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Cass: A New Winter Barley For Southwestern Michigan  
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# RESEARCH REPORT 83

## FARM SCIENCE

FROM THE MICHIGAN STATE UNIVERSITY  
AGRICULTURAL EXPERIMENT STATION EAST LANSING

## Cass: A New Winter Barley For Southwestern Michigan<sup>1</sup>

*John E. Grafius, Cecil D. Nickell, Dimon Wolfe and David H. Smith\**

CASS IS A NEW WINTER BARLEY which has malting possibilities. Laboratory tests and limited plant scale tests indicate that Cass may have a satisfactory quality pattern. More testing must be done but results to the present are favorable enough that the strain 414-80 has been named and will be given a limited release.

To get the quality characters necessary in a malting variety it was necessary to sacrifice some in lodging resistance and winter hardiness. It is not as winter-hardy as Hudson (Table 1), but is satisfactory in southwestern Michigan (Table 2).

The yield values for Ingham County (Table 1), are a direct reflection of winter survival. Without doubt, Hudson is agronomically superior to Cass for this area.

In the area of Cass and Kalamazoo counties, however, no significant yield advantage for Hudson over Cass was found. Indeed the yields of the two varieties were equal in 1965. Hudson for some unknown reason was vastly superior to everything in the nursery in 1966, having a yield of 97 bushels vs. 75 bushels for Cass. In 1967 the tables were reversed and Cass out-yielded Hudson by 5 bushels.

<sup>1</sup>The authors wish to acknowledge the generous financial support of the Malting Barley Improvement Association. Without the active support of the malting and brewing industry these tests would not have been possible. We would also like to acknowledge the assistance of