

## UFVS-2003 Soybean Cultivar

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### ABSTRACT

The UFVS-2003 soybean cultivar was developed by the Soybean Genetic Breeding Program at the Plant Science Department, Federal University of Viçosa, Minas Gerais, Brazil. It was released for sowing in Minas Gerais State. Flowering and maturity are, on average at 62 and 146 days after emergence, respectively, with grain yield of 3,432 kg/ha in the regions of best adaptation. It is resistant to stem canker, frogeye leaf spot and bacterial pustule, and moderately resistant to powdery mildew.

**KEY WORDS:** *Glycine max*, soybean, cultivar description and seed production.

### INTRODUCTION

Soybean (*Glycine max* (L.) Merrill) UFVS-2003 was developed by the Soybean Genetic Breeding Program at the Plant Science Department Federal University of Viçosa, Minas Gerais, Brazil. It is a late maturity cultivar, released for cultivation in Minas Gerais after field yield tests performed in 1997/98 and 1998/99 under the inbred line denomination UFV95-4131333.

### PEDIGREE AND BREEDING METHOD

The UFVS-2003 cultivar is an individual plant selection in the F6 generation of the cross between IAC-12 and UFV-10 (Uberaba) (Figure 1), obtained from modified genealogical method (SSD Single Seed Descent) proposed by Brim (1966), adapted to the single pod descent method (Sedyama et al., 1999). About one hundred plants were selected initially to assess the uniformity of the agronomic traits by a progeny test. Their seeds were cultivated in 2.0m long rows, spaced at 0.70cm with 12 plants/m density. The individual plant selection were inoculated with *Diaporthe phaseolorum* f.sp. *meridionalis*, by the toothpick method (Yorinori, 1991) and with *Cercospora sojina* Hara isolates, in a greenhouse (Yorinori, 1989). After

selecting the best progeny resulting from the yield trails, 150 plants were sampled and sowed in single rows. The homogenous rows were mixed to compose the genetic seed.

### PERFORMANCE

The UFVS-2003 cultivar yielded on average 3,052 kg/ha assessed in 13 experiments carried out in the 1997/1998 and 1998/99 agricultural years in Capinópolis, Rio Paranaíba, Florestal, Uberlândia and Paracatu (Table 1). This yield was 1.8% higher than the FT-104 cultivar and 7.4% more than the Doko RC cultivar. The average yield in four experiments carried out in Capinópolis and Uberlândia in the 1997/98 and 1998/99 agricultural years (Table 2) was 3,432 kg/ha, respectively 5.8% and 19.7% more than FT-104 and Doko RC used as control.

### OTHER CHARACTERISTICS

The UFVS-2003 cultivar has determined growth habit and good resistance to lodging and pod dehiscence. It flowers at 62 days on average and reaches harvest maturity at 146 days after emergence (Sedyama et al., 2001). The mean plant height was 77cm and weight of a 100 seeds was 12.9 g. The oil and protein percentages are

19.47% and 43.41% respectively. The UFVS-2002 cultivar has purple colored flowers, brown pubescence and pod, yellow seed coat and negative peroxidase activity. It is resistant to stem canker, frog-eye leaf spot bacterial pustule and moderate resistance to powdery mildew.

## PEDIGREE SEED MAINTENANCE AND DISTRIBUTION

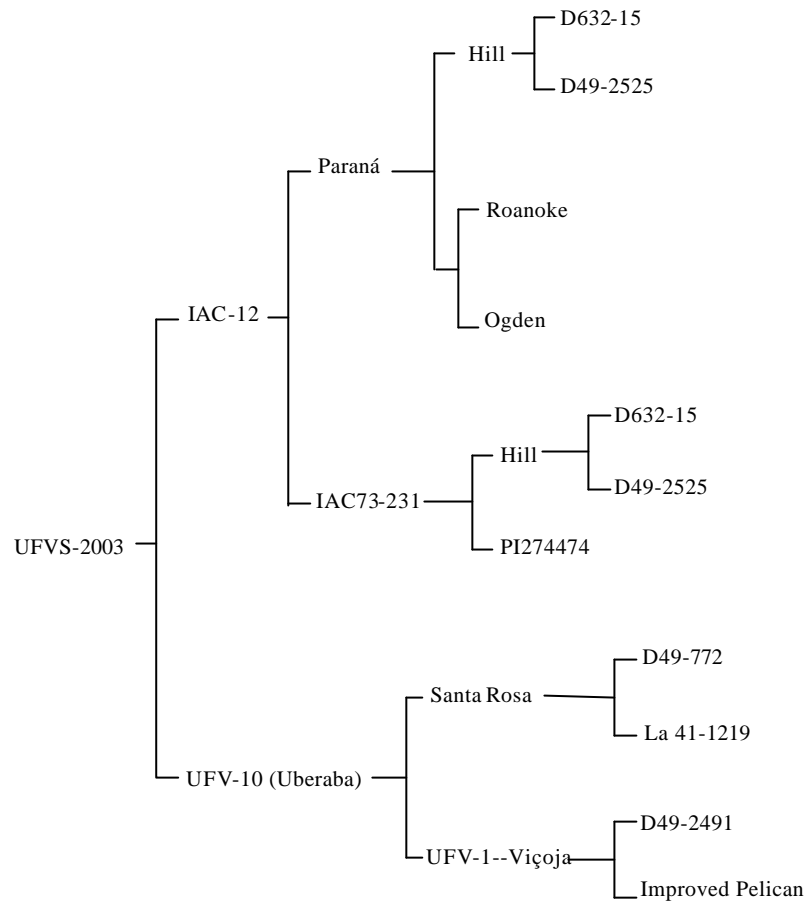
The UFVS-2003 seed is maintained by the Federal University of Viçosa, Plant Science Department, CEP 36571-000 Viçosa-MG Brasil.

**Table 1** – Means for grain yield, relative yield and number of bags/ha, obtained in experiments carried out in Capinópolis, Rio Paranaíba, Florestal, Uberlândia and Paracatu, Minas Gerais, in the 1997/98 and 1998/99 agricultural years

Cultivar	Grain yield (kg/ha)	Relative yield (%)	Grain yield (bags/ha)
UFVS-2003	3,052	107.4	50.9
FT-104	3,002	105.6	50.0
Doko RC	2,842	100.0	47.4

**Table 2** – Mean results of grain yield, relative yield and yield in 60 kg/ha bags, obtained in experiments in Capinópolis and Rio Paranaíba, Minas Gerais, in the 1997/98 and 1998/99 agricultural years

Cultivar	Grain yield (kg/ha)	Relative yield (%)	Number of bags/ha (60kg/bag)
<b>Capinópolis</b>			
UFVS-2003	3,400	120.9	56.7
FT-104	3,256	115.8	54.3
Doko RC	2,812	100.0	46.9
<b>Uberlândia</b>			
UFVS-2003	3,464	118.5	57.7
FT-104	3,276	112.0	54.6
Doko RC	2,924	100.0	48.7
<b>Capinópolis and Uberlândia Mean</b>			
UFVS-2003	3,432	119.7	57.2
FT-104	3,266	113.9	54.4
Doko RC	2,868	100.0	47.8



**Figure 1** – UFVS-2003 pedigree.

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