

**Soil Technologies Corp.
Research and Development Department**



SOILTECH
Teaming With Biology

Research Report

Date: October 31, 2019

Title: Nematode control efficacy using Armorex¹, Bac-Pack¹

Location: Moorings Country Club Naples, FL

Principal Investigators: Dale Walters, CGCS

Crop: Turfgrass **Cultivar:** Bermuda 'Celebration'

Abstract:

The purpose of this study was to evaluate the financial impact and efficacy of Armorex and Bac-Pack for nematode control on golf course turf. Two ¼ acre fairway plots were tested. Nematode counts were analyzed before and after completion of the protocol. The treatment protocol shows efficacy in the control of infestations with high nematode counts with an average nematode reduction of 78%. The cost of the treatment protocol of Armorex and Bac-Pack was \$442.75/ac.

Methods:

Plot Size: ¼ acre

Two plots were selected that showed signs of nematode damage. Soil samples of 100 cc were taken on June 10th, 2019 from both plots. Soil samples were sent to the University of Florida Nematode Assay Laboratory for microscopy and visual observation including nematode counts.

Protocol:

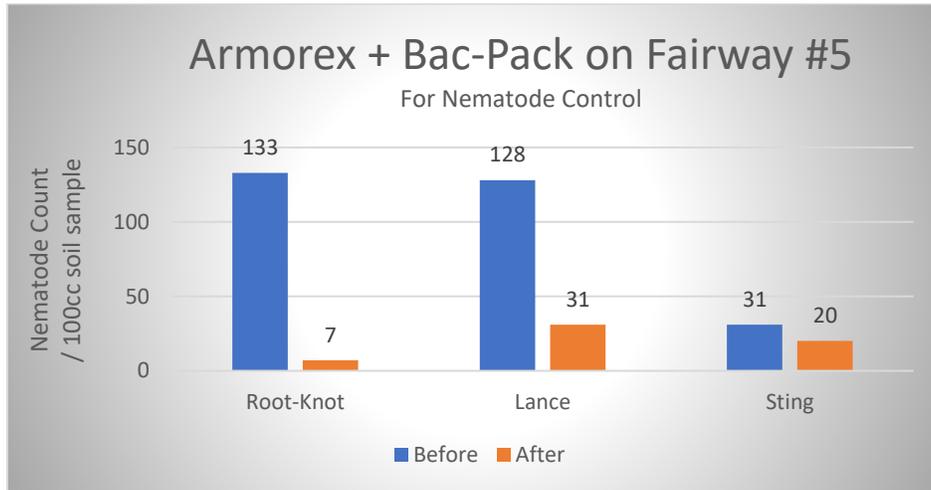
Armorex and Bac-Pack treatment: Both plots received the same treatments on the same days. On June 15th Armorex was applied at a rate of 2.25 gal/ac. On June 29th Bac-Pack was applied at a rate of 32 oz/ac. On July 13th Bac-Pack was applied at a rate of 32 oz/ac.

Data:

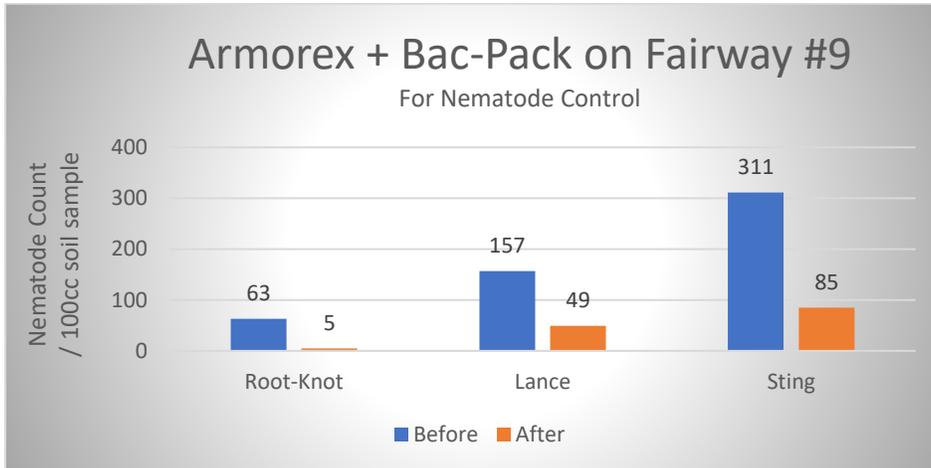
Soil samples of 100 cc were taken on July 29, 2019 for the two plots. Soil samples were sent to the University of Florida Nematode Assay Laboratory for microscopy and visual observation including nematode counts.

¹ Armorex and Bac-Pack are products of Soil Technologies Corp.

Initial nematode counts found three species of nematodes with high nematode infestations. Root-knot (*Meloidogyne*), Lance (*Hoplolaimus*), Sting (*Belonolaimus*). High nematode count infestations were defined as a count of 50 or more greater than the moderate risk of damage count per the University of Florida’s *Nematode Management for Golf Courses in Florida*. Before and after nematode counts are shown in Chart 1 and Chart 2 for Fairway #5 and Fairway #9 respectively.



Charts 1: Nematode counts before and after on Fairway #5



Charts 2: Nematode counts before and after executing Protocol 2

Conclusions: The nematode counts of the University of Florida suggest that application protocol of Armorex with Bac-Pack reduce Root-Knot, Lance and Sting nematodes when applied to high nematode count infestations. Qualitative visual assessments of the treated plots by the principal investigators included this observation, the areas treated looked weak and unhealthy prior to application. A couple weeks after being treated with Armorex and Bac-Pack those areas have recovered nicely.