

The Effects of Comand® on Nematode Populations

Turfgrass Micro-plot Trials



What is Comand® & Why is it so Unique? Comand® is derived from the high temperature, aerobic decomposition of organic residuals under strictly controlled conditions, using a unique composting technology.

Through many years of research, Harvest Quest International, Inc., a strategic partner of Life Soils, developed a proprietary biological inoculant, which accelerates and uniquely enhances the natural biological process of composting. The major benefit of using the inoculant is its ability to breakdown the materials at an accelerated rate while significantly reducing the need for mechanical turning of the compost piles. This allows bacterial densities to increase optimally, resulting in the production of superior-quality compost, which is carefully processed to maintain excellent soil building attributes and a remarkable abundance of beneficial microorganisms.

Ongoing Research – Life Soils and Harvest Quest recently commissioned the University of Florida (UF) to conduct experiments comparing turf grown with Comand® vs. peat moss to determine if the Comand® compost product has an effect on suppressing nematodes. A blend of 85% sand and 15% peat moss is typically utilized for the construction of golf courses and sports fields. Comand® is utilized in place of the peat moss and provides organic matter, similar moisture holding properties, and both accelerated and enhanced grow-in and root development.

The experiments are being conducted in micro-plots, which consist of 8 inch diameter x 18 inch long PVC pipes buried in the ground. The micro-plots originally contained 12 inches of native soil on top of 6 inches of gravel.

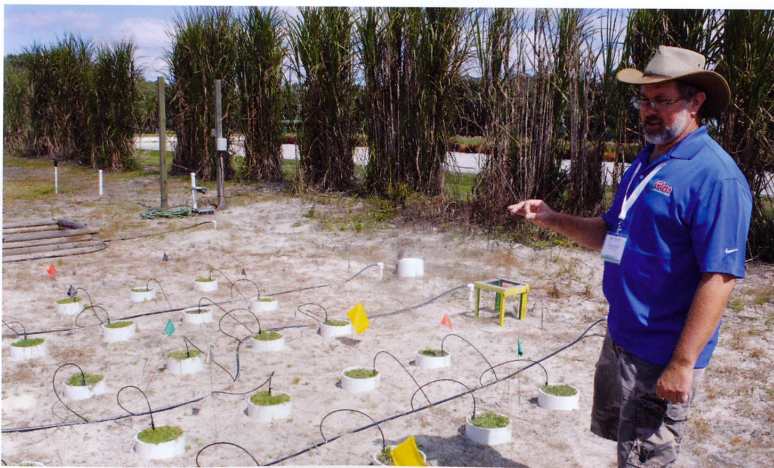
In each micro-plot the top 8 inches of native soil was removed and replaced with one of the three following sand blends (construction mixes):

- 85/15 sand/Canadian Peat
- 80/20 sand/compost (Comand®)
- 60/40 sand/compost (Comand®)

There are five replications of each blend and the experiment commenced in August of 2015. After the amendments were installed, the micro-plots were sprigged with Tifway bermudagrass. Once roots became established, 250 sting nematodes (*Belonolaimus longicaudatus*) were introduced into each micro-plot.

An organic slow-release fertilizer manufactured by GreenEdge® was chosen due to its non-toxicity to the beneficial microbes in the Comand®. The fertilizer has been applied at the same rate to all the plots and application frequency is based on a typical nutrient requirement schedule determined and utilized by UF staff.

Nematode population density and root mass was scheduled to be measured in February and August 2016. A single core (1.5 inch diameter) is taken from each microplot to the depth of the amendment (8 inches). Nematodes and roots are to be extracted from these cores and measured. Water infiltration rate will also be measured.



Billy Crow is overseeing an experiment comparing turf grown with compost vs. peat moss to determine if compost has an effect on nematodes.

After a full morning of 10 field presentations, attendees enjoyed a barbecue lunch, visited with vendors, and some participated in a golf chipping contest. Then it was back to the field with Dr. Billy Crow, where he discussed biocontrols for nematodes, NTEP trials for nematode resistance and additional turf research projects funded by Sod Solutions. 🌱

January/February 2016 • FLORIDA TURF DIGEST 21



Interim Results

From: "Crow, William T" <[wtcr@ufl.edu](mailto:wtc@ufl.edu)>
Date: February 10, 2016 at 4:50:50 PM EST
To: "Ryan McMeekin (ryan@lifesoil.net)" <ryan@lifesoil.net>
Subject: **UF Comand Study**

Ryan, I just analyzed the nematode and root data collected this week.

During grow-in the Tifway bermudagrass sprigs filled in much faster in soil amended with either 20% or 40% Comand Compost than in soil amended with 15% peat.

Six months after sprigging we collected soil and roots samples for analysis and found that root lengths in soil amended with 20% or 40% Comand Compost were 55% and 80% greater, respectively, than in soil amended with 15% peat. Finally, sting nematode population densities were 89% lower in soil amended with either 20% or 40% Comand Compost than in soil amended with 15% peat.

William T. (Billy) Crow
Professor of Nematology
University of Florida
PO Box 110620
1881 Natural Area Dr.
Gainesville, FL 32611
Ph: (352) 273-3941
FAX: (352) 392-0190
[wtcr@ufl.edu](mailto:wtc@ufl.edu)
<http://entnemdept.ufl.edu/lab/people/crow/>

Additional Testing – Obviously, the initial results are significant and have begun to validate our claims of the plant health benefits and suppressive qualities of Comand®. Subsequent experiments utilizing the product in top-dressing applications, larger scale grow-in comparisons, and Thatch reduction are now underway.



The above photos were taken on 10/07/2015 and show the various treatments 85:15 sand/peat (U), 80:20 sand/Comand® (20), and 60:40 sand/Comand® (40)