

Delivery

- **Pack well to minimize shifting**
- **The quicker the delivery the better**
- **Fill out forms completely**

Nematode management

- **Sanitation – “an ounce of prevention is worth a pound of cure”** (Quote by Dr. Crow’s Mamma, used with permission).
- **Plant parasitic nematodes are moved in infested planting material, soil, or water.**



Root-knot nematode galls





Nematode management

- Sanitation -

- **Clean equipment after use!!**

Soil Solarization

- **Damp (not saturated) soil**
- **Clear plastic tarp**
- **High temperatures (June, July)**
- **1 to 2 months**
- **Small amounts in plastic bags**



Soil Solarization

Organic amendements

- **Increase water and nutrient holding capacity of soil**
- **Increases plant tolerance**
- **May stimulate natural enemies of nematodes**

Choose adapted plants

- **The better the overall health of the plant, the better its ability to withstand nematode pressure**

Alternative planting

- **If a nematode-resistant or nematode-tolerant plant can be identified it should be used.**

Annual bedding plants that are commonly damaged by root-knot nematodes in Florida

- Coleus
- Snapdragon
- Petunia
- Verbena
- Pansy
- Portulaca
- Impatiens

Annual bedding plants that are resistant to several root-knot nematode species

- **Ageratum 'Blue Mink'**
- **Alyssum 'Rosie O'Day'**
- **Dianthus 'Baby Doll Mix'**
- **Vinca**
- **Salvia (except blue ones)**

Marigolds

Cultivar	<i>M. incognita</i>	<i>M. arenaria</i>	<i>M. javanica</i>
Alaska	G	G	G
Tangerine	G	G	G
Petite	G	G	G
Petite Harmony	G	G	G
Toreador	G	G	G
Goldie	G	G	G
Cracker Jack	G	G	M
Diamond jubilee	G	M	G
Flor de muerto	G	G	M
Polynema	G	P	M
Red nugget	M	G	G
Bolero	M	M	G
Bonita mixed	G	G	M
Gypsy Sunshine	G	G	P
Scarlet Sophie	G	G	P
Single Gold	G	G	P
Golden Gem	P	P	P
Tangerine Gem	P	P	P

Woody ornamental plants that are commonly damaged by root-knot nematodes in Florida

- **Butterfly bush**
- **Hibiscus**
- **Boxwood**
- **Gardenia**
- **Pittosporum**
- **Ixora**
- **Japanese holly**
- **Rose**
- **Lantana**

Woody ornamentals resistant to multiple root-knot species

- Firespike (*Odontonema cuspidatum*)
- 'Gold Dust' Croton (*Codiaeum variegatum*)
- Oakleaf hydrangia (*Hydrangea quercifolia*)
- Anis (*Illicium parviflorum*)
- Sweet pepper bush (*Clethra alnifolia*)
- Walter Viburnum (*Viburnum obovatum*)

Cultivar selection

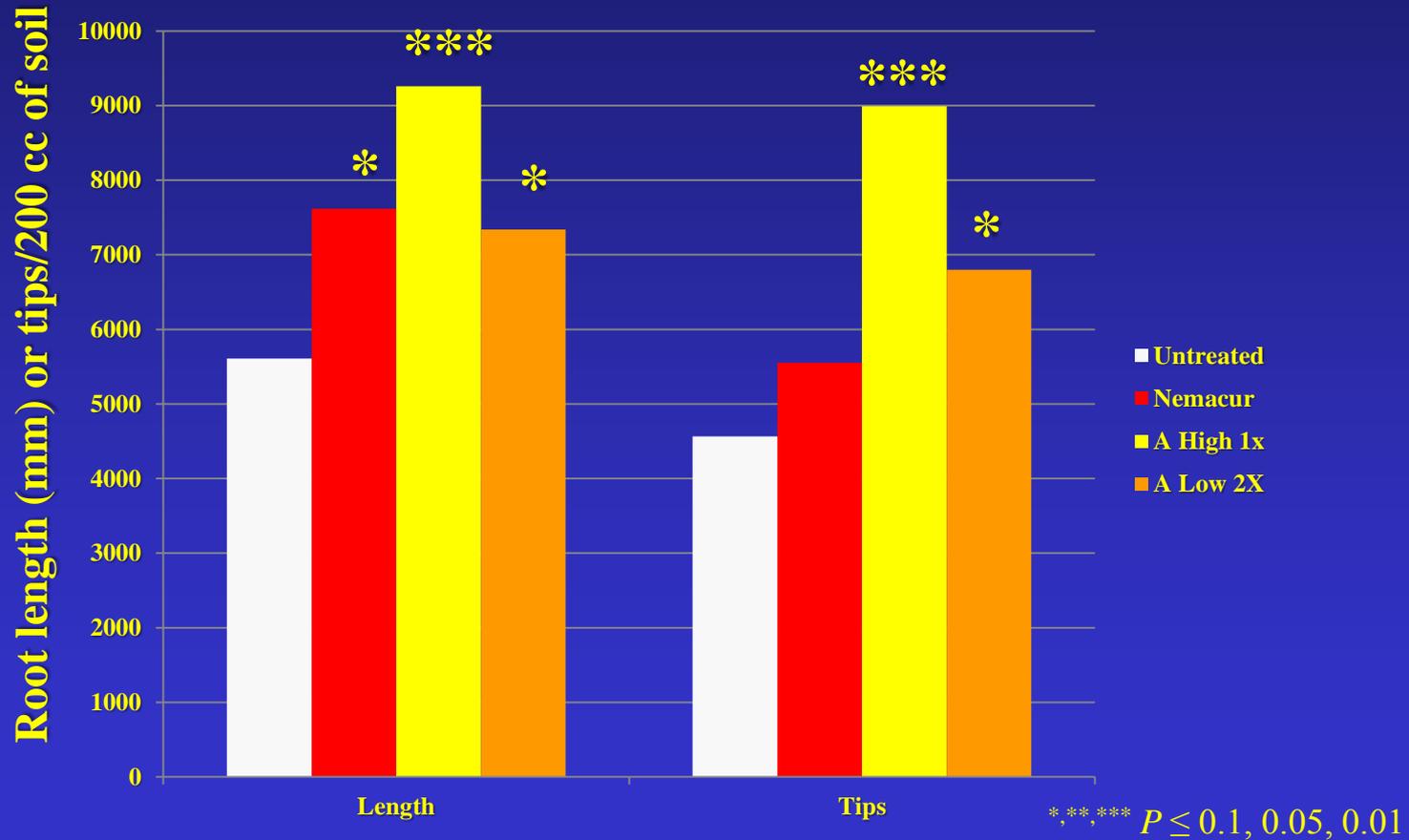
- **Research underway to identify cultivars with resistance or tolerance to certain nematodes in bermudagrass, seashore paspalum, St. Augustine, and zoysiagrass**

