

COTTON CULTIVARS INTERACTIONS WITH ENVIRONMENTS (*)

Fábio A. Suinaga (Embrapa Algodão / suinaga@cnpa.embrapa.br), Eleusio C. Freire (Embrapa Algodão), Cristina S. Bastos (Embrapa Algodão), Luis E. P. Rangel (MAPA)

ABSTRACT The objective of this work was to assess the stability and adaptability of cotton (*Gossypium hirsutum*) cultivars using Eberhart and Russel's (1966) methodology. Eleven varieties of cotton were tested at seven locations in Mato Grosso, Brazil, by the National Center for Cotton Research (CNPA) of the Brazilian Enterprise for Agricultural Research (EMBRAPA) in two agricultural years (2002/2003 and 2003/2004). The experimental design used in this study was the complete randomized blocks with four replications and the assessed characters were the lint percentage (%) and the total lint yield (@/ha). Considering the character total yield, BRS Aroeira, BRS Ipe, BRS Cedro, BRS Jatoba and Delta Opal might be recommended for broad adaptability and stability in Mato Grosso State. However, for lint percentage, there were not found cotton cultivars possessing both broad adaptability and stability for the studied environments.

Key words: *Gossypium hirsutum*, adaptability and stability

(*) This research was sponsored by FACUAL.



Panel 328

PRODUCTION OF CULTIVARS AND LINES OF HERBACEOUS COTTON IN THE CERRADO OF THE EASTERN MARANHÃO STATE

José Lopes Ribeiro (Embrapa Meio-Norte / jlopes@cnamn.embrapa.br), Valdenir Queiroz Ribeiro (Embrapa Meio-Norte), Eleusio Curvelo Freire (Embrapa Algodão), Luis Paulo de Carvalho (Embrapa Algodão), Francisco José Correia Farias (Embrapa Algodão), Camilo de Lelis Morelo (Embrapa Algodão), Fábio Akiyoshi Suinaga (Embrapa Algodão), Joaquim Nunes da Costa (Embrapa Algodão), Francisco Pereira de Andrade (Embrapa Algodão).

ABSTRACT - Two experiments were carried out in Chapadinha, MA, in the year of 2004, to evaluate cultivars and lines of herbaceous cotton. The objective was to select the most promising cultivars and lines for commercial crops in the cerrado area of the eastern Maranhão. The randomized blocks experimental design, with four replications, was used. The population density was 110 thousand plants for hectare, with 0.80 m of spacing among lines. The used fertilization was of 120 kg/ha of N, 120 kg/ha of P₂O₅, 120 kg/ha of K₂O and 30 kg/ha of FTE - BR 12. In the regional experiment, no difference among the cultivars was observed ($p > 0,05$) although the productivity ranged from 3,055 kg/ha (Suregrow 821) to 3,597 kg/ha (BRS Jatobá). In the state experiment differences were observed ($p < 0,05$) among the cultivar CNPA ITA 90-2 (3,737 kg/ha) and the lines CNPA CO 98-337 (2,870 kg/ha), CNPA CO 98-10024 (2,878 kg/ha) and CNPA CO 98-302 (2,921 kg/ha). All the evaluated cultivars presented potential for cultivation in commercial scale. Among the lines seven presented productivities above 3,000 kg/ha.

Key words: plant genetic improvement, *Gossypium hirsutum*, yield.