AGRONOMIC TRIAL RESULTS ON FIBERMAX VARIETIES - 1998

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Abstract

Agronomic data for FiberMax cotton varieties under different growing conditions were gathered to support and substantiate production guidelines and management recommendations for the first year of limited commercial production. Tests were developed to observe the effects of soil type, seeding rates, plant growth regulators, production system and relative maturity under different growing conditions. Varieties observed included FM 989, FM 832, FM 819, FM 963 and FM 975. FiberMax 832 and 819 are okra-leaf varieties and FM 989, 963 and 975 are normal-leaf varieties. All FiberMax varieties had standard germination percent above 90% and cool germination percent above 84%. FiberMax 989 had a compact plant type that responded well to plant growth regulators and performed well over a wide range of soil types and production systems. FiberMax 832 performed best on heavy soils in dryland situations and required aggressive plant growth regulator management to retain early boll set. FiberMax 819 has a more determinant growth habit and shows better yield potential in a wheat rotation. FM 963 has a good Delta-type plant that responds well to PGR and is suited to shorter season production systems. FM 975 is a small-seeded variety with a niche market capability. All varieties showed best yield response at 3-4 plants/foot final stand, although producer fields averaged final stands of 5 plants/foot due to higher than expected germination rates.

Fruiting characteristics of FM varieties show that a greater percent of lint yield comes from nodes 11-17 as compared to nodes 7-14 for standard Midsouth varieties. FiberMax varieties emerge 3 days earlier and initiate square and bloom one day earlier, but reach open boll and 50% open boll 8-10 days later. Height to node ratio through the season indicates similar or better fruiting efficiency than standard varieties. The types of technical fiber properties observed in FiberMax 989 and 832 (superior length, strength and micronaire) as well as fruit set on higher nodes, is often associated with longer boll maturation period. In addition, FiberMax 989 and 832 produced more seed per locule than standard Midsouth varieties. Yield data reinforce agronomic observations that FM 832 performed well in heavy soils, particularly in Louisiana, while both FM 832 and 819 did well under drought conditions in Texas, indicating good water use efficiency in the okra-leaf varieties. Although 1998 data are preliminary, FiberMax varieties appear to fit well in ultra-narrow row production systems because of fruiting efficiency capability under high plant populations (plant height is easily controlled despite early vigor) and good storm-proof characteristics compared to standard picker varieties.

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