

laid down (Messrs. Buchanan and Hislop) the rye-grass used consisted of a blend of four lines of certified perennial rye-grass from Hawke's Bay, and a blend of twelve lines in the case of the Canterbury type. In the other trials under review the certified seed of the Hawke's Bay type consisted of a blend of thirty-two lines, and the Canterbury of a blend of twenty lines.

In all cases the fertilizer used at the time of sowing was ammoniated superphosphate, applied at the rate of 2 cwt. per acre. The establishment of the areas could, on the whole, be considered satisfactory, although growth in some cases was seriously retarded by the dry weather experienced soon after the laying down was completed.

The grazing of the fields was carried out under a system of alternate grazing and spelling, and in order to obtain full utilization of the pastures the areas were often stocked with sheep at the rate of from twenty to forty per acre. In this way growth was in most cases rapidly fed off. The plants were then allowed to recover before being again stocked. In the main the Canterbury type of rye-grass proved the more rapid in establishment and in the providing of feed, but after the first few grazings the reduction of rye-grass in most of the Canterbury areas was apparent, and after the first year the death rate of plants was high. The certified type has proved much more persistent, and has provided a reasonably good sward despite the intensely dry spells experienced since the areas were laid down.

In the various grazing trials the difference in sward became most apparent during the autumn of 1932. The rye-grass on the "B" fields showed a definite thinning, and clovers (also to some extent cocksfoot) took up the running, and in the following autumn and winter fully 50 per cent. of the feed was being produced by pasture constituents other than the rye-grass.

During this time the "A" fields in each trial showed a fairly good sward of rye-grass, and there was practically no reduction of the amount of rye-grass, the growth of which, however, definitely depressed the establishment of both the clovers and the cocksfoot.

The certified type has showed to advantage on the lighter types of soil, as well as on the heavier types, while the Canterbury rye-grass has been practically a failure on the lighter types, but has held somewhat better on the heavy soils.

The management of the true type of perennial rye-grass calls for decidedly better control than is necessary in the case of the ordinary Canterbury type. This was clearly demonstrated in some of the trials. When the "A" fields were grazed when growth was about 2 in. high, control was most satisfactory, while in cases where a growth of 4 in. to 5 in. or more was allowed good utilization by sheep was not so readily obtained.

OBSERVATIONS ON THE INDIVIDUAL TRIALS.

I. K. Buchanan, Irwell.—The area on this farm was laid down in March, 1930. The germination of all seeds was remarkably good, the most striking thing about the fields in the early stage being the comparatively rapid growth of the Canterbury type and the light green colour of the foliage. This type was ready to graze approximately