

ERADICATION OF GORSE AND BRIARS

By EDNA BURNS, B.AGR.SC.

ONE of the most difficult problems in planting waste land, such as that covered by gorse, briars and blackthorn is the eradication of that scrub at the lowest cost. In years gone by such methods as burning and cutting were tried, but the cost per acre was high, and also these operations could not be regarded as being entirely satisfactory, because, as is commonly known, these types of scrub re-shoot after cutting.

The soil types on which one finds the gorses i.e. *Ulex Europaeus*, *Ulex Gallii*, and *Ulex Nanus*, are in most cases quite fertile, and the same applies to the briars and the blackthorns. Taking this country on the whole we find that a lot of our plantable land comes into the category of brushwood covered land. One generally finds heaths whose common associates of calluna include dwarf furze (*Ulex Nanus*), together with *vaccinium*, *Erica* and bracken, and these cannot be regarded as being poor from the forestry point of view.

Trial No. 1.

GORSE ERADICATION WITH PHORDEX

Within the past few years new chemicals have come on the market, some of which have proved themselves in the eradication of gorse. These chemicals gain entrance through the stomata of the leaves or spines. Then during the process of respiration the chemical is taken into the leaves, stems and roots of the plant and in this way kills it.

Phordex is one of these new chemicals which according to the trials carried out at Johnstown Castle eradicated gorse completely. This chemical is a mixture of 2, 4, 5—*trichlorophenoxyacetic acid* (2, 4, 5 T) and 2, 4, *dichloro phenoxyacetic acid* (2, 4D). Phordex controls quite a number of plants which form most of our scrub.

OUTLINE OF TRIAL—GORSE

A small area was treated. 15 yards \times 20 yards i.e. approximately 1/16 of an acre. The gorse in this plot was about three feet high, and was so thick that in order to facilitate spraying, paths had to be cut through the area.

Rate of application (1—100) i.e. one gallon of Phordex in one hundred gallons of water.

Time of application : 3/9/53.

Six days had elapsed before the gorse showed any signs of being affected. The flowers, spines, etc. turned brown and on cutting sections at the base of the stems, it was discovered that the chemical had affected this part also. These sections showed drying and discolouration of the cells. Four weeks later the gorse was completely burned, and showed no signs of recovery. It was thought that at this stage there might be a

tendency for the plots to reshoot at the base, but fortunately this did not occur.

For comparative purposes half of the plot received a second application at the same rate (1—100) but there was little or no difference between the results of the two treatments.

Two years have elapsed since this trial was carried out and at the present day the gorse shows no sign of recovery, but is in a state of complete decay. On taking up some of the roots it was discovered that these too were rotten, and brittle, and presented no difficulty in pulling by hand. At this stage it would be a good practice to plough through the area, so as to get rid of the roots.

The spraying was done in this trial, as in the rest, with an ordinary knapsack sprayer using the high volume nozzle. An important point to note is that the spraying be carried out during fine weather, but not during excessively hot weather, nor should it be done during drought.

The approximate time taken to spray 1/16 of an acre was fifteen minutes.

The cost of one gallon of Phordex is £5 10s. 0d. and the concentration 1—100 (water) is sufficient to treat one acre.

Trial No. 2.

BRIAR ERADICATION WITH PHORDEX

The rate, strength, and time of application were similar to those of the gorse trial. The briars were much easier to spray since they were only two feet or less high, and for that reason could be easily walked through. Burning of the leaves and stems occurred after two days and two weeks later the plot was completely burned. Here again there was no sign of recovery nor was there any tendency to reshoot. The area was 1/16 of an acre and the time spent in spraying was eleven minutes. The rate 1—100 (water) was sufficient to treat one acre.

Trial No. 3.

GORSE ERADICATION WITH S.B.K.

S.B.K. which is also a comparatively new chemical was tried on the eradication of gorse. It contains the chemical 2, 4, 5 T, that is 2, 4, 5—trichlorophenoxyacetic acid. The spraying was carried out on 1/16 acre plot on 24/8/53, at a strength of 1—50 using T.V.O. The results were somewhat quick to show up since on the third day after spraying the spines showed signs of burning. Twenty days later the area was the same as the Phordex trial as it was completely dead and showed no sign of recovery. The roots and stems are at the present day dried up and brittle, and for that reason S.B.K. can also be regarded as being successful.

The cost of one gallon of S.B.K. is £7 10s. 0d.

Trial No. 4.**BRIAR ERADICATION WITH S.B.K.**

Rate of application : $\frac{1}{2}$ gallon of S.B.K. to
50 gallons of water (1-100).

Time of application : 28-8-'53.

The plot tried out was similar in area, and height of briars to the Phordex plot. Burning of leaves, and stems took place on the third day, and on observations made last July ('55) it is quite obvious that the briars have been eradicated.

SUMMARY

As the reader has seen a number of trials have been carried out to investigate the potentialities of Phordex and S.B.K. for the eradication of gorse, and briars. Both Phordex, and S.B.K. proved successful in eradicating gorse, and briars at their respective strengths. The machine used was a knapsack sprayer and this should be thoroughly cleaned after each operation. Another point of importance is that the spraying be carried out during fine weather. As with most sprays it is wise to use rubber gloves while handling these chemicals. Neither Phordex nor S.B.K. are poisonous, nor have they shown any ill-effect on soil fertility.