

dormant for a long period. The eggs of nematodes are capable of lying dormant in the soil for months or even years in an "encysted" stage. They are inclosed in a thick coat which resists the action of the weather and preserves the organism. But, if moisture, the proper amount of heat, and air are present in the soil, the eggs sooner or later hatch. During a greater portion of winter the necessary heat and moisture are lacking sometimes; but during summer there is ample heat, and usually ample moisture, but sometimes insufficient air in the soil. The heavy rains of summer often compact the surface and fill the pores of the soil with water until air cannot readily enter. This is shown by the acid reaction and the general growth of the inch-high sedge, *Eleocharis*, often called "moss."

In these experiments, therefore, the soil has been kept well supplied with air by constant cultivation so as to insure hatching of the eggs. The plots are cultivated at least once a week and more often, in the case of heavy rains, the aim being to maintain a constant soil mulch and to break up crusts as soon as formed. At the same time the ground was kept free of all vegetation so as to starve the nematodes. This has been tried out during both winter and summer. Some of the plots were kept fallow from May to October, others from May to August, others from June to September, others from July to October, and others from October to April. The winter fallow considerably reduced the infestation as compared with plots kept in truck crops but not nearly as well as did the summer fallow. The latter greatly reduced the infestation. In no case, however, was there anywhere near complete eradication. In most cases there were more nematodes in the fallowed soil than in soil treated with "cyanamid" or sodium cyanide and ammonium sulphate.

As was to be expected this fallowing treatment proved destructive to soil fertility. Not only was much of the humus in the soil destroyed but the bacterial content doubtless was reduced greatly. The soil was "dead" as the result of the action of the hot sun on the bare ground and the leaching effects of the heavy summer rains. This deleterious effect on the soil is a serious objection to this method of combating nematodes. Nevertheless, it should be useful under some circumstances, as on lands rich in humus or on small truck farms where the owner can afford to restore the fertility and soil organisms by the liberal use of manure and other fertilizers.