

Nematode Control Recommendations for Corn

Nematode surveys conducted on the Delmarva peninsula in the late 1970's demonstrated that there are varied populations of different plant parasitic nematodes on farms throughout Delaware. Threshold levels (nematode numbers at which plant injury may occur) have been established for certain of these nematodes. Nematode counts at or above these threshold levels should be considered as a basis for the implementation of control measures for susceptible crops. There are numerous cultural practices (rotation, fallow, resistant and tolerant varieties, etc.) which will reduce nematode populations. However, at times, such practices are not possible or feasible. When this is the case, the use of chemicals (nematicides) for nematode control should be considered in addition to cultural controls.

*THRESHOLD LEVELS

<u>Damaging Nematode</u>	<u>Fall Sampling</u>	<u>Spring Sampling</u>
Root-Knot	500+	200+
Lesion	800+	500+
Root-Knot +	250+ +	100+ +
Lesion	550+	400+
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Total	800+	500+

*Above Threshold Levels per 250 cc. (1/2 pint) soil sample.

NOTE

1. When EITHER root-knot or lesion nematodes are present in a soil sample in numbers at or above the threshold level, control should be considered.
2. For Root-Knot and Lesion COMBINATIONS, a minimum number of 250 Root-Knot nematodes in the Fall sampling, and 100 Root-Knot nematodes in the Spring sampling should be present before control measures are considered.

3. Stunt, Spiral, Lance, Dagger, and Stubby root nematodes are also often detected in samples assayed from corn fields. At the present time, knowledge of the need for control measures for these nematodes on corn in Delaware is limited. Recommendations for control of these nematodes will be indicated on assay report forms if control is considered advisable.

Control Measures

A. Non-chemical control:

1. Rotation

As far as can be determined at the present time, no rotations feasible for the Delaware area will successfully reduce nematode populations to levels considered insignificant for corn.

2. Green manures and soil amendments

In general, the incorporation of large amounts of organic matter into the soil reduces populations of plant-feeding nematodes. The decomposition products of some plants kill nematodes. These include butyric acid released during the decomposition of rye and timothy, and isothiocyanates released during the decomposition of rapeseed and other plants in the genus *Brassica*. Maximum benefit of these "natural" nematicides is obtained when the plant material is incorporated into the soil as green manure. Research in this area is continuing.

B. Chemical control:

The following nematicides are labeled for use on corn:

Counter 20CR - In-furrow, 6 oz. Per 1,000 ft. of row for any row spacing (minimum 20" row spacing). Counter is labeled for lesion, spiral, stunt, stubby-root, and dagger nematodes. See label for insect control and application directions. Use of Accent or Beacon herbicide on corn treated with Counter may cause severe crop injury.

Mocap 10 G - Follow label directions for rates because they vary with row width. Do not apply in-furrow. Apply in band over the row and lightly incorporate.

Caution: The information and recommendations in these fact sheets were developed for Delaware conditions and may not apply in other areas.