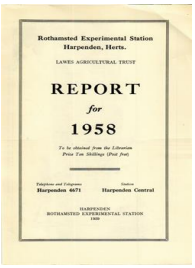
ROTHAMSTED RESEARCH

Report for 1958

Full Table of Content



The Farms : Woburn

J. R. Moffatt

J. R. Moffatt (1959) *The Farms : Woburn ;* Report For 1958, pp 177 - 180 **- DOI: https://doi.org/10.23637/ERADOC-1-91**

old ewes giving a lambing percentage of 174, and the gimmers 131. The gimmers were sold in the spring with lambs at foot. After the lambs had been weaned from the old ewes, the ewes were sold as they became fat. They have been replaced by a new flock of 100 Scotch Half-bred gimmers, which have been mated to Suffolk rams this autumn.

Equipment

Normal replacements accounted for most of the expenditure under this heading, but a concrete-sided silo was erected under the existing barns and filled with new buckrakes.

The platform drier, which was moved in 1957 and re-erected adjoining the circular drying silos of the main grain drying plant, was fitted with its own fan and heaters. A second corn elevator was added to this plant to enable the seed cleaner to be used as a pre-cleaner. This effectively removed the green material and sprouted grain which would otherwise have prolonged the drying operations.

Estate Work

The amount of work involved in the clearing of the derelict orchard in Whittlocks field, bought in 1955, prevented much other estate work. About 75,000 cordon trees and many miles of supporting wire were removed. The land was then ploughed deeply and fallowed for the rest of the year. The field was very foul, and was sprayed in the late autumn with " Dalapon " to kill the couch grass, and also with MCPA.

Staff

J. Hart was appointed Recorder in February 1958.

F. Stokes retired in June 1958 from the position of horseman after almost 30 years of unbroken service.

Woburn

The work of the Woburn Farm is directed and managed by the staff of the Rothamsted Farm. The field experiments are planned by the Field Plots Committee, and the day-to-day planning is done by the bailiff at Woburn.

The unusual weather of 1958 did not affect the crops in the same way as at Rothamsted. The start of land work in the spring was delayed, but all crops grew well in early summer. Most of the barley became lodged shortly before harvest, but the yield of grain was not greatly affected. There was no lodging on either the winter- or the spring-sown wheat, and yields were better than usual. Sugar beet yielded well, and sugar content was high. Beans and potatoes were poor. The King Edward potatoes had a very early and severe attack of Late Blight (*Phytophthora infestans*), which killed the crop before much tuber growth had been made. Autumn land work was held up by the wet weather, and much ploughing remained to be done at the end of the year.

https://doi.org/10.23637/ERADOC-1-91

Cropping

Of the 127 acres farmed, 17 were under wheat, 31 under barley, 8 under beans, 26 under potatoes and 6 under sugar beet. There were smaller areas of kale, lucerne and market-garden crops.

Beans were again grown to prevent too-frequent cropping with cereals, and the acreage of potatoes was limited by the presence of potato-root eelworm. The sugar-beet acreage remained constant.

Cereals

Very little winter wheat was sown, but it stood well. Conditions for the sowing of spring corn were not good, and the seeds germinated unevenly, possibly because of uneven depths of sowing. Cage wheels will be used in future on the tractor pulling the drill to prevent the deep wheel tracks usually made on this light land. Most of the areas were treated with herbicides. The exceptionally heavy rain in June and July caused barley and rye to lodge, but the spring wheat stood well. This may indicate that too little nitrogen was given.

Harvest did not begin until about the end of August and was not finished until mid-October. The barley was combined first; yields were better than had been expected, and the quality was surprisingly good for the season. Most of the spring wheat was cut by binder, but on the plots a combine-harvester was used. Yields were heavier than usual. Herta was the main variety of barley, and Koga II the main wheat variety.

Beans

The area under this crop was sown with winter beans, but they were destroyed by birds. A resowing in spring with tick beans produced a good plant, but subsequent growth was uneven. The crop was kept free from aphids (*Aphis fabae*) by spraying with " Metasystox ". The low yield was ascribed partly to inadequate fertilizer treatment, and a rather low but patchy pH status.

Potatoes

These were planted in good time and under good conditions, and grew well during the summer. This and the wet soil conditions made ridging difficult. A very early attack of potato blight (*Phytophthora infestans*), especially on King Edward, the main variety grown, spread rapidly despite three sprayings. Majestic withstood the attack far better, but the haulm began to turn yellow and die off early in August. Both yield and tuber size of the King Edwards were small because the haulm died early, and to sell as much of the crop as possible, lifting started on the worst-affected areas in August, when there was no riddle-size restriction.

