

It will be readily observed that four applications were more effective in controlling the numbers of thrips than two. Nevertheless, the results obtained from two sprayings were quite satisfactory, so much so that in most cases this would be all that would be required.

It is interesting to note the marked difference between the appearance and length of the stamens in the blossoms of the oil-treated trees and those in the controls. In the former, they were fully twice as large as in the latter, white in colour, vigorous, and fairly well spread, thus contrasting readily with the brown, shrivelled stamens of the unsprayed blossoms, which, because of their being deformed by the feeding of the thrips, prevented the rapid penetration of the spraying mixture into the receptacles where large numbers of larvæ were feeding.

THE VALUE OF EARLY AND LATE APPLICATIONS.

In order to determine the comparative value of early and late applications, a block of Duchess apple-trees was divided into three sections. The first section received two miscible oil-nicotine sprays, one on April 3 and the other on April 28. Section 2 received a treatment on April 3 and section 3 on April 28. The results were recorded as follows:—

TABLE IX.—RESULTS OF EXAMINATION OF THREE SECTIONS IN A BLOCK OF DUCHESS TREES IN MAY, SPRAYED RESPECTIVELY, (1), ON APRIL 3 AND 28; (2), ON APRIL 3; (3), ON APRIL 28.

Section.	Treatment.	Average Number of Larvæ per 100 Calyces After Spraying.	Average Number of Larvæ per 100 Leaves After Spraying.	Percentage Mortality.
1.....	Sprayed.....	66	2	
	Control.....	347	230	88.1
2.....	Sprayed.....	61	19	
	Control.....	243	70	74.5
3.....	Sprayed.....	132	16	
	Control.....	205	100	51.5

Two sprayings gave the best results, and it is shown that the early application surpassed the later in its effectiveness. From this and other experimental evidence it is concluded that, if circumstances demand the making of but one treatment, it is better that it should be an early than a late one. Fortunately, the adoption of such a course fits in admirably with the later sprayings as suggested in the spraying calendar (p. 49) which has been constructed as a guide to the orchardist for the control of orchard pests and diseases in general. In the above table, contrary to what might be expected, the counts for the block which received two treatments do not differ materially from those of the block which received but a single early application. One would naturally expect to find a lesser number of larvæ in the section twice sprayed. This contradiction can be reasonably accounted for by the fact that there was a constant migration of adults from tree to tree during the season of flight. It is impossible, therefore, to obviate the chances of a re-infestation in the course of field experiments or to confine it to limits which could be considered negligible. The figures as given, however, are both suggestive and significant. The general results attending the use of the whale-oil-soap-nicotine mixture closely approximate in degree to those of the oil-nicotine mixtures. Consequently, it would be superfluous to make other than this brief mention of them.