Soil Technologies Corp.
Research and Development Department

Research Report

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

Location: Hasyurt, Turkey

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Crop: Cucumber (in greenhouse)

Date: January 2015

Abstract:
The purpose of this study was to evaluate the effect of Armorex on cucumber plants with severe Root-knot (*Meloidogyne spp.*) nematode infestation. The extent of the infestation was such that growers were considering abandoning the entire plantation. Three applications of Armorex were applied to the treated area. The cucumber plants of the treated area recovered significantly with cessation of gall formation on the cucumber's root system, and produced a healthy crop.

Methods:
The cucumbers were transplanted to 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, the entire greenhouse 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 three days later. A third, and final application was done four days after the second application.

[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.

Results:
The treated area recovered from the nematode infestation. There was a cessation of gall formation on the cucumber's root system and extensive growth of healthy new roots. The recovery was such that the grower reported that the yield for the greenhouse was approximately normal, as expected in a reasonably healthy greenhouse in the region.

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 cucumber plant recovery, including development of new healthy roots and near normal crop production in cucumbers suffering from Root-knot nematode infestations through the use of Armorex as a nematode control agent.