Several areas of twitch (*Agropyrum repens*) in the crops were sprayed with TCA when the stolons were exposed after lifting.

Sugar beet

The crop germinated irregularly, and an attack by flea beetle early in May made it necessary to spray with DDT. Good growth

https://doi.org/10.23637/ERADOC-1-91

was made during the summer on all except the Six-Course Rotation and the Irrigation experiment, where the plant looked uneven and unhealthy. All areas were sprayed in late June with " Metasystox " to control virus yellows. Because of the mild, wet autumn the crop maintained its growth until it was lifted during November. The sugar content (about 16 per cent) was higher than expected, and remained constant throughout the lifting period. Only the last truck-load, which had been clamped for several weeks, gave a lower figure (14·4 per cent).

Market-garden crops

The season favoured the growth of these crops in the experiment in Lansome field. Heavy yields of red beet and early potatoes were obtained, but the transplanted leeks took some time to get established. Weeds grew thickly throughout the summer, and much hand work was necessary.

Grassland

Grass grew slowly in the spring, and the first cut in the Irrigation experiment was not made until mid-May. Throughout the rest of the season the grassland was very productive, and growth was maintained until the end of the year. A total of eight cuts was made on the Irrigation experiment, the last in mid-November. On the Ley–Arable experiment the grazing plots were stocked almost continuously from early spring.

During a short spell of fine weather in the early part of July the small area of hay was made and baled in good condition.

Field Experiments

Details of these will be found on pp. 185–190 below.

Livestock

Cattle

A bunch of Hereford beasts were bought in December 1957 for fattening, mainly on grass. In the early part of the winter they were fed on hay and sugar-beet tops, the tops being later replaced by a small amount of kale and a cheap concentrated ration. They were all outwintered and fattened well during the summer and early autumn.

A further bunch was bought at the end of the year for fattening in 1959.

Pigs

The sties were further improved. The breeding herd of about twenty Large White sows was maintained. Only 49 per cent of the baconers sold in 1958 were in the AA or AA+ grade, and in an attempt to improve upon this grading a Landrace boar is being used on some of the sows. It is too early to see the effect of this.

https://doi.org/10.23637/ERADOC-1-91

Implements

The policy over the past few years has been to replace, gradually, all the out-moded implements by modern equipment, and make Woburn independent of Rothamsted. In the past the conflicting machinery requirements of the two farms have caused much inconvenience to both, particularly at harvest. The usual difficulties were experienced with the 1958 harvest, but these should not recur, as a 10-foot self-propelled combine and a pick-up baler have been transferred permanently to Woburn from Rothamsted. The cereal acreage at Woburn is too small to justify these machines for normal farming, but they are well justified by their advantages when harvesting cereal experiments.

Summary of Cereal Variety Trials at Rothamsted and Woburn, 1955–58

M. J. Hill & J. R. Moffatt

Introduction

Variety trials with winter and spring wheat, spring oats and spring barley incorporating two levels of nitrogen manuring were made on the Rothamsted and Woburn farms between the years 1955 and 1958. Their primary object was to test the suitability of new varieties for use on experiments on the two very different soils, and to compare them with the standard varieties in use on the two farms, but information was also obtained on their response to nitrogen. Trials have not been done with all crops in all years, nor have the varieties grown, or the level of nitrogen used within each trial, been constant.

All the experiments were laid out in a simple randomized block, split plot, design with threefold replication.

Interest centred primarily in yield of grain, but observations were made on all the experiments at Rothamsted, particular attention being paid to lodging.

For the purpose of this summary most of the varieties which were included in only one of a series of trials have been omitted. There are yields for spring wheat and barley at Woburn for only 1 year.

Discussion

Spring wheats. Koga II usually outyielded all the other varieties (Table 1). In the mean yields over the three year period 1955–57 (Table 2) it heads the list at both the high and low levels of nitrogen, although at the high level it is closely rivalled by Svenno. Svenno is interesting because it responds to nitrogen much more than any of the other varieties, and at very high levels of nitrogen it can outyield Koga II, as it did in the 1958 trial. It is, however, somewhat weak in the straw. Atle, which has been replaced by Koga II as our standard variety, has been outyielded by all others, except for Svenno at the low level of nitrogen (Table 2).

In spite of the wet summer of 1958, all the varieties included in this review stood well and there was no sign of lodging at either level

https://doi.org/10.23637/ERADOC-1-91