Registration of ‘Huron’ Navy Bean

‘Huron’ navy bean (Phaseolus vulgaris L.) (Reg. no. CV-112, PI 578077) was developed and released cooperatively by the Michigan Agricultural Experiment Station and the USDA-ARS in 1994 as an upright, mid-season navy bean cultivar with excellent processing quality.

Huron, tested as N90563, was derived from a cross made in 1987 between navy bean cultivars C-20/Harokent. C-20 is a full-season, high-yielding, upright indeterminate (Type II) cultivar; Harokent is a determinate (Type I), mid-season, disease-resistant cultivar with excellent seed and canning quality. The cross was designed to incorporate earliness and improved canning quality into the Type II navy bean growth habit. The F₁ plants were advanced through the greenhouse and space-planted in an F₂ nursery at Saginaw, MI. A single-plant F₂ selection was identified as possessing the desired agronomic and 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 (Type II), disease resistance [bean rust, caused by Uromyces appendiculatus (Pers.:Pers.) Unger] and seed (navy) traits. The F₅ progeny were advanced as a plant row in Puerto Rico. The F₅ breeding line coded N90563 entered replicated yield trials in 1990.

Huron was extensively tested for yield and agronomic traits at 34 locations over four seasons (1990–1993). Huron averaged 2800 kg ha⁻¹, which exceeded the yield of early- and mid-season navy bean cultivars by 11 to 19% and was competitive with full-season cultivars (which yielded from 0 to 6% higher than Huron). Huron has specific adaptation to Huron County, the major navy bean production county in Michigan.

Huron exhibits the upright Type II indeterminate growth habit, averaging 46 cm in height, but (like the C-20 parent) plants exhibit a tendency to lodge. Huron is an early- to mid-season bean, maturing 92 d after planting (with a range in maturity from 87 to 98 d, depending on season and location). Huron matures 1 wk earlier than the full-season cultivar Mayflower. In canning trials, Huron scored 4.3 on a five-point hedonic scale (where 5 is best). This evaluation is based on whole-bean integrity (no splitting or clumping), uniformity of size (uniform water uptake), color (no after-darkening), and drained weight ratios.

Huron has a large ovoid seed averaging 21 g 100 seed⁻¹ and ranges from 20 to 25 g 100 seed⁻¹, larger than but similar in color to that of Mayflower. Huron has been subjectively rated as excellent (Huron scored 4.3 on a five-point hedonic scale, best). This evaluation is based on whole-bean integrity (no splitting or clumping), uniformity of size (uniform water uptake), color (no after-darkening), and drained weight ratios.

Huron navy bean has been released as a public nonexclusive variety, with a research fee to be assessed on the sale (dried weight) of certified seed sold. Varieties are approved for plant variety protection under the Plant Variety Protection Act (1991-577), with the option that Huron may be sold under the certified class. Breeder seed is maintained by the Michigan Agricultural Experiment Station, Rogers City, MI 49779. Research supported by the Michigan Dry Bean Foundation, Michigan Foundation Seed Association.

References and Notes


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