

The following is a summary of samples received for service reports and research investigations:—

Soils—

Research	..	..	..	743
Service	..	..	..	270
Limestones	..	..	..	174
Fertilizers	..	..	..	197
Pastures	..	..	..	1,740
Weedicides	..	..	..	33
Miscellaneous	..	..	..	33
Total	..	..	..	3,190

Weed Control.—At the commencement of the year there were 58 field-experiment plots in weed-control trials under observation. During the year 306 field plots were laid out in 28 experimental series, and at the end of the year 290 plots remain under observation or are scheduled for retreatment at a later date.

The main weeds on which work was carried out were ragwort, blackberry, gorse, wild garlic, *Oxalis cernus*, periwinkle, triquetrous onion, stinging nettle, *Poa aquatica*, *Glyceria fluitans*, Californian thistle, willows, creeping buttercup, Scotch thistle, variegated thistle, and cress.

In addition to the above, observations have been made of a considerable number of incidental weeds not enumerated, while a very large species tolerance trial was laid down in the spring wherein some 70 species of pasture crop and weed species were put on trial for tolerance to 7 weedicides applied at various stages of growth.

The following general indications are well established and are worth recording at this stage—

- (1) *Blackberry*.—None of the chemicals on trial is alone capable of a satisfactory kill by one or more applications at any time of the year. The eradication of blackberry requires repeated treatments combined with a mechanical method for removal of rubbish to permit access by stock, re-establishment of pasture, and controlled grazing.
- (2) *Gorse*.—This has been shown to be susceptible to hormones and other weedicides, but almost invariably treatment is followed by regrowth from basal shoots.
- (3) *Ragwort*.—This weed can be satisfactorily controlled, if not exterminated, by hormone weed-killers applied as sprays, provided they are applied by the beginning of December. Later treatment may not react quickly enough to inhibit flowering. Ragwort can be satisfactorily controlled and flowering inhibited at later stages by chlorate spraying, and, actually, the later the ragwort is treated by chlorate the more readily it is controlled.
- (4) Twin cress can be controlled by hormone weedicides.
- (5) Californian thistle is not controlled by single applications of any of the many weedicides on trial.

Considerable supplies of a very wide range of weedicides are now on hand, but many arrived too late during the past season to be put on trial under satisfactory conditions. There are on hand some fifteen hormone preparations; five arsenicals; four chlorate; a small amount of ammonium