

MICHIGAN AGRICULTURAL EXPERIMENT STATION
MICHIGAN STATE UNIVERSITY
East Lansing, Michigan 48824

and

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
Washington, DC 20205

NOTICE OF NAMING AND RELEASE OF HURON, A NEW MID-SEASON UPRIGHT
NAVY BEAN FOR MICHIGAN AND THE GREAT LAKES REGION

The Michigan Agricultural Experiment Station and the Agric. Res. Service, United States Department of Agriculture, announce the joint release of Huron, a new upright, mid-season, disease resistant, navy bean cultivar with excellent processing quality.

Huron tested at MSU no. 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 cross was coded 87N606 and subsequently single-plant F₂ selection no. 18 was identified as possessing the desired agronomic and seed traits. Progeny were advanced to the F₆ generation where breeding line numbered 87N606-18-01-02 entered replicated yield trials in 1990 and was coded with the permanent accession number N90563.

Huron was developed by the dry bean breeding team at East Lansing, Michigan, consisting of Dr. J.D. Kelly, Mr. J. Taylor and Ms. M. Brothers of Michigan State University, Department of Crop and Soil Sciences; Dr. G.L. Hosfield of ARS, U.S. Department of Agriculture, Sugarbeet, Bean and Cereal Research Unit; Dr. M.A. Uebersax of Michigan State University, Department of Food Science and Human Nutrition; and Mr. G.V. Varner of the Michigan Dry Bean Production Research and Advisory Board.

Huron was extensively tested for yield and agronomic traits for four seasons (1990-93) over 34 locations. Huron averaged 2800 kilograms per hectare and exceeded the yield of early and mid season navy bean cultivars by 11-19 percent; was competitive with full season cultivars which ranged from 0-6 percent higher yield than Huron. Huron has demonstrated superior yield performance in the early to mid season maturity class with specific adaptation to Huron county which is the major navy bean production county in Michigan.

HURON NAVY BEAN

Huron exhibits the type-11, upright indeterminate growth habit averaging 46 centimeters in height but plants exhibit a tendency to lodge like the C-20 parent (score of 3). Huron is a early-to-mid season bean maturing 92 days after planting with a range in maturity from 87-98 days depending on season and location. Huron matures a week earlier than the full season cultivar Mayflower and five days later than the early season cultivar Seafarer. Huron has demonstrated uniform maturity and excellent dry-down across a broad range of environments.

Huron carries the single dominant hypersensitive I gene resistance to Bean Common Mosaic Virus (BCMV) but is sensitive to the temperature insensitive strains of BCMV like NL 3 and NL 8 which induce the black root reaction. Huron possesses the Are gene for resistance to all races of anthracnose and the Ur-3 rust resistance gene which conditions resistance to all indigenous rust races prevalent in Michigan. Huron has shown tolerance to white mold (17 percent versus 83 percent for susceptible cultivar) and resembles the tolerance level of the C-20 parent.

Huron has a large ovoid navy bean seed averaging 22 grams per 100 seed and ranges from 20-25 grams per 100 seed. The seed is slightly larger than Seafarer and is equivalent in color; dry seed color is brighter than Mayflower. In canning trials Huron has been subjectively rated by a team of panelists as being excellent in cooking quality. Huron scored 4.3 on a 5-point hedonic scale (5 is best). Data on cooked color, hydration and drained weight ratios exhibited no differences between Huron and other commercial navy bean varieties. The texture of 45 kilograms per 100 grams is well within the acceptable range of 40 to 80 kilograms per 100 grams for processed navy beans.

Seed of Huron for experimental purposes may be obtained from Dr. J.D. Kelly, Department of Crop and Soil Sciences, Michigan State University, East Lansing, MI 48824. The Agricultural Research Service has no seed for distribution.

Huron navy bean is being released as a public, non exclusive cultivar, jointly by the Michigan Agricultural Experiment Station and the Agricultural Research Service. A research fee will be assessed on each unit (hundredweight) of certified seed sold.

Director
Michigan Agricultural Experiment Station

Date

Administrator
Agricultural Research Service

Date