

Ruakura Farm of Instruction.

It may safely be stated that 1916-17 has been a most prosperous year for this station. With few exceptions, results have exceeded expectations, particularly in regard to pasture formation and crop production. One of the most important experiments is in relation to the employment of temporary fillers when laying down permanent pasture. A progress report has already been supplied on this experiment, and a further one will shortly be available. The grass-plot experiments initiated last season have furnished valuable information substantiating the results of the temporary-filler plots. A reduction in the weight of seeding of temporary fillers, judging from their influence over the permanent pasture, is recommended, and a further trial with a lighter seeding immediately suggests itself.

A variety of fertility experiments have also been in progress during the year, while a good deal of work has been done in connection with the testing of seed and plant introductions in the nursery. The growing of red clover for seed was continued on a larger scale. The success of last year's crop proved so encouraging that it was decided to close an extra field for seed. As a result three clover stacks have been harvested. There is not the least doubt that this district will grow excellent red-clover seed, and on account of its market price, which can be based at 1s. per pound, the crop will pay handsomely. Other seeds harvested this last season included *Lotus major*, Western woliths, rye-grass, cocksfoot, mangels, vetches, and horse-beans.

The success which has attended the cultivation of lucerne at this station should dispel all doubts as to its immense value. This year's results cannot fail to impress on farmers, and particularly dairy-farmers, the great returns which can be expected from lucerne. Every care has been exercised in recording full details regarding the lucerne-field from the 31st March, 1916, to the 31st March, 1917, and a special report has been made thereon.*

Considerable progress has been made with the drainage-work this year. Thorough drainage is one of the essentials at Ruakura if development is to be expected. The area still to be drained is about 178 acres, and this is work which should be undertaken as early as possible. The cleaning-out of open drains alone is no small contract, and is work which requires attention annually. Some of these drains, particularly those dangerous to stock, have been piped and filled in. During 1916 over 100 chains of these drains were piped and levelled. During the same time two large fields, Nos. 55 and 56, were thoroughly drained, and the latter brought under the plough. Every acre thus won from the swamp is a valuable addition to Ruakura, and it is these additional acres that increase the carrying-capacity of the farm.

The past season has been no doubt a record one for high prices for live-stock, with the exception of horses. A steady demand is maintained for the best pedigree stock from Ruakura, and all fat stock meets with a ready sale at high figures.

Progress is being made with the building-up of improved herds and flocks. Testing of dairy cows has continued, with the result that several have been culled on their performances. The introduction of the tested Jersey bull Golden Swan should do much to improve the present Jersey herd, as he is beyond doubt the best bull so far introduced. For some time past the very best Shorthorn bulls obtainable have been used on the Shorthorn herd, and their progeny give promise of developing into cows possessing better qualities than their dams. Their butter-fat records are not yet obtainable, but eight heifers by Darbalara bulls are due to calve in the ensuing season as three-year-olds.

Although the demand for Southdown stud sheep was not so great as in previous years there was no difficulty in disposing of all rams offered for sale at this station. Several orders could not be supplied. A new stud ram has been purchased, and it is hoped that he will leave good-quality lambs. The fat-lamb experiment conducted this season placed the Southdown before the Border Leicester for this purpose. A special report dealing with this experiment will be submitted later. The last of the lambs sold at 27s., whereas similar lambs on or near the same date last season only realized 15s. 6d. This, of course, is due to market rates, there being no appreciable difference in the quality of the lambs.

Improvements during the last year have been mainly in the direction of draining, fencing, bringing in of unimproved land, and small additions to existing buildings. No buildings of any consequence have been erected, although urgently required. The building of a new office, and the erection of improved poultry-houses, as recommended last year, have not yet been put in hand. The building of a proper shearing-shed, with suitable sheep-yards adjacent, is work which should be undertaken at an early date.

Ten farm learners are at present undergoing a course of training, and during the year ten have completed their course.

The Ruakura Farm has been under the present direction and management for something under two years. No marked deviation from the policy of the previous administration has occurred during that time. Under this regime varied and excellent services have undoubtedly been rendered to the farming community and the State. It has, however, become increasingly apparent that certain changes may require to be effected in the near future. Especially is it desirable that the scope of the farm, the residential accommodation available, and the opportunities for training should not be limited to ten learners. Too few learners and too many labourers is certainly a state of matters which calls for correction. The time has also arrived for a closer scrutiny of the affairs of the institution with a view to readjustment of expenditure on the various services according as they are of prime or of secondary importance as divisional enterprises. It may be necessary to make very considerable reductions in some directions, as Ruakura now accounts for an undue share of the expenditure on experimental farms.

Moumahaki Experimental Farm.

The year has been a strenuous one for the management; shortage of skilled workmen has made it difficult to effectively carry on general farming operations, consequently experimental work has been considerably curtailed. During the year all employees eligible for military work joined the Forces, thus considerably reducing the efficiency of the staff.

* Published in the Department's Journal for June, 1917.