CONTROL OF ROOT-KNOT, II

By J. R. Watson

Root-knot is one of the most widespread and destructive diseases with which the Florida trucker has to contend. The parasite causing the disease is so abundant thruout the well drained sandy soils of the state that it is found in practically every field cleared for even a few years. Newly cleared land is usually free from the worms, root-knot nematodes. However, this is by no means always true. On stiff clay soils or any wet soils they are not nearly as destructive as on well drained sandy soils.

The entomologist of the Florida Experiment Station has been working on this problem for several years and has published a bulletin (number 136) and several reports (An. Repts. Fla. Agri. Exp. Sta., 1916, 1917, 1918).

The aim of this bulletin is to present to farmers and truckers only those details essential to the intelligent treating of infested fields and to make public the main results of recent experiments. A more detailed account of the experiments upon which these recommendations are based may be obtained from the reports listed above.

In all these experiments the method of testing the absence, presence or abundance of the nematodes in the soil has been by planting plots, after treatment, to highly susceptible crops and noting the presence or absence of the characteristic knots on the roots, as well as their abundance, compared with crops planted the same day on adjoining untreated plots.

The worms are too small to make direct observations in the soil practicable. The direct effect of the reagents used has been observed on the worms under a microscope. The roots with the galls on them have been dipped directly into the solution used and the effects noted. Field conditions, however, are so different, with the worms imbedded in the roots in the soil, that apparently little of a practical value as to dosage, etc., can be learned from laboratory experiments.

THE CAUSE OF ROOT-KNOT

Root-knot derives its name from the large, irregular, swollen, knotted appearance of the roots of affected plants. These should