

and an instructive book in connection with it published by Mr. A. D. Hall, the late Director, under the title "Rothamsted Experiments." An annual report, with a guide to the experimental plots as a supplement, is published each year, which brings the history up to date.

Neither do there seem to be any records (except very brief notes) of either the stock carried by the various paddocks or the crops grown.

The Managers of the various properties complain that with the clerical staff at their disposal this work cannot be done properly. The Board thinks that it is essential that sufficient clerical assistance should be supplied not only to keep the exact records, but also properly to tabulate them and have them made available to the public. Without this, experimental work can be of little value. The cost of this additional assistance, in comparison with the present expenditure on the experimental farms, would not be great, and without these records the work done is likely to be misleading and of little educational value. In the case of Ruakura the office accommodation is sadly inadequate.

ABSENCE OF FARMS IN THE SOUTH ISLAND.

If these farms are to be used for experimental and research work more than they have been in the past it is important to note that they are all situated in the North Island. It is quite true that southern agricultural farming until quite lately was much in advance of that of the North Island, and that they had Lincoln College doing some experimental work for them. But as time goes on, and as land rises in value, and the virgin qualities of the soil are lost, it is evident that one or more experimental farms in the South are just as essential as in the North. Yet it is likely that the money required for this purpose would be very difficult for the Government to find for some time to come. This point has been carefully considered by the Board, and, as will be seen later, their recommendation includes a suggestion that a portion of the North Island farms could be sold without impairing their efficiency, in order to provide others in the South Island. These might form the nucleus from which demonstration plots in various parts of the districts surrounding them might be carried on by officials from the farms, or probably by the cadets or learners who might be receiving their training there.

STUD SHEEP.

The Board was unanimous in thinking that the day had gone past when it was necessary to maintain stud sheep on the experimental farms. All the members who had seen them were of the opinion that they had gone back. None of them show any exceptional quality, and some are inferior. There are large numbers of stud breeders throughout New Zealand of all the breeds of sheep used in this country, and it is not reasonable to expect the Managers of these State farms, working under departmental rules and restrictions and attending at the same time to the vast number of details in connection with the many experiments being carried on, to compete in the production of stud sheep with the specialists who are devoting their whole time to the work. The only breed of sheep that the members have any doubt about is the Ryeland. There are very few of this breed in New Zealand, and until it is proved whether they are suitable or not for our requirements it might be well to retain them. The flocks of this breed at Weraroa and Moumahaki, however, should be joined. If they prove of value there will soon be plenty of breeders ready to take up the work of supplying any demand that may arise for rams of the breed. The Board thinks, therefore, that with the exception of this one breed all the stud sheep should be disposed of and replaced with commercial sheep as they may be required for carrying out grazing, feeding, fattening, and crossing experiments, or for the growing of fat lambs which may be disposed of in the usual manner.

The delay of the Department in replying to Managers' requests for authority to buy store stock is much against the best results being obtained from feeding experiments and the grazing of the farms. If authority has to be obtained it should be granted promptly by wire. A Manager should, however, have the power to buy ordinary commercial stock as required. He could before the end of each month furnish the Department with a return of his probable requirements and sales for the ensuing month, at the same time explaining, if necessary, why his previous estimate has not worked out.

DAIRY HERDS.

Members of the Board are of opinion that the Holstein cattle at Weraroa are a valuable lot. It was questioned whether the Department was right in having imported two bulls from America of an entirely different class, and it was the opinion of one that the progeny of these American cattle were not so good as the old herd. Having this valuable strain, however, it would be better to retain the cattle in the meantime, because all these farms would require a milking-herd. The selection of sires should be left entirely to the man in charge of the herd.

There is nothing special about the Jerseys at Ruakura—in fact, there are many people in the district who are breeding much better animals for stud purposes. This herd might be sold off.

It would be advisable to send the Illawarra cattle to Ruakura for the purpose of having this breed carefully tested as to milking-qualities and general profit with the Shorthorns at present there.

The Moumahaki cattle are a nondescript lot, except one or two good Ayrshires.

The most important demonstration that any of these farms can possibly give, and which should never be lost sight of, is the selection of the dairy animal by test. This could be shown as easily with an ordinary herd—in fact, perhaps better—than with a purebred one. So far as breeding for sale goes, it is the same with the dairy herds as with the stud sheep; the Government farms are not likely to be able to compete against the private owner. There is therefore