917-18 clip

Maintenance of
Quality.