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Subsoil Fumigant Injection Methods for Nematode Control

Nematodes continue to be a problem facing quality turfgrass production in Michigan. In cooperative work with Dr. Joe Vargas, we are investigating nematode control methods for established turfs. Trials using fumigant nematicides in the establishment of Toronto creeping bentgrass were initiated in Eastern Michigan. Preliminary data indicated that Nemacur and Vydate at rates as low as 5 pounds active ingredient per acre are effective in the reduction of nematode populations and are not phytotoxic to newly planted bentgrass stolons.

Additional work is continuing involving the use of nonfumigant nematicides in the control of nematodes associated with Fusarium blight. Rates as low as 5 pounds active per acre appear to significantly reduce the number of nematodes associated with Fusarium blight and also suppresses the macro-symptoms of the disease. These studies have been established at several locations throughout the southern part of the Lower Peninsula.

A new study was initiated this spring using fumigants injected below established sod. Trials were established both on bentgrasses and bluegrasses. DBCP was applied at a rate of 5 gallons per acre with no indication of phytotoxicity. Preliminary nematode counts indicate that the depth of placement may be an important factor in nematode kill. Also, once the material is injected the area should be irrigated immediately or other methods initiated to seal the soil so as to reduce fumigant loss and obtain better kill. Subsod fumigation may develop into a safe and effective approach to reduce nematode populations. However, additional studies will be needed to determine its feasibility under Michigan conditions.