grassed in 1932. For convenience in handling the stock the 24-acre block has been subdivided into five fields varying in acreage from 1 acre up to 8·6 acres. The smaller fields have been reserved for hay and ensilage making and the provision of early spring feed. The other three fields have been grazed in rotation by dry stock.

During 1934 dry stock was maintained on the farm throughout the whole of the winter, and, with the exception of a small supplement of hay fed during the months of July, August, September, and part of October, were entirely dependent on pasture-growth. For the whole year 1934 the 24 acres maintained on an average fourteen head of young heifers, but, in addition, 2·6 acres were shut up for hay and 3·8 acres were shut up for ensilage in the early summer of 1934. It is estimated that these two fields gave approximately 3 tons of hay and 13 tons of prepared ensilage. The following table shows the number of grazing-days throughout the year 1934 on the 24-acre block:—

Number of Grazing-days on 24-acre Block.

	1933.	1934.	1935.
January	..	620	310
February	..	672	277
March	..	744	341
April	..	500	330
May	..	485	341
June	..	300	..
July	..	320*	..
August	..	310*	..
September	..	300*	..
October	..	310*	..
November	119	300	..
December	490	217	..
	609	5,078	1,599

* During these months hay at the rate of 50 lb. per day was fed.

The stock grazed on the pakihi pastures has kept in excellent condition, and certain heifers gained first and second prizes at the recent Agricultural and Pastoral Show at Westport. At the present time over 7 acres of the farm are shut up for spring feed and the ten head of dry stock are being carried successfully on 16 acres.

Experimental Plots.

The results obtained from the large number of small experimental plots confirm those of previous years. In connection with the use of lime, plots treated at the rate of 1 ton of ground limestone per acre began to show a marked falling-off in the fourth year. Where only ½ ton of ground limestone per acre has been used in the initial treatment of pakihi land partial failure of pasture occurred at the end of the second year. The results of these lime-tests indicate the desirability of liming at the rate of ½ ton of ground limestone per acre at the end of the third year after establishment.

The top-dressing of pakihi pastures has again proved of supreme importance in the maintenance of growth. Two hundredweight of superphosphate has given very satisfactory results, but where ensilage and hay are cut the use of potassic manures appears to be very desirable. In those cases where top-dressing has been discontinued very great deterioration in pastures has taken place, but it is interesting to note that plots which have in the past received Nauru rock phosphate have suffered much less than those which received either super or basic slag.

In connection with the trials of individual species of grasses and clovers the best results have been obtained with lotus, white clover, alsike, red clover, crested dogstail, and fog. Great improvement in the growth of all grasses has taken place as soon as lotus or white clover gained free entry into the plots of the individual grass species.

It is interesting to note that plots sown with mixed grasses and clovers six years ago and subject to annual top-dressing treatment continue to give heavy growth of lotus, cocksfoot, red clover, and other pasture components.

Pasture-establishment by Farmers.

The success which has been obtained by the Cawthron Institute in establishing pastures on pakihi land has encouraged farmers both at Westport, Onekaka, Collingwood, and Takaka to grass areas of pakihi land. Generally speaking, the methods which have been employed are those recommended by the Cawthron Institute, but in certain cases modifications have been made to meet the particular conditions ruling on the individual properties of farmers.

At Westport at least three areas, varying in acreage from 5 acres to 30 acres, have been sown with fair results. The financial position of farmers, however, in the provision of annual top-dressings has militated against obtaining optimum pasture-growth.

At Onekaka Mr. F. G. Gibbs has continued the grazing of his 75-acre pakihi farm, and during last season maintained an average of over twenty head of dairy cows during the whole of the milking-season. The cows milked well, and during drought periods more feed was available on the pakihi land than was the case on high-grade pastures on the alluvial flats in the vicinity. Less extensive developments in connection with the establishment of pastures on pakihi land have taken place in the Takaka district and also at Collingwood.