Recent advances for management of Meloidogyne arenaria on peanut in Georgia

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Management of the peanut root-knot nematode, *Meloidogyne arenaria*, is of critical importance to peanut producers in the southeastern United States. Tactics to manage the peanut root-knot nematode have included crop rotation and use of nematicides such as 1,3-dichloropropene and aldicarb. In recent years growers have planted the root-knot nematode resistant cultivar ‘Tifguard’ but have lost use of aldicarb. Aldicarb had been widely used both in-furrow and as an over-the-top application during “pegging time” in the peanut field. A new product from Bayer CropScience offers opportunity for effective management of root-knot nematode affecting peanut. In 2012 and 2013 fluopyram (either alone or formulated with prothioconazole or imidacloprid) was assessed for management of *M. arenaria* in a naturally infested field on the University of Georgia’s Coastal Plain Experiment Station in Tifton. The objective of this study was to assess the efficacy of fluopyram (65 and 130 g/100kg seed) + imidacloprid (Admire, 9 fl oz/A), fluopyram + prothioconazole (Propulse, 13.7 fl oz/A) and fluopyram + imidacloprid (Velum Total, 10 and 18 fl oz/A) as compared to aldicarb (Temik 15G, 10 lb/A) for management of the peanut root-knot nematode. Plots were planted to ‘Georgia-06G’. Fungicide treatments were applied either as seed treatments, in-furrow-at-plant, at pegging-time, or in a combination of timings. Thrips were managed using aldicarb, phorate or imidacloprid. Data collection included stand count (2013), plant vigor (2013), nematode counts from soil, root-gall ratings, above-ground symptoms of stunting and necrosis, and yield. Numerical increases in stand counts were observed with in-furrow applications of Velum Total as compared to Temik 15G and fluopyram applied as a seed treatment. Greatest stand counts were observed where Velum Total was applied at 18 fl oz/A. Numeric increases in vigor ratings were greatest where Velum Total was applied in-furrow; however such differences were not significant among treatments. In-furrow applications of fluopyram were associated with reductions in root damage (significant in 2012, numeric in 2013), a numeric reduction in above-ground stunting (2012), and increased yield (numeric) as compared to applications of aldicarb, seed-treatment use of fluopyram, or pegging-time applications of Propulse. Research will continue to further elucidate how fluopyram, marketed with imidacloprid, as Velum Total, can be of greatest benefit to peanut producers.