tapine 41 when evaluated 60 d after planting in a RN-infested field at Baton Rouge in 1986. Three of the lines (La. RN 909, La. RN 910, La. RN 1032) were compared with Deltapine 41 for degree of root galling after growing in heavily infested RKN soil in the greenhouse. Their average root knot scores were 2.6, 2.8, and 2.6, respectively, compared with 5.0 for Deltapine 41.

These germplasm lines, except La. RN 4-4, were compared with Deltapine 41 and Stoneville 825 cultivars for agronomic performance at multiple year-location environments (eight tests) in Louisiana on soils relatively free from the nematode wilt disease complex. All germplasm lines produced mean lint yields equal to or greater than the check cultivars and with fiber superior to Deltapine 41 in strength and fineness and equal or superior to this check in length. Lint percentages of the three germplasm lines were similar to Stoneville 825; boll size of all RN germplasm lines were significantly larger than either check cultivars. The RN lines are full-season cotton germplasms that are similar to their Deltapine 16 parent in crop maturity and plant size. La. RN 4-4 is expected to perform similarly to La. RN 909 and La. RN 910 since all are sister lines.

These agronomically enhanced breeding lines represent the first germplasm releases of cotton with known resistance to the reniform nematode. They could be of value in improving the level of pest resistance in cotton cultivars. Seed (25 g) of these lines are available for distribution to cotton breeders and other scientists upon written request to Jack E. Jones, Department of Agronomy, Louisiana Agricultural Experiment Station, M. B. Sturgis Hall, Baton Rouge, LA 70803.

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References and Notes


8. The La. HG-063, La. HG-103, and La. HG-213 lines were developed from the following crosses: La. HG 83-1-1546 × LG 91-1-369 for La. HG-063; La. HG 83-1-1546 × LG 91-1-369 for La. HG-103; and GT 5A-10-15-2 × GT 5C-10-15-2 for La. HG-213. All hybrids were obtained from M.J. Luka, Louisiana State University, HG trait. Primary selection for resistance was based on a panel of natural H. zea conditions. Secondary selections were based on natural H. zea and natural Fusarium oxysporum (Atk.) Snyder and Hans infections.

The three La. HG germplasms were selected based on the test yield average of 32% in the three-test yield average at 31% when H. zea and Fusarium oxysporum (Atk.) Snyder infections were performed at both damage levels. The other economic threshold levels were similar to Stoneville 2133 in fiber fineness. These three germplasms were higher fiber tensile strengths than Stoneville 2133. The germplasms have reduced the damage levels and bolls than Stoneville 2133. The fusarium wilt [Fusarium oxysporum (Atk.) Snyder and Hans.] was not observed.

Seed (25 g) of these lines are available for distribution to cotton breeders and other scientists upon written request to Jack E. Jones, Department of Agronomy, Louisiana Agricultural Experiment Station, M. B. Sturgis Hall, Baton Rouge, LA 70803.

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References


