12TH ANNUAL ALMOND RESEARCH CONFERENCE, DECEMBER 4, 1984, SACRAMENTO

Project No. 84-S1 - Almond Diseases
Statewide Nematode Survey of Almonds

Project Leader: Dr. M. V. McKenry (209) 646-2794
University of California, KEARNEY
9240 So. Riverbend Ave.
Parlier, CA 93648

Personnel: Joe Kretsch

Objectives: To conduct statewide survey of nematodes associated with almond production.

Interpretive Summary:

This first progress report is based on the findings of 120 soil samples taken from 30 almond orchards. These findings should be considered as an on-going survey rather than completed work. At this point we do not have enough samples to build confidence into our findings. Our findings are of two kinds A) Results confirming what we would have expected or what has already been reported from crops other than almond. B) New questions or findings.

A. Confirming of other findings:

1. Dagger nematode (Xiphinema americanum) can be found across all soil texture from clay to sand. Population levels seldom exceed 100 nematodes per 250 cc soil samples.

2. Spiral nematodes (Helicotylenchus dihystera) is associated with finer textured soils stretching from south of Hanford to throughout northern growing regions.

3. Ring nematode (Criconemella xenoplax) is the dominant nematode in sandy soils and is in association with bacterial canker complex.

4. Root lesion nematode (Pratylenchus vulnus) is a dominant nematode on tree fruit from Merced through Stockton. It also occurs sporadically throughout the Central Valley.

5. Root knot nematodes (Meloidogyne spp) generally occurs at very low population levels on Nemaguard or Marianna rootstock. It is most common south of Modesto on susceptible rootstocks. Thus far we have found it on only a single orchard on Lovell rootstock in the Durham area.

6. Pin nematode (Paratylenchus hamatus) and stubby root nematode (Paratrichodorus minor) are commonly associated with soils of the San Joaquin Valley but it is not common in the Sacramento Valley.

B. New findings:

1. Dagger nematode is the predominate nematode of almonds north of Stockton.

2. Spiral nematode occurs on clay soils but the regularity of its occurence on almonds appears unique.

3. Ring nematode has been occasionally found at low population levels throughout the surveyed area. It is the dominant nematode in three areas sampled thus far. They include Ripon, Escalon and Caruthers.

4. Among almond orchards the root lesion nematode is not a dominant nematode except in the area from Merced to Stockton. Walnut groves statewide, on the other hand are commonly infested with root lesion nematode. Reasons for this apparent difference are not available.

If any of these findings stimulate questions or give validity to the personal experiences of farm advisors PCA's or growers; we would appreciate your sharing them with us at this meeting. We solicit your comments.