

BRS EXECUTIVO - CRANBERRY COMMON BEAN FOR INTERNATIONAL MARKET

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INTRODUCTION

Nowadays, the demand for beans with accepted grain type has been growing in the international market. In this way, the program of bean genetic improvement at Embrapa Rice & Beans is focused on the development of new cultivars to attend this new market request, enabling farmers to offer a better product value and to obtain better revenue with the crop. As a result of this effort, the Cranberry bean cultivar BRS Executivo has been released for the dry season, under irrigation, in the State of Goiás.

Origin and cultivar development

BRS Executivo was obtained from the single cross between A 192 and BAT 1274 accomplished at International Center for Tropical Agriculture (CIAT), in 1983. The selected line SUG 33 was evaluated at Embrapa National Rice & Beans, under field conditions for plant type, lodging, yield and pos-harvest grain type. In 2000 this line was evaluated together with 11 other lines plus three controls and in the year of 2001 it was evaluated with three other lines and two controls in a completely randomized block design with four replications (each plot consisted of four rows of 4 m) using all cropping practices recommended for the different bean planting systems. Evaluations were realized at Santo Antonio de Goias, Santa Helena de Goias and Anapolis in the years 2000 and 2001 during the dry season, under irrigation, performing a total of 14 experiments in the State of Goias.

RESULTS

Yield

In 15 Regional trials (VCU) conducted in the years of 2000 and 2001 during the dry season in the State of Goiás, the cultivar BRS Executivo showed to be 5.2% superior in an average yield when compared to the average yields of the controls Irai and Jalo Precoce (Table 1). Although the controls present a different grain type but, a similar 100 grain weight, they were used because there are no beans such as the BRS Executivo grain type registered in Brazil.

Table 1. Yield of BRS Executivo in the State of Goias compared to the average controls in the Regional trial (VCU) during 2000 and 2001.

State	Sowing season	BRS Executivo yield (kg/ha)	Control average yield (kg/ha)	Relative yield (%)	Number of environments tested
GO	dry	1,644	1,563	105.2	15

Morphophysiological, technologic and industrial characteristics

This cultivar belongs to the Cranberry bean group and presents a growing cycle from sowing to maturity of 85 to 95 days, 39 days to flowering, rose and violet colored flower, yellow pods with red stripes at maturity, beige grain color with dark red points and stripes, semi-erect plant type. Besides BRS Executivo have a very uniform grain color and size, 100 grain weight of 76g and cooking time of 26 minutes (Table 2).

Table 2. Technological and industrial grain qualities of BRS Executivo bean cultivar.

Cultivar	Cooking time (min.)	Protein (%)	100 grain weight (g)
BRS Executivo	26	25	76
Irai	37	22	44
Jalo Precoce	25	24	36

Disease reaction

BRS Executivo presented intermediary reaction to anthracnose after inoculation under artificial inoculation and susceptibility to angular leaf spot, rust, common bacterial blight, bean common mosaic virus, mildew and bean golden mosaic virus under field condition.

CONCLUSION

The bean cultivar BRS Executivo due to its cranberry grain type, semi-erect plant type and the agronomic characteristics is an option to farmers interested in producing beans for the international market during the dry season, under irrigation, in the State of Goias.