Soil Technologies Corp.
Research and Development Department

Research Report

Title: Field Trial Samples of Banana Roots Treated with Intercept[1]

Location: Guayaquil, Ecuador

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Crop: Banana, Cavendish clone Valery

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Abstract:
The purpose of this report is to document the root growth of banana plants as part of a field trial of Intercept on banana plants. Photos of root cross sections and root mass show signs of increased root hairs and root mass, improved health and reduced damage after three applications of Intercept. Additionally, plants treated with Intercept had a reduced nematode count of *Radopholus similis*; treated plants on average had a 35% lower count than untreated plants. Yields of the treated plants averaged 44 boxes per hectare more than the control.

Methods:
Test were performed at Hacienda Maria Isabel on banana plants that had been established for seven years. Random tests were performed with three repetitions. The treated plots received three applications of Intercept. The dosage rate per application was .7 ml/plant. The control was left untreated.

[1]Intercept is an OMRI listed soil microbial inoculant.
Intercept is manufactured by Soil Technologies Corp. Fairfield, IA USA.

Results:

Qualitative results can be observed in the photos taken after field examination of the banana roots of treated and untreated plants. Photos 1 and 2 show the longitudinal cross section of the banana roots. Photos 3 and 4 show the root mass.

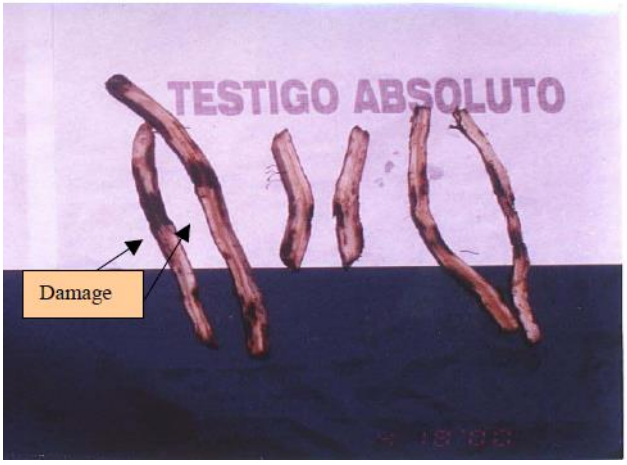

Photo 1: Control root cross section

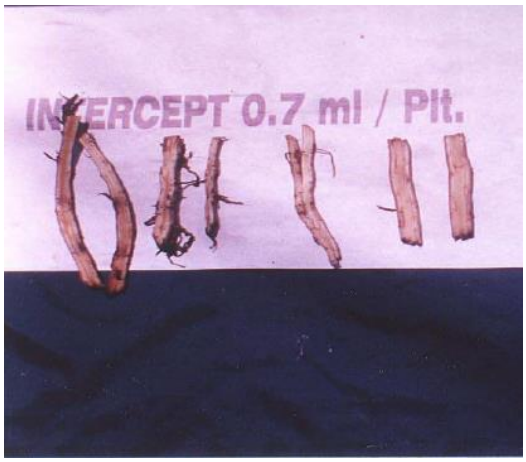

Photo 2: Treated root cross section

Photo 3: Control root mass

Photo 4: Treated root mass

Nematode counts were taken during the third application cycle. Counts of *Radolpholus similis* had a 35% lower count in the treated banana plants than in the control. The nematode counts were taken as a sample per 100 grams of root mass. Chart 1 (below) shows average results of the nematode counts. It should be noted that Intercept is not a nematicide and that the reduced nematode counts could be attributed to the biological protective nature of the inoculating species and overall plant and root heath.

