2007 Beltwide Cotton Conferences, New Orleans, Louisiana, January 9-12, 2007

PERFORMANCE OF COTTON LINES IN A ROOT-KNOT NEMATODE INFESTED FIELD

Mustafa McPherson
Frank Bordelon
John Pellow
Phytogen Seed Co. / Dow AgroSciences, LLC
Leland, MS

Abstract

The root-knot nematode (RKN) is a serious pest of cotton, particularly in RKN-infested fields with coarser textured soils. The detrimental effects of RKN infection on cotton production are more severe in dryland fields during years with insufficient rainfall. Furthermore, the effect of simultaneous infection with both RKN and *Fusarium oxysporum,* is more severe than either disease alone. Host plant resistance is an effective means of managing RKN infestation, but no commercial variety is highly resistant despite the availability of germplasm lines with near-immunity to RKN. Several cotton varieties with a moderate level of resistance have recently been available to cotton growers in CA (Acala NemX) and the Mid-South (ST LA887, ST 5599 BR, PM 1560 and PM 1560 BR), but the delayed maturity of the Upland varieties reduces their suitability for culture in the northern Mid-South. The purpose of this research was to evaluate several earlier maturity experimental cotton lines developed by PhytoGen Seed Company for agronomic performance and RKN resistance in an RKN-infested field in MO. Five of thirteen 548WRF lines with no Telone treatment yielded more than DP 444 BR with Telone treatment. Furthermore, four of these best five lines yielded basically the same regardless of Telone treatment as did the highly RKN-resistant germplasm line M240-RNR.