

BRS EMBAIXADOR - DARK RED KIDNEY 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 Dark Red Kidney bean cultivar BRS Embaixador has been released for the dry season, under irrigation, in the State of Goiás.

Origin and cultivar development

BRS Embaixador was obtained from the single cross between XAN 42 and G 13922 accomplished at International Center for Tropical Agriculture (CIAT), in 1983. The selected line DRK 18 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 22 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 Goiás, Santa Helena de Goiás and Anapolis in the years 2000 and 2001 during the dry season, under irrigation, performing a total of 14 experiments in the State of Goiás.

RESULTS

Yield

In 14 Regional trials (VCU) conducted in the years of 2000 and 2001 during the dry season in the State of Goiás, the cultivar BRS Embaixador showed to be 19.1% 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 Embaixador grain type registered in Brazil.

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

State	Sowing season	BRS Embaixador yield (kg/ha)	Control average yield (kg/ha)	Relative yield (%)	Number of environments tested
GO	dry	2,214	1,859	119.1	14

Morphophysiologic, technologic and industrial characteristics

This cultivar belongs to the Dark Red Kidney bean group and presents a growing cycle from sowing to maturity of 75 to 85 days, 33 days to flowering, rose and violet colored flower, green-yellow pods at maturity, dark red grain color with intermediary brightness, erect plant type and is resistant to lodging. Besides BRS Embaixador have a very uniform grain color and size, 100 grain weight of 63g and cooking time of 28 minutes (Table 2).

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

Cultivar	Cooking time (min.)	Protein (%)	100 grain weight (g)
BRS Embaixador	28	19	63
Irai	37	22	44
Jalo Precoce	25	24	36

Disease reaction

BRS Embaixador 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 Embaixador due to its Dark Red Kidney grain type, 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.