NON-FUMIGANT NEMATICIDES FOR STRAWBERRY PRODUCTION IN FLORIDA

Tristan Watson*[1], Johan Desaeger [1]
[1] University of Florida, Department of Entomology and Nematology, Gulf Coast Research and Education Center, Wimauma, Florida, 33598, United States

Plant-parasitic nematodes present a significant obstacle for strawberry growers in Florida. Historically, nematodes have been controlled through the application of soil fumigants; however, there is interest in exploring the use of non-fumigant nematicides that can provide similar levels of control. Using two field experiments, the effects of non-fumigant chemical and biological nematicides on plant vigor and fruit yield, populations of plant-parasitic nematodes, and populations of free-living nematode feeding groups were evaluated. In experiment 1, soil fumigation with metam potassium, as well as all non-fumigant nematicides failed to increase plant vigor, fruit yield, or suppress populations of plant-parasitic nematodes. In experiment 2, fluopyram suppressed sting nematode (*Belonolaimus longicaudatus*) populations by the end of the growing season. Soil fumigation with 1,3-dichloropropene + chloropicrin (Pic-Clor 60®) provided consistent enhancement of plant vigor and fruit yield, as well as suppressed populations of *B. longicaudatus*; however, populations of free-living nematodes were also reduced. Overall, Pic-Clor 60 was more effective than non-fumigant nematicides in protecting strawberry yield. Fluopyram showed good potential to reduce *B. longicaudatus* in experiment 2, but more trials need to be done to evaluate the potential of fluopyram and other non-fumigant nematicides for strawberry production. Whether or not they can be used as stand-alone products for nematode management, or as a component of an integrated non-fumigant pest management strategy for the control of *B. longicaudatus* in Florida strawberries, remains to be seen.