

- (7) Lupins : Sweet Blue, Sweet Yellow, Sweet White flowering.
- (8) Linen Flax : Stormont Gossamer, Stormont Cirrus, Liral Prince, and three Russian rust-resistant varieties introduced last year.
- (9) Mangels : Yellow Globe.
- (10) Carrots : Holmes Improved.

On behalf of Grasslands Division—

- (11) Grasses : Perennial, Italian, and short-rotation rye-grasses, timothy.
- (12) Clovers : Montgomery Red, Broad Red, White.

#### OTHER ACTIVITIES

(1) *Weed Control*.—Further trials with Sinox confirmed previous results—*i.e.*, that it gives excellent control of weeds in linen flax when correctly used, but that we cannot as yet define sufficiently accurately the conditions of use to enable us to recommend its general use for this purpose.

Preliminary trials have been made with Methoxone and Weedone received late in the season. As the real efficacy of these hormone weed-killers against deep-rooted perennial weeds cannot be assessed for some months, no report is yet available.

(2) *Linen Flax Manurial Trial*.—A comprehensive manurial trial was undertaken. This was designed to determine, in terms of total crop yield, line fibre yield, and seed yield, the effects of applying several fertilizers alone or in combination.

(3) *Green-manuring Trials*.—A trial was carried out to determine the effect on the yield of wheat of ploughing in lupins at different stages of maturity. The results obtained were in favour of delaying the ploughing-in of the lupins until the crop was at the full pod stage, but further evidence is necessary before any recommendation could be made.

(4) *Cultivation Trial*.—Two trials, one observational and one replicated, have been arranged to determine the effects on subsequent crops of different methods of cultivation. As the basic operation, discing is to be compared with shallow ploughing and with deep ploughing.

(5) *Vegetable Work*.—In order to obtain additional information concerning varietal behaviour preparatory to the establishment of a Vegetable Research Section, a further series of vegetable varieties was grown. This included cabbage, cauliflower, broccoli, Brussels sprouts, spinach, carrots, parsnips, red beet, onions, lettuce, radishes, swedes, and sweet corn.

(6) *Grassland Section*.—This is under the control of the Grasslands Division and the following series of investigations is being undertaken :—

- (a) Trials to determine the comparative performances of several hybrid rye-grass types, either alone or in mixtures, under two distinct grazing techniques.
- (b) Trials to determine the changes in a normal sward which may be brought about by the “return” or “no return” of animal dung and urine with super plus lime superimposed at three different rates of sowing or with no fertilizer added.
- (c) Seed-production trials with cocksfoot.
- (d) Single plant studies and plot trials of grass and clover breeding material.

#### BOTANY DIVISION

Director : Dr. H. H. ALLAN

STAFF AND ACCOMMODATION

Owing to extreme shortage of staff it has not been possible to expand the work of the Division to cope fully with many urgent problems that have come before it during the year. In particular it has not been possible to render the full service to Catchment Boards that they desire. The Division still suffers also from being housed in quarters not originally designed for its purposes, and not capable of being really suitably modified. Even with an inadequate staff the present quarters are insufficient in space.