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EDITORIAL

PASTURE IMPROVEMENT AND SUPERPHOSPHATE.

In recent years pasture improvement has played a major role in the revolution in farming methods which has taken place in many parts of New South Wales. A spectacular increase in the use of artificial fertilizers (particularly superphosphate) has been a feature of this development.

In an article which appears in this issue an examination is made of trends in the use of superphosphate in relation to probable developments in the wheat and livestock industries and it is suggested that the consumption of superphosphate in this State will probably double and possibly treble within the next eight to ten years. The main reason for the rapid increase in consumption which is forecast is the expansion which it is expected will take place in the area sown to improved pastures on the Tablelands and in parts of the Western Slopes and the Riverina.

The expansion of pasture improvement in New South Wales has assumed considerable proportions in recent years. Developments in the Southern Tableland provide a typical example of this trend. There approximately 26 per cent. of all graziers topdressed part of their pastures during 1950-51, the average area topdressed per farm was 225 acres and the average rate of application 109 lb. of fertilizer (predominantly superphosphate) per acre. Three years later, in 1953-54, 47 per cent. of all graziers in the Southern Tableland topdressed their pasture, while the average area treated had risen to 301 acres and the average rate of fertiliser application per acre was 127 lb.

In the last seven years the area under sown pastures in inland districts of New South Wales has increased fourfold. Even more rapid farm investment in pasture improvement might have taken place during that period but for shortages of superphosphate, farm machinery and materials such as steel posts and fencing wire. As farm incomes generally have declined somewhat in the last two to three years, it is possible that the recent rate of expansion in sown pastures will not be maintained, but there is little doubt that further substantial increases will take place within the next decade.

Such increases can be predicted with some confidence because there is obviously a growing realization by the farming and grazing community that the improvement of native pastures is a highly profitable practice in many parts of the State. Experimental results provide strong support for this. At present commodity price levels, an investment of £10 in pasture improvement will, in many areas, lead to an increase in gross returns of from £15 to £20 over the life of the pasture, in the form of increased income from wool, meat or dairy products. These very tentative calculations do not make any allowance for the build-up in soil fertility produced by the liberal application of superphosphate and the sowing of leguminous pasture species. This carry over effect on fertility may also bring considerable additional economic benefits to farmers in the longer term. For instance, in parts of such areas as the Northern Tableland, it seems likely that a large proportion of the cost of pasture improvement can be recouped subsequently by increased yields of crops such as maize, after the conclusion of a six to eight-year pasture phase.

Changes in the level of rural output which have occurred in recent years have been affected by a complexity of factors including climatic variations and reduced rabbit numbers due to the spread of myxomatosis. Consequently it is difficult to gauge the influence of improved pastures on rural productivity. However, as the area of improved pastures continues to increase there should be a further substantial expansion in livestock numbers. It is probable that this will have relatively more effect on the sheep industry than on other livestock industries. An examination of official statistics for New South Wales shows that, apart from seasonal fluctuations, sheep numbers were fairly static for over a quarter of a century, prior to 1952. Between 1926 and 1945 the sheep population of the State fluctuated between 50,000,000 and 55,000,000. The 1944-46 drought reduced numbers drastically and the losses incurred in these years were not made up until 1951. Since then the sheep population has shown a continuous increase, and the 1954 level of almost 60,000,000 has been exceeded only once in the history of the State.

It is significant that these increases have occurred within the central and eastern parts of the sheep belt, that is in areas capable of supporting improved pastures under natural rainfall conditions, rather than in the drier western districts where a considerable decline in stock numbers has occurred this century. If investment in pasture improvement is maintained at the level of the last four to five years, sheep numbers may rise to 70,000,000 in the next ten years—provided seasonal conditions are not too unfavourable. Such a development would involve very considerable increases in the consumption of fertilizer and other production requisites.

Superphosphate manufacturers in New South Wales are planning substantial expansion of plant capacity. However, the plans so far announced will do no more than eliminate current shortages and provide for the expected increase in demand this year and next. Not only will great increases in the consumption of superphosphate have to be planned for within the next decade, but substantial increases in the demand for fencing materials and watering facilities can also be expected to accompany the further development of pasture improvement. At the present moment many requisites, such as fencing materials, which are needed if improved pastures are to be properly managed, are in short supply. Unless determined efforts are made by manufacturers to step up the output of such products these shortages may intensify in the future.

In the post-war scramble for resources, rural producers have experienced great difficulties in obtaining a reasonable proportion of their requirements. This is true of most scarce resources, whether they be labour, building materials, steel or galvanized iron. The need for greater and more efficient rural production has received considerable publicity in the post-war period and as a result more attention has been given to the needs of the farming community in recent years. It is to be hoped that this trend will continue in the future.