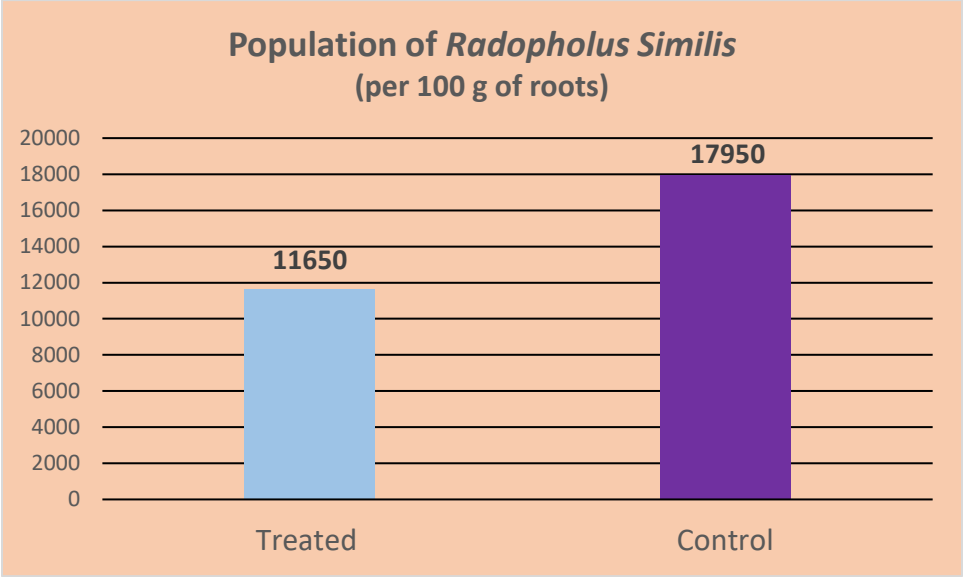

Chart 1: Nematode populations of *Radopholus similis*

Yields of treated and control plant were measured. The treated plants yielded 44 boxes per hectare more than the control. Chart 2 shows the yield increase. demonstration of overall plant health.

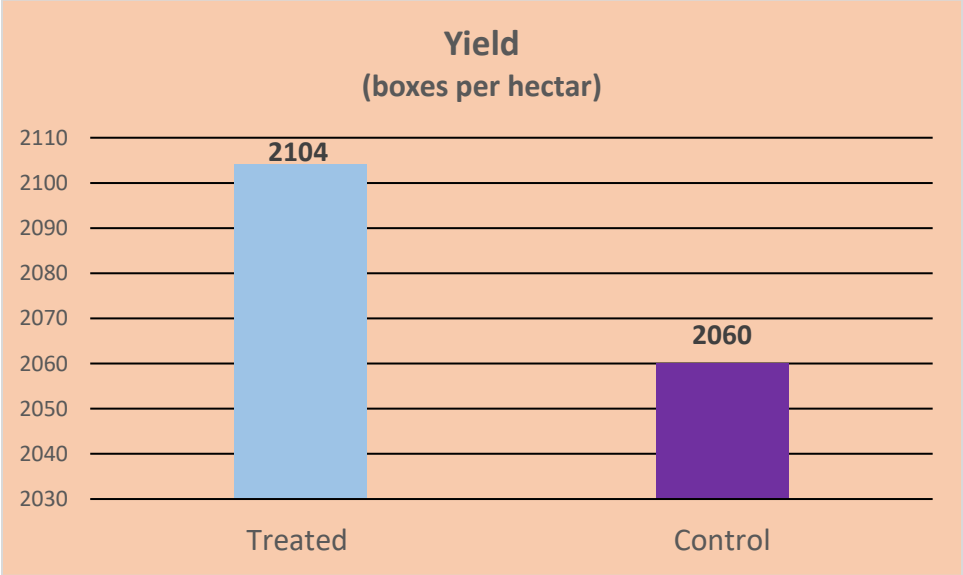

Chart 2: Yield of banana fruit

Conclusions:

The field trial results of this study demonstrate increased overall plant health in treated plants. Intercept has the potential to minimize damage to banana roots while increasing root health and root mass and overall plant production. Intercept applications helped protect banana plant roots and reduce nematode damage and counts while increasing yields.