Nortica – *Bacillus firmus*

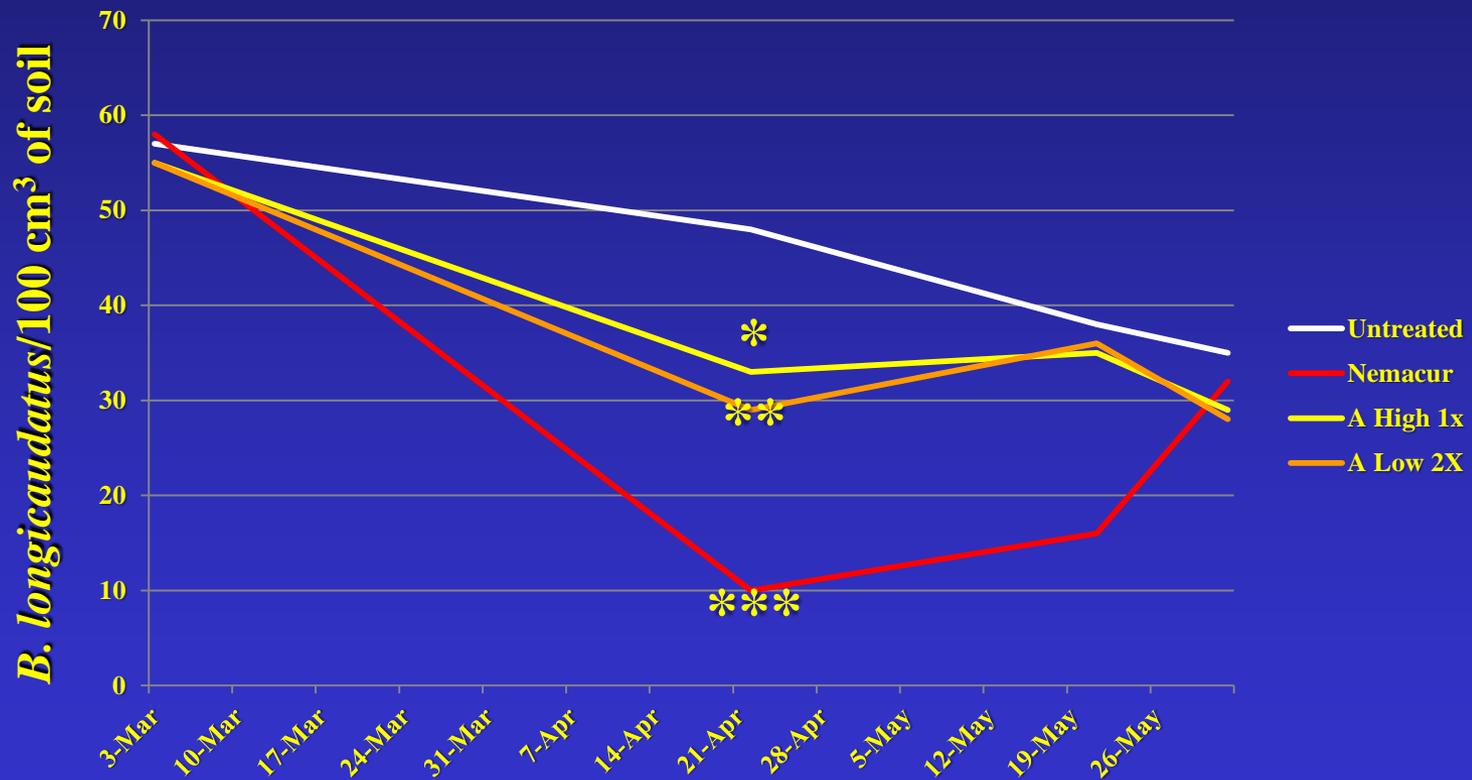
- Bayer Environmental Science
- Biological
- Mode of action - protectant



Celebration tee, roots



Celebration tee, *B. longicaudatus*



*, **, *** $P \leq 0.1, 0.05, 0.01$