DEVELOPMENT OF MULTIGUARD™ PROTECT (FURFURAL) FOR NEMATODE CONTROL IN TURF

Jerry Hensley*, Agriguard Company LLC, Jackson, TN
Jonathan Myers, Agriguard Company LLC, Cranford, NJ

Furfural is a natural product derived from various plant sources. Sugar cane bagasse is an important raw material used in the production of furfural. Agriguard Company LLC, a US company jointly owned by Illovo Sugar Ltd, a South African sugar and furfural producer, and Harborchem, are developing and commercializing furfural as a nematicide.

In the United States, furfural is being investigated for the control of nematodes in turf, peanuts, vegetable crops, ornamentals and fruit and vine crops. Due to furfural's low phytotoxicity, applications can be made post plant as well as preplant to crops. This unique property allows for in-season applications to provide season long nematode control. Furfural is a contact nematicide and must be mechanically incorporated or moved into the soil profile with irrigation. The product currently being tested is Multiguard Protect which contains 1.04 kgai/l of furfural. Rates ranging from 53.5 kg ai/ha to 155.5 kg ai/ha are currently being tested and activity has been demonstrated on *Belonolaimus* spp (Sting), *Hoplolaimus galeatus* (Lance), *Criconemella xenoplax* (Ring), *Meloidogyne* spp (Root Knot) and *Paratrichodorus minor* (Stubby Root) nematodes. Preplant applications up to 448 kgai/ha have been tested and shown to be safe on strawberries, tomatoes and peppers. This presentation will focus on the data for the control of nematodes in turf in the United States.

Using initial applications of 77.8 or 155.5 kgai/ha of Multiguard Protect, followed by multiple applications of 53.5 kgai/ha on a three week application interval, research trials have shown significant reductions in nematode counts for Ring, Root Knot, Spiral and Stubby Root nematodes. Data will be presented from Florida and California showing the influence of application rate and application interval for nematode control with Multiguard Protect. Initial data indicate that the optimum amounts of irrigation range from 1.27 to 1.91 cm water applied immediately after the chemical application and that better nematode reduction occurs in turf that has not been de-thatched or aerated immediately prior to the chemical application.