Registration of 'Negro Tacaná' Common Bean

Negro Tacaná, a black-seeded common bean (*Phaseolus vulgaris* L.) cultivar (Reg. no. CV-138, PI 592898), was developed in a Collaborative Regional Project for Central America, Mexico, and the Caribbean basin (PROFRIJOL) with partial financial support from the Swiss Commission for Development (COSUDE), and technical advice from the International Center for Tropical Agriculture (CIAT). Negro Tacaná was released in 1995 by the National Research Institute for Forestry, Agriculture, and Livestock (INIFAP) of Mexico as a bean golden mosaic virus (BGMV) resistant cultivar for the tropical lowlands of Mexico. It was selected for disease resistance using the modified pedigree method from an *F*₂ population made at CIAT (Cali, Colombia) in 1986.

Negro Tacaná originated from the double cross (DOR 364/G 18521)/(DOR 365/LM-30630). Bred lines DOR 364 and DOR 365 are adapted to the tropical lowlands of Central America, while G 18521 and LM-30630 were bred for Brazil. All four parents were selected for a degree of resistance to BGMV. Individual plant selections were made at CIAT (Palmira, Colombia) in the *F*₂, based on plant type. Selections were increased in *F*₃, and *F*₄ families were planted at Cuyuta, Guatemala, where individual plants were selected for reaction to BGMV. Families in the *F*₅ were planted at Monjas, Guatemala. Fifteen plants were taken in selected families, seeds bulked, and planted at Jutiapa, Guatemala. In the *F*₆ generation, selection was performed on best families. Selections from the *F*₄ to *F*₆ generations were based on disease reactions: scores less than 3 (on a scale of 1 to 9, where 1 = symptomless and 9 = dead plant), mainly against BGMV.

Negro Tacaná is of indeterminate bush growth habit Type II (1), with relatively small leaves and purple flowers. It matures 1 and 3 d earlier than 'Jamapa' and 'Negro Cotaxtla 91', respectively, and is adapted to similar latitudes (approximately 16 to 25°N) (2). It has a more erect, compact growth habit than all other tropical bred cultivars grown in Mexico. Prior to release, Negro Tacaná was designated as DOR 390 and was distributed for yield testing in Central America and Mexico in 1989. From 1992 to 1994, Negro Tacaná was tested at several locations in the humid tropics of Mexico. In the state of Veracruz, averaged over 3 yr, it produced 9 and 27% more than Negro Cotaxtla 91 and Jamapa, respectively. In uniform yield trials conducted in several states of the tropical lowlands of Mexico, Negro Tacaná averaged 997 kg ha⁻¹, compared with 916 and 724 for Negro Cotaxtla 91 and Jamapa, respectively. In tests at Tapachula, Chiapas, under a strong pressure of BGMV, Negro Tacaná outyielded all local landraces and cultivars from 26 to 100%. In eight commercial plots (1 ha each) established at different locations in the state of Veracruz, Negro Tacaná, Negro Cotaxtla 91, and Jamapa yielded an average of 1214, 1142, and 867 kg ha⁻¹, respectively.

The average flowering date of Negro Tacaná is 38 d after planting, which is similar to most tropical landraces and cultivars. In the lowland tropics of Mexico, Negro Tacaná is resistant to BGMV and anthracnose [caused by *Colletotrichum lindemuthianum* (Sacc.) deighton]. Seeds are harvested by hand, and the plant was not registered for yield. Small quantities of seed of DOR 390 can also be obtained from the bean program at CIAT.

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References and Notes


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Registration of 'ICMV 88904' Pearl Millet

ICMV 88904, a grain cultivar of pearl millet [*Pennisetum glaucum* (L.) R. Br.] (Reg. no. CV-13, PI 591068), was released by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, Andhra Pradesh, India, on 17 Aug. 1993. It was released under the experimental designation 'ICMV 221' as a higher-yielding alternative to 'ICRV 8203' (2) in all pearl millet producing regions of India except central and western Rajasthan and northern Gujarat that receive <400 mm mean annual precipitation. ICMV 88904 is a hybrid under the experimental designation MP 221 and was released under the experimental designation MP 221 of the Coordinated Pearl Millet Improvement Project (AICPMIP).

In the 1987 dry season, 1000 cycle-3 S₁ progenies of the ICRISAT Bold Seeded Early Composite (BSEC) (4) were evaluated under postflowering drought stress conditions at ICRISAT Asia Center. We selected 124 *S₁* progenies with the highest threshing percentage (grain mass as a percentage of panicle mass). ICMV 88904 was subsequently tested as MP 221 in 79 trials across 20 locations, ICMV 88904 yielded 15% more grain than ICTP 8203 (2) in all pearl millet producing regions of India except central and western Rajasthan and northern Gujarat that receive <400 mm mean annual precipitation. ICMV 88904 was subsequently tested as MP 221 in 79 trials (across 20 locations). ICMV 88904 flowered in 46 d (51 d for WC-C75) and had a plant height of 165 cm (177 cm for WC-C75).

ICMV 88904 has thick, semi-compact to compact, lanceolate to oblanceolate panicles that often taper sharply toward the apex. In the 72 trials at locations in AICPMIP's Zone B (corresponding to all pearl millet producing regions in India that receive >400 mm mean annual precipitation), ICMV 88904 yielded 2.07 t ha⁻¹, 15% more than ICTP 8203 (2.3 ± 0.2 t ha⁻¹) (Fig. 1). ICMV 88904 is more resistant to BGMV than ICTP 8203. ICMV 88904 flowered 3 d earlier than 'Jamapa' and 'Negro Cotaxtla 91', respectively. In tests at Tapachula, Chiapas, under a strong pressure of BGMV, Negro Tacaná outyielded all local landraces and cultivars from 26 to 100%. In eight commercial plots (1 ha each) established at different locations in the state of Veracruz, Negro Tacaná, Negro Cotaxtla 91, and Jamapa yielded an average of 1214, 1142, and 867 kg ha⁻¹, respectively.

The average flowering date of Negro Tacaná is 38 d after planting, which is similar to most tropical landraces and cultivars. In the lowland tropics of Mexico, Negro Tacaná is resistant to BGMV and anthracnose [caused by *Colletotrichum lindemuthianum* (Sacc.) deighton]. Seeds are harvested by hand, and the plant was not registered for yield. Small quantities of seed of DOR 390 can also be obtained from the bean program at CIAT.