NATIONAL COTTON VARIETY TEST AT SAVANNA AREAS IN BRAZIL - 2013/14.

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Abstract:

Many sources of information are available to growers to help them choose a good variety. The best source of information, of course, is personal experience with a particular variety on the farm, but given the large number of varieties to choose from, it is impossible to try them all. Many growers, therefore, consider performance data from variety trials that are conducted by seed companies and research institutes within the region of interest. Annually, the Cotton Breeding Program of Embrapa evaluates cotton varieties at numerous locations within the cotton-growing regions at Savanna Areas of Brazil. The purpose of the National Cotton Variety Test (NCVT) is to provide an unbiased comparison of varieties across a range of environments. Trial evaluation of standard, commercially available, and

new and upcoming cotton cultivars from different breeding programs provides producers data to make well-informed variety selection decisions based upon how a particular cotton variety performed close to their bases of operation. The National cotton Variety Test is conducted annually at different states: Mato Grosso, Goiás,Mato Grosso do Sul, Piauí, Maranhão and Rondônia. At each location, all varieties entered into the trial are treated identically (Conventional and Transgenic) with respect to herbicide and insecticide input to strive for unbiased evaluation of genetic potential. This experiment aims to identify cultivars from different breeding programs with high yield stability and resistance to major diseases that occur in the region. In the season 2013/14, the NCVT (Middle Early) was conducted in 10 locations. The experiment was a randomized completed block design (RCBD) with 13 treatments and 4 repetitions. The experimental plot consisted of four linear rows of 5m, with a spacing of 0.90m between rows. The variables tested were height (HEI); boll size (BS), cotton seed yield (CSY); lint yield (LY); lint percent (LP); fiber length (LEN); resistance (RES) and micronaire index (MIC). In the joint analysis found that the cultivars that produced lint yield (LY) above the average were IMA 690, DP 555 BG RR BRS 369 RF, TMG 42 WS and TMG 41WS. Regarding the lint percent (LP), it was found that the overall average was 42.06%. The cultivars that produced LP above average values were IMA CV 690 (45%), DP 555 BG RR (43.60%), BRS 369 (42.60%), BRS 368 RF (42.40%) and TMG 43 WS (42.40%). While the varieties NUOPAL (39.80%) and TMG 41WS (40.80%) had the lowest average. With respect to the average values of the technological properties of fibers, it was found that the majority of genotypes showed the fiber characteristics required by the textile industry. The material that stood out mainly in relation to the fiber strength (RES) was the cultivar TMG 41WS with 32,20gf / tex values (RES). The cultivars IMACV 690, DP555 BG RR, BRS 369 RF, TMG 42 WS and TMG 41WS were selected for show high yields and fiber quality.

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