

The Production of Pasture Seed in Canterbury

IN the last 20 years pasture-seed production in Canterbury has undergone major changes largely through the increase in Certified-seed production, improved methods of pasture management, and the superseding of the old threshing methods by the header harvester. In this article, which was presented as a paper at the 1948 conference of the New Zealand Grassland Association, J. G. Slater, a farmer of Hilton, South Canterbury, deals with these changes and outlines the practices and methods necessary in pasture-seed production in Canterbury today.

THE demand for an ample supply of pasture seeds has always existed in areas where arable farming is practised and the demand for good seed has increased with the knowledge of the influence of strain and its effect on the production and life of pastures. As a result there is now a fairly stable demand for more highly productive types and strains of seed for both resowing arable land and for resowing those areas which are used solely for herbage production. As pasture-seed production demands similar conditions of soil, climate, and contour as the production of cereals and other annual crops it is natural that Canterbury should be the largest producer of pasture seeds, the main kinds of which are ryegrasses and clovers.

In order that the present and, if possible, the future position of pasture-seed production and its relationship to arable farming may be appreciated it is necessary to understand the facts leading up to the present situation.

Up to about 1930 the method used by Canterbury farmers for sowing pasture was to sow down with wheat or other cereal or rape or turnips about a bushel of "ryegrass" with 2 or 3lb. of red clover. One of the areas sown was left for ryegrass seed in the summer of the following year and after sufficient seed was kept for the following year's requirements the surplus was sold. Red clover was saved for seed after an early hay crop, and white clover was sometimes taken in suitable seasons from stubble areas which had been left over from the previous harvest.

In short, pasture was considered secondary to cropping, and pasture seed was taken only to save the expense of buying. This was the situation up to 1930; paddocks were sown down only to give them a spell, the use of lime was considered unnecessary, and superphosphate was still regarded by most farmers only at the best as a stimulant and not a necessity to crops.

Production of Ryegrass Seed

Ryegrass-seed production in Canterbury received its first modern impetus with the sowings of "Hawkes Bay" ryegrass sown under contract about 1929-30. As a result of this the pendulum swung back, and but for the strenuous efforts of a few this initial effort would have ended in disaster; even as it was it retarded development for some years. The pure sowing of ryegrass without clover on cropped land, without lime, and with little phosphate was, as is well known, the cause. In fact the only feature which

kept the project alive was the price, another stimulant which was ultimately to react against the true development of pasture-seed production and its relationship to arable farming.

During the boom-price period pasture seeds were produced for their return per bushel or pound of seed rather than their yield per acre. Machine-dressing loss and quality were forgotten in what can be termed the mad rush for the buried treasure of small seeds, a treasure which only a few ever found. This culminated in the collapse of the market, the causes of which were receding prices, record areas, bad harvesting conditions, and disease.

Period of Formation

Those 15 years of alternating periods of hope and despair can be regarded now as a period of formation and development during which the true relationship between seed production and arable farming was straightened out. Lessons were being learnt and applied throughout this period which have gradually placed seed production on arable land in its true perspective.

It has been proved that, first, pasture-seed production on a catch-crop basis as a quick revenue earner is risky, and, secondly, that it is not

sound practice to devote the farm wholly to seed growing and to ignore the use of livestock in arable farming.

Like any other business, whether farming or commercial, seed production resolves itself into one routine. Certain operations must be carried out annually and throughout the farming year to ensure continuity in production and revenue and to avoid failures.

It has been claimed, and rightly so, that on many farms throughout the 15-year period from 1930 seed growing reduced the areas of crops and the number of sheep carried and fat lambs produced. This, however, has taken place only on those farms (and they may still be in the majority) where haphazard methods have been used. On farms where seed production has been dovetailed into arable farming combined with sheep raising and where the lessons learnt through the development period have been applied land fertility, crop production, and carrying capacity have improved and revenues have increased.

Use of Built-up Fertility

The basis of sound arable farming is a constant annual supply of first-year harvest paddocks of perennial, short-rotation, or Italian ryegrasses and second-year paddocks of red or white clover sown under conditions suitable to the establishment and growth of pasture seed—conditions which make full use of built-up fertility by adequately-limed and fertilised land and a good fallow and cultivation and which encourage the crop and make the maximum use of the initial vigour which all plants and animals possess in youth.

The basis of all first-year harvests is, of course, yield, and high yield has been found to be associated with high



The use of high-producing strains of grasses and clovers, together with lime and phosphate, has done much to increase the fertility of the arable rolling country in Canterbury.