Registration of ‘Beluga’ Alubia Bean

‘Beluga’ alubia bean (Phaseolus vulgaris L.) (Reg. no. CV-158, PI 604229) was developed and released cooperatively by the Michigan Agricultural Experiment Station and the USDA-ARS in 1998 as an upright, full season, disease-resistant cultivar.

Beluga, tested as K90902, was derived from a cross made in 1988 between the Italian Borlotto bean ‘BEA’ with the white kidney bean ‘Lassen’, BEA/Lassen. BEA was supplied by Matt Silbernagel (USDA-ARS, Prosser, WA) and Lassen is a determinate, early-season commercial cultivar. The objective of the cross was to develop an adapted, large-seeded white bean equivalent in appearance and performance to U.S. white kidney bean cultivars and the Argentinian Alubia bean that is preferred in European markets. The F1 plants were advanced in the greenhouse and space-planted in an F2 nursery at the Montcalm Research Farm near Entrican, MI. A single-plant F2 selection was identified as possessing the desired agronomic and great northern seed traits. The F3 progeny were advanced as a plant row in Puerto Rico. A single-plant selection was made in a space-planted F4 nursery in Michigan on the basis of agronomic traits, seed traits, and resistance to bean anthracnose [caused by Colletotrichum lindemuthianum (Sacc. & Magnus) Lams.-Scrib.]. The F5 progeny were advanced as a plant row in Puerto Rico. The F6 breeding line, coded K90902, entered replicated yield trials in 1990.

Beluga was extensively tested for yield and agronomic traits at 24 locations in Michigan, over eight seasons (1990–1997). Beluga averaged 2430 kg ha⁻¹ and at over 20 locations outyielded ‘Montcalm’ dark red kidney by 5% and yielded 3% less than ‘Chinook’ light red kidney bean cultivars. Beluga is recommended for production in coarse textured soils under a high input management system and the variation in yield observed across locations reflects the fact that recommendation was not met at all test locations.

Beluga averaged 52 cm in height and exhibits a Type I determinate growth habit, with resistance to lodging. Beluga has white flowers and blooms 48 d after planting. Beluga is a full season bean, maturing 105 d after planting and with a range in maturity that recommendation was not met at all test locations.

Beluga has a large white kidney seed which averages 62 g 100 seed⁻¹, and seed oil concentrations of the two were(P< 0.01), and seed oil concentrations of the two were

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Registration of ‘Prolina’ Soybean

‘Prolina’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-393, PI 597389) was developed by the USDA-ARS in 1996 to provide a cultivar of Group VI maturity with increased seed protein concentration. Prolina is most adapted to production areas between 33° and 37° N latitude.

Prolina is the bulk of two F8-derived lines from a first cycle of a recurrent selection program for increasing seed protein (4). Parents of Population IA were D55-4110 and N56-4071. ‘Ogden’ and ‘CNS’ were parents of Population IA in a recurrent selection program for increasing seed protein (4). Parents of Population IA were D55-4110 and N56-4071. ‘Ogden’ and ‘CNS’ were parents of Population IA in a recurrent selection program for increasing seed protein (4).

In the initial population development, several F₀-derived lines from each parental combination resulted in 234 F₁ families. A restricted index was applied to S₀ families chosen in the field index selection to increase average yield and maintain the average protein concentration at constant level (8). Modified pedigree to S₀ families initially selected as an F₁ line in 1987 under the name ‘Prolina’. Because of heterogeneity for plant height when selected as a single-plant line in 1987, the name ‘Prolina’ was changed to ‘Prolina’ for Phaseolus vulgaris L. (Reg. no. CV-208, PI 597389)....