Effect of Intensive Cropping on Nematode Population Management

A.W. Johnson¹

Abstract

Plant-parasitic nematodes cause losses that exceed \$5 billion annually on field crops, fruit and nut crops, vegetable crops, and ornamental crops in the United States. Nematicides have been a major tool used in managing nematode populations for over 35 years. The impact of the loss of the most effective soil fumigants and the environmental concerns about nonvolatile nematicides is being felt by growers, and the impact will probably increase since available nematicides are more costly and less effective. Alternative integrated systems utilizing intensive cropping, tillage methods, non host crops, resistant cultivars, trap crop, minimal use of nematicides, and other strategies are needed to manage nematode population densities on crops. Research results on new alternative systems for managing nematode populations in intensive cropping systems under irrigated conditions at the Coastal Plain Experiment Station will be discussed.

¹A.W. Johnson, USDA-ARS Coastal Plain Experiment Station, Tifton, GA 31793 (Plant Pathology Department, Univ. of Ga., Athens, GA).