

‘BRS PITANGA’: NEW DRY BEAN VARIETY OF THE SMALL PURPLE COMMERCIAL GROUP

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The Brazilian bean production from 1994 to 2003 oscillated between 1,97 and 2,77 million tons.year⁻¹. Last year it reached 3,0 million tons, practically attending the entire Brazilian population needs. Beans, in Brazil, is part of the daily basic diet of its population and involves a large production area cultivated mainly by small farmers. The Brazilian people is regionally demanding regarding the kind of grain for consumption such as color, shape and size. As a function of this exigent market the bean improvement genetic program at Embrapa Rice and Beans is developing new genotypes of the small purple commercial bean group with high yield, earliness, erect plant growth habit and disease resistance. The new BRS Pitanga cultivar, of the small purple commercial group, is the result of this effort and was released to the growers of the State of Goiás and Federal District. This cultivar has an erect plant growth habit and is resistant to four pathotypes of the anthracnose causal agent, to rust and to the bean common mosaic virus. BRS Pitanga was originated from the single cross between FEB 163 and AN512879, performed at Embrapa Rice and Beans. The bulk method was used from the F₂ to F₄ generations, with selection for commercial purple grain type. In the F₅ generation plants were selected for commercial purple grain type and harvested individually. From the F₆ families it was selected the line LM 95105718, for its productivity, erect plant growth habit and resistance to diseases. In 1997, this line was evaluated together with an additional 27 bean lines and two controls, in the National Trials, under 8 different environments in the States of Goiás (2), Mato Grosso (1), Mato Grosso do Sul (2), Minas Gerais (1), Bahia (1) and Espírito Santo (1). The joint analysis of the grain yield data and other agronomic characteristics provided the elements to promote LM 95105718 to the Regional Trial with the pre-commercial name of CNFR 7866. In the growing season of 1999/2000 this variety was evaluated with other 8 bean lines and two controls in a randomized complete block design with four replications (each plot consisted of 4 rows of 4m) in 10 different environments in the States of Goiás (9) and Federal District (1). In 10 Regional Trials, conducted during the "dry" and "winter" seasons in the State of Goiás and Federal District, line CNFR 7866 presented the same average yield as the control cultivars (Table 1).

Table 1. Average yield of BRS Pitanga compared to the average yield of the best two control cultivars in the Regional Trials of 1999/2000.

Region	Season	BRS Pitanga (kg.ha ⁻¹)	Mean for Control ¹ (kg.ha ⁻¹)	Relative Yield (%)	Number of environment
GO e DF	"dry"	1.541	1.632	94,4	3
	"winter"	2.282	2.261	101,0	7
Mean	-	2.059	2.072	99,4	---

¹Roxo 90 and Safira.

BRS Pitanga presents grain size and color uniformity, a very important characteristic for the purple grain group, excellent cooking qualities and an excellent aspect after cooking (Table 2).

Table 2. Industrial and technological grain qualities of the purple bean BRS Pitanga compared to the variety Roxo 90.

Variety	Cooking time (minute)	Soluble solids (%)	Protein content (%)	100 grain weight (g)
BRS Pitanga	21,0	9,3	21,5	20,3
Roxo 90	26,0	9,5	-	23,1

Cultivar BRS Pitanga, under artificial inoculation, was resistant to bean common mosaic virus and to the pathotypes 55 (lambda), 89 (alfa-Brazil), 95 (Kappa) and 453 (zeta) of *Colletotrichum lindemuthianum*, the causal agent of anthracnose. In field trials it was resistant to rust, moderately resistant to angular leaf spot and susceptible to common bacterial blight.

BRS Pitanga presents an erect growth habit in all tested environments. It has also good resistance to lodging for the entire growing cycle (mean of 83 days from emergency to physiological maturity).

BRS Pitanga is a new option for bean growers involved with the small purple grain type bean production, that presents excellent cooking qualities, erect plant growth habit, resistance to lodging and diseases. This cultivar was released for the State of Goiás and Federal District.

Genetic seed stocks are maintained by Embrapa Rice and Beans and basic seed is available at Embrapa Technology Transfer.

Institutions involved in the cultivar evaluation:

Embrapa Arroz e Feijão; Embrapa Cerrados; Agência Goiana de Desenvolvimento Rural e Fundiário; Universidade de Rio Verde/Fesurv.