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Huron a New Navy Bean for Michigan  
Michigan State University Extension Service  
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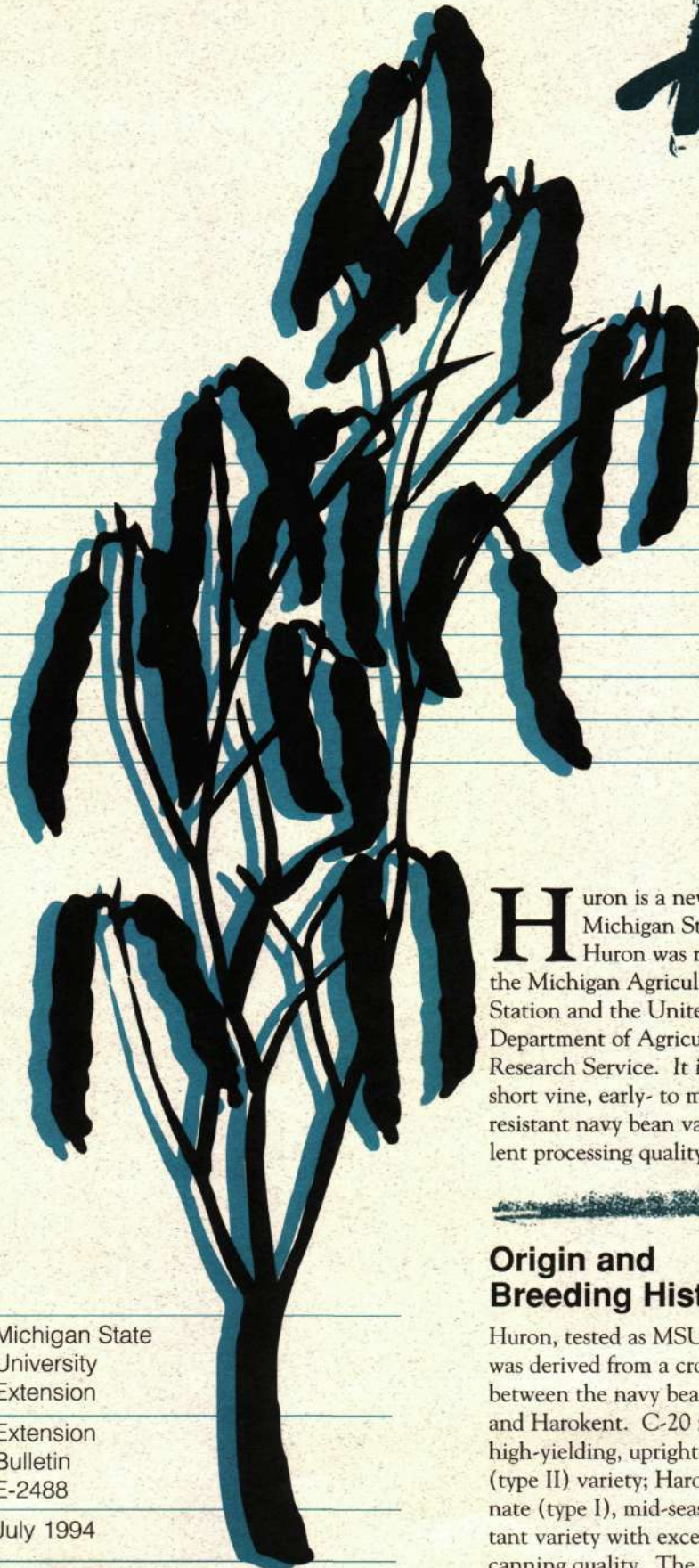
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**NEW from  
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# Huron

A NEW NAVY BEAN

*for Michigan*



- Upright, short vine
- Early- to mid-season maturity
- Disease resistant
- Excellent processing quality
- Exceeds yields of similar varieties
- Large, ovoid seed
- White mold tolerant

**H**uron is a new navy bean from Michigan State University. Huron was released jointly by the Michigan Agricultural Experiment Station and the United States Department of Agriculture, Agricultural Research Service. It is an upright, short vine, early- to mid-season, disease resistant navy bean variety with excellent processing quality.

