

Sugarcane varieties: a century of Brazilian breeding programs contribution

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The improvement of sugarcane in Brazil began in the early 20th through the hybrid varieties of Java as an option for genetic control of the mosaic. The major contribution of the resistance was POJ213, occupying 80% of the state of Sao Paulo. The replacement of POJs happened in the 40s with the variety Co290, which prevailed until 1953. Subsequently, new replacement; CB41-76 replaced gradually Co290. In the 70s, the domestic varieties CB41-76, CB49-260, CB41-14 and IAC48/65 occupied 63% of cultivation area. In the late 70's contribution began with NA56-79, which was the one that caused greater impact on earnings of sugar / area. In the 1980s, the emergence of varieties SP, especially the SP70-1143, and yet the prevalence of NA56-79 allowed them occupy together 58%. By the late 80's, 75% of the cultivated varieties were the result of the Brazilian programs, particularly the IAC and Coopersucar (SP). With expansion of Brazilian varieties the germplasm banks changed in the same direction. In the 1990s, the varieties SP70-1143, RB72454 and SP71-6163 occupied together 60% of the cultivated area. Currently, there is a growing supply of new varieties, However, the eclectic varieties RB86-7515 and SP81-3250 are exceptions to this rule, with 22% and 13% of the cultivated area, respectively. Over 100 years of cultivation of sugarcane in Brazil, the breeding programs have helped to expand the number of commercial varieties, maximizing the genotype x environment interactions, which led, improvement of yield. In some cases, due the offer of new varieties the recommendation for specific environment is becoming mores frequent.

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