### Grassland-farming.

Taking mutton, lamb, wool, beef, butterfat, pork, bacon, and veal as the products sold by the farmer from grassland, carefully prepared estimates show that between 1907 and 1921 the value of these on a standard price basis doubled—from 16 to 32 millions sterling. Between 1921 and the present time the figure has risen to 43 millions. At the rate of progress now being maintained the value of our grassland products is increasing at over double the rate it did in the first two decades of this century. The grassland-farmer is to-day producing over 40 per cent. more products per acre of occupied area than he did eight or nine years ago. Butterfat has doubled during that period, with an increase of only 40 per cent. in the number of cows, and with no increase worth mentioning in the area devoted to dairying. During the past two years well over three million sheep have been added to the flocks of the Dominion, and the potentiality of still greater expansion through the fact that breeding-ewes are now increasing by nearly a million annually becomes sufficiently apparent.

To use an everyday expression, 1928–29 has been our "peak year" for production from grassland. It can now be viewed that the vast majority of New Zealand farmers are fully alive to the great potential production-increase that lies ahead of modern grassland-farming, in which more and better grass represents one phase, and better utilization by sound live-stock husbandry the other. The successful interweaving of these two fundamental principles of grassland-management is destined to make our premier crop—grass—play an even more important role in out national prosperity than could have been thought possible a few years ago.

That this statement has a solid practical foundation is well exemplified by the performance of the New Zealand grassland-farmer during the past ten years. In the five-year period 1920 to 1924 the average annual value of grassland products on a standard-price basis was £33,410,000. During the five years 1924–1929 the average annual value amounted to £39,520,000.

Of even greater significance than these figures are the yearly increases since 1924 over the average of the previous five years, which indicate very clearly the rapid upward movement that is taking place, as follows:—

| Year. | Amount of Increase. | Approximate Percentage Increase. |
|---|---|---|
| 1924–25 | £3,550,000 | 11 per cent. |
| 1925–26 | £3,540,000 | 11 ,, |
| 1926–27 | £6,020,000 | 18 ,, |
| 1927–28 | £7,680,000 | 23 ,, |
| 1928–29 | £9,780,000 (estimated) | 29 ,, |

### Top-dressing and related Farm-management Problems.

By far the most outstanding feature in the process of increasing the quantity and quality of our grass crop is the application of artificial fertilizer generalized under the term "top-dressing."

The large increase in acreage top-dressed in 1927 and 1928 has been fully maintained during the past twelve months. A very considerable proportion of our rapidly expanding pastoral production is directly due to this practice, which up to recently has been mainly applied to dairying land, but which during the past three years has increased at even greater rate on sheep-country. The actual acreage top-dressed during the past three years have been (in round figures) as follows:—

| | Amount of Fertilizer. | Area Top-dressed. |
|---|---|---|
| 1926–27 | 180,000 tons | 1,400,000 acres. |
| 1927–28 | 245,000 ,, | 1,850,000 ,, |
| 1928–29 | 315,000 ,, | 2,250,000 ,, |

These figures represent an increase of nearly a million acres within two years. Large as is the area now annually top-dressed, it represents only 13 per cent. of the sown grasslands of the Dominion, and it is safe to say that there are not less than 6 million acres of grassland in New Zealand where payable increases due to top-dressing could be secured. At the rate of top-dressing progress of the past two years this acreage would be reached within the next decade, with the fertilizer tonnage reaching the million mark and an annual top-dressing bill of approximately £6,000,000 or more.

Almost the whole of the 315,000 tons of top-dressing fertilizer used last year was of a phosphatic nature. Apart from great expansion in the use of phosphates, the time is rapidly approaching when more consideration will have to be given to nitrogen, potash, and lime in the top-dressing of grass and. This is particularly true of those farms on which the practice is being applied to almost the whole of the pastures, and where saturation-point of high profits from phosphates alone is being