SOME OBSERVATIONS ON HORMONE SPRAYING

By - L.B. Scott.

I should like to present the case of a farmer owning say 200 acres of good arable land where cropping is the major activity. Let us assume that the soil is good, the methods of cultivation thorough, the manuring adequate, and the care of crops and pastures reasonably sound. The rotation is briefly out of grass into peas then wheat, barley - maybe a third grain crop, fallow and sow down in certified grasses and clovers. By fallow I mean the continuous working of the soil from the beginning of October to end of January. The header harvester is largely used, but the weeds are bagged and later destroyed.

Such farms can produce large and profitable crops, but there is one problem holding up the cropping programme - the weed problem. No matter what care the farmer takes, the header broadcasts some weed seeds and there are the wind borne seeds, particularly the thistles. Fallowing will clean the ground, but in my district the third year finds the Californian thistle well established. This means we must try to grow crops and at the same time check the weeds and so we have turned to the use of hormone sprays. Even if hormones do not completely eradicate the weeds but enable us to harvest our crops satisfactorily, surely that is worth while. My spraying was mainly to check and kill Californian thistle, and in the barley crop I found I could by the use of Agroxone 1-60, stop normal growth without the barley showing any signs of punishment. I know of no other means by which I could have got equal results. In passing I might mention that my spraying has been done both by machine and knapsack sprayers. This year it is my intention to treat wheat.

The gorse hedges had to be dealt with for they form a nursery for all my weeds and no ordinary means deals with them satisfactorily. I used Weedone 1-60 and the success that attended our efforts was most encouraging - all may not have been killed, but all were checked and did not seed. The next year found a marked decrease in population and here again some were probably fresh seed germinated. The second year the hedges were done by knapsack sprayers. It did not take long nor use much spray. The gorse was not affected in any way.

Thistles growing amongst the heaps of timber such as fencing posts and strainers were easily dealt with, and here I got 100% kill with Weedone. By kill I mean that they didn't come up the following year. A Young Pinus radiata plantation had Californian thistles in it and here I was a little nervous but again Weedone 1-60 killed the thistles. The trees were two year olds planted two years so it was impossible to spray thistles and not the trees and I feared the worst, but beyond looking a little unhappy for a fortnight they seemed none the worse and certainly did not lose their needles.

With the eradication of Californian thistle the opinion I formed was that I did best when I sprayed in the early-bud stage in early December on a hot day and early in the day, preferably morning. Under these conditions I did well even with the weak solutions. One day the mixing was messed up and unknowing I used a 1% solution and apparently got the desired result.

I had no luck with hemlock and cleavers and mixed results with fennel, but cleaned up the Scotch thistles, docks and convolvulus.

QUESTIONS AND DISCUSSION

MR. ALLAN: When I sprayed wheat it was fifteen inches high - too high - and a third of the turnips were in flower three inches above the wheat. The turnip flowers were tipping the boom in some cases. I made a few wheel tracks in the wheat but it certainly paid me all the same. Turnips will take spray right up to flowering time, but six inches is probably the best height.

MR. BONSELL (Blenheim): We have had a little experience with broad red and subterranean clover spraying, not so much for Californian thistle as for winged thistle, rib grass and docks. Using Weedar we have had

a pretty good control of thistles, certainly of rib grass and to a certain extent Californian thistle. The day after spraying, the clover looked very sick, but in no case did we kill any of the crop. The crops yielded round about a bag to a bag and a half an acre in that particular area.

MR. IVERSEN: I hear that in South Australia wild turnips was very well controlled with 1/6 lb. in 16 gallons of water.

MR. BARRAUD: I have been in South Australia and I can endorse Mr. Iversen's remarks. As for spraying red clover I think the conference should know it can be very dangerous if any esters are used. Amine salts are used quite extensively throughout Manawatu with **spectacular results**.

MR. JOHNSON: (Christchurch) I understood Mr. Allan to say that when he sprayed his peas they showed no effects. In my experience of pea crops the lower leaves showed some signs of scorch, but the eventual yield of the crops was not affected by that scorch. Did Mr. Allan's crop show any signs of scorch?

MR. ALLAN: The first week they took on that curling effect and I was prepared to see them die. After another week or ten days they straightened up and they seemed to grow quicker. They flowered and seemed to pod the same as others. This paddock threshed 52 bushels but I was not growling.

* * *
*