## Origin and Breeding History

Huron, tested as MSU No. N90563, was derived from a cross made in 1987 between the navy bean variety C-20 and Harokent. C-20 is a full-season, high-yielding, upright indeterminate (type II) variety; Harokent is a determinate (type I), mid-season, disease resistant variety 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. Selections were advanced to the F6 generation over three years, and the breeding line code number N90563 entered yield trials in 1990.

## Yield Performance

Huron was extensively tested for yield and agronomic traits for four seasons (1990-93) at over 34 locations and averaged 25 cwt/acre (Table 1). It exceeded the yield of early- and mid-season navy bean varieties by 11-19 percent and was competitive with full season varieties which ranged from 0-6 percent higher than Huron. Huron has demonstrated superior yield performance in the early- to mid-season maturity class with specific adaptation to Huron county where it outyielded Mayflower.

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## Agronomic Features

Huron exhibits the type II, upright indeterminate growth habit averaging 18 inches in height but exhibits a tendency to lodge like the C-20 parent. Huron is an early- to mid-season bean maturing 92 days after planting, with a range in maturity from 87-98 days depending on season and location. It matures a week earlier than the full-season variety Mayflower and five days later than Seafarer. Huron has demonstrated uniform maturity and excellent dry-down across a broad range of environments. Huron has a white flower.

## Disease Resistance

Huron carries the single dominant hypersensitive I gene resistance to bean common mosaic virus (BCMV) but is sensitive to temperature-insensitive strains of BCMV which induce the black root reaction. Huron possesses the A gene for resistance to alpha anthracnose and the Ur-3 gene which provides resistance to all local rust races prevalent in Michigan. Huron shows tolerance to white mold (17 vs. 83 percent for susceptible variety) comparable to that of the C-20 parent.

## Quality Characteristics

Huron has a large, ovoid navy bean seed averaging 22 g per 100 seeds and ranges from 20-25 g per 100 seeds. The seed is slightly larger than Seafarer and is equivalent in color. The dry seed color of Huron is brighter than Mayflower. In canning trials Huron has been rated as having excellent cooking quality by a team of panelists who rated it 4.3 on a 5-point scale (5 is best). Data on cooked color, texture, hydration and drained weight ratios showed no differences between Huron and other commercial navy bean varieties.

Table 1. Huron Navy Bean — Comparison of Agronomic, Disease, Yield Performance and Canning Characteristics.

Traits	Huron	Mayflower	Seafarer	Avanti	Midland	Schooner	Bunsi
<b>Agronomic Traits</b>							
Days to flower	40	47	40	44	42	42	42
Days to maturity	92	99	87	94	93	97	97
Height (cm)	46	50	43	48	45	42	42
Lodging score (1-5)	3.0	2.0	3.0	3.0	2.5	4.0	3.5
Selection index (1-9)	6.0	5.0	3.5	5.5	4.5	3.0	4.0
100 seed weight (g)	22	19	20	20	18	19	21
Yield (percent)	100	103	82	100	90	107	104
<b>Disease Resistance</b>							
Bean common mosaic virus	R	R	R	R	R	R	R
Alpha anthracnose	R	S	R	S	S	S	S
Michigan rust races	R	R	S	S	S	R	R
Common blight	S	S	S	S	VS	S	S
White mold (1-5)	2	3	4	3	5	3	1
<b>Canning Quality</b>							
Color L-scale	51	50	51	51	50	52	52
Hydration ratio	1.9	1.8	1.9	1.9	1.9	1.9	1.8
Washed drained ratio	1.2	1.3	1.3	1.3	1.4	1.3	1.4
Texture (kg/100 g)	45	45	37	44	44	48	31
Organoleptic rating (1-5)	4.3	2.8	3.3	4.0	3.8	3.5	3.7

Lodging: 1=erect, 5=prostrate

Selection index: 1=worst, 9=best

Diseases: R=resistant, S=susceptible

White mold: 1=resistant, 5=susceptible

Organoleptic rating: 1=worst, 5=best

## Release and Research Assessment

Huron navy bean was released as a public, nonexclusive variety by the Michigan Agricultural Experiment Station and the Agricultural Research Service. A research fee will be assessed on each unit (cwt) of certified seed sold.

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