Registration of ‘Rosada Nativa’ Pink Bean

‘Rosada Nativa’ pink bean (Phaseolus vulgaris L.) (Reg. no. CV-164, PI 606250) was developed and released in 1998 by the Puerto Rico Agricultural Experiment Station in cooperation with the USDA-ARS. Rosada Nativa, tested as PR9443-1, was derived from the cross DOR483/BelNeb Rust Resistant-1. DOR483 is a bean golden mosaic (BGMV) resistant small red breeding line from CIAT, BelNeb Rust Resistant-1 (2) is a great northern bean cultivar that has resistance to bean rust [caused by Uromyces appendiculatus (Pers.:Pers.) Unger] and common bacterial blight [caused by Xanthomonas axonopodis pv. phaseoli Starr & Garces 1950 emend. Vauterin et al. 1995; syn. X. campestris pv. phaseoli (Smith) Dye].

Crosses, field selections, and evaluations were made at the Isabela Substation in Puerto Rico. The F1 was advanced in the field. Individual F2 and F3 plants were selected under field conditions for erect plant architecture, early maturity, and commercially acceptable pink seed type. The F4 and F5 were evaluated for plant type, relative maturity and rust resistance. The best plants from selected families were harvested in bulk. The F6 was screened for BGMV resistance using a greenhouse inoculation technique (1). The BGMV resistance of the Rosada Nativa was confirmed in field trials conducted in Puerto Rico and the Dominican Republic. Rosada Nativa has the recessive bgm-1 allele for resistance to BGMV. The presence of bgm-1, a recessive resistance gene, was confirmed using the R2570/530 RAPD marker (3). Rosada Nativa represents the first release of a pink bean with BGMV resistance.

Rosada Nativa is resistant to the bean rust races prevalent in Puerto Rico and the Dominican Republic. It also carries the I gene for resistance to BCMV. Rosada Nativa is moderately resistant to web blight (caused by Rhizoctonia solani Kühn) and susceptible to common bacterial blight.

The performance of Rosada Nativa was evaluated in 10 field trials conducted in Puerto Rico from 1995 to 1997. When planted during the cooler winter growing season, Rosada Nativa produced seed yields in Puerto Rico similar to the adapted cultivar ‘Arroyo Loro’. However, the seed yield was significantly greater (>30%) than Arroyo Loro during the hot and humid summer growing season (Programa Regional de Frijol para Centroamérica y Caribe) Caribbean Adaptation Nurseries conducted in Mexico, the Dominican Republic, Haiti, and Puerto Rico. Rosada Nativa yields similar to ‘Tío Canela-75’, a BGMV- and BCMV-resistant red cultivar.

Rosada Nativa has an indeterminate, short-vine habit. It is a midseason line, flowering at 30 d and d after planting. Rosada Nativa has a commercially acceptable white seed color and an average seed weight of 31 g.

Breeder seed of Rosada Nativa will be maintained by the Agricultural Experimentation Station of the University of Puerto Rico. Small quantities will be available upon request from the corresponding author.

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References and Notes

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Registration of ‘Morales’ Small White Bean

‘Morales’ small white bean (Phaseolus vulgaris L.) (Reg. no. CV-163, PI 606249) was developed and released in 1998 by the Puerto Rico Agricultural Experiment Station in cooperation with the USDA-ARS. Morales, tested as PR9610-9, was derived from the cross ‘Arroyo Loro’/‘Don Silvio’. Arroyo Loro is a white-seeded cultivar with bean rust [caused by Uromyces appendiculatus (Pers.: Pers.) Unger] and bean common mosaic virus (BCMV) resistance. DOR482 is the CIAT identification of the bean golden mosaic (BGMV) resistant small red cultivar Don Silvio.

Crosses, field selections, and evaluations were made at the cross DOR483/BelNeb Rust Resistant-1. DOR483 is a bean golden mosaic (BGMV) resistant small red breeding line from CIAT, BelNeb Rust Resistant-1 (2) is a great northern bean cultivar that has resistance to bean rust [caused by Uromyces appendiculatus (Pers.:Pers.) Unger] and common bacterial blight [caused by Xanthomonas axonopodis pv. phaseoli Starr & Garces 1950 emend. Vauterin et al. 1995; syn. X. campestris pv. phaseoli (Smith) Dye].

Crosses, field selections, and evaluations were made at the Isabela Substation in Puerto Rico. The F1 was advanced in the field. Individual F2 and F3 plants were selected under field conditions for erect plant architecture, early maturity, and commercially acceptable pink seed type. The F4 and F5 were evaluated for plant type, relative maturity and rust resistance. The best plants from selected families were harvested in bulk. The F6 was screened for BGMV resistance using a greenhouse inoculation technique (1). The BGMV resistance of the Rosada Nativa was confirmed in field trials conducted in Puerto Rico and the Dominican Republic. Rosada Nativa has the recessive bgm-1 allele for resistance to BGMV. The presence of bgm-1, a recessive resistance gene, was confirmed using the R2570/530 RAPD marker (3). Rosada Nativa represents the first release of a pink bean with BGMV resistance.

Rosada Nativa is resistant to the bean rust races prevalent in Puerto Rico and the Dominican Republic. It also carries the I gene for resistance to BCMV. Rosada Nativa is moderately resistant to web blight (caused by Rhizoctonia solani Kühn) and susceptible to common bacterial blight.

The performance of Rosada Nativa was evaluated in 10 field trials conducted in Puerto Rico from 1995 to 1997. When planted during the cooler winter growing season, Rosada Nativa produced seed yields in Puerto Rico similar to the adapted white-seeded cultivar ‘Arroyo Loro’. However, the seed yield was significantly greater (>30%) than Arroyo Loro during the hot and humid summer growing season (Programa Regional de Frijol para Centroamérica y Caribe) Caribbean Adaptation Nurseries conducted in Mexico, the Dominican Republic, Haiti, and Puerto Rico. Rosada Nativa yields similar to ‘Tío Canela-75’, a BGMV- and BCMV-resistant red cultivar.

Morales has an indeterminate, short-vine habit. It is a midseason line, flowering at 35 d and d after planting. Morales has a commercially acceptable white seed color and an average seed weight averaging 19 g.

Breeder seed of Morales will be maintained by the Agricultural Experimentation Station of the University of Puerto Rico. Small quantities are available upon request from the corresponding author.

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References and Notes

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