Soil Technologies Corp.
Research and Development Department

Research Report

Title: Field Trials of Armorex[1] on Root-Knot Nematodes in Tomato

Location: Kumluka, Turkey

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Crop: Tomato (in greenhouse)

Date: January 2015

Abstract:
The purpose of this study was to evaluate the effect of Armorex on tomato plants having an extensive Root-knot (Meloidogyne) nematode infestation of the root system. The extent of the infestation was such that growers considered abandoning the entire plantation. Two applications of Armorex were applied to the treated area. The tomato plants of the treated area recovered and produced an average crop while the tomato plants in the control area died early and produced a 50% lower yield.

Methods:
The tomatoes were transplanted in the greenhouse in September 2014. There had been no preplant treatment for nematode control. Within the first three weeks of transplant the tomato plants had developed severe signs of Root-knot nematode damage. Widespread gall formation was consistent throughout the greenhouse. The infestation was such that it warranted abandoning the plantation. One month after the transplant date, a section of the greenhouse was left as a control while the rest was treated with Armorex.

Protocol:
Armorex was applied by injection to the irrigation system. The dosage was 0.15 cc per square meter (150 cc/1000m^2.) A second application of the same dosage was done one week later.

Results:
The treated area recovered from the nematode infestation. There was a very obvious reduction of gall counts within the treated area and plant growth returned to normal. The

[1] Armorex is a Minimum-risk pesticide used as a biocontrol for soil pests and parasitic nematodes. Armorex is manufactured by Soil Technologies Corp. Fairfield Iowa USA.

tomato crop yields were approximately normal for a reasonably healthy greenhouse in the region.

The control area continued to have nematode damage. The plants died early and were removed from the greenhouse. The tomato crop yield of the control section was 50% lower than that of the treated area.

Conclusions:

The field trial results of this study indicate that Armorex has the potential to control Root-knot nematode even when well established nematode populations and high gall counts are present. Moreover, there is potential for tomato plant recovery and normal crop production in tomatoes having Root-knot nematode infestations through the use of Armorex as a nematode control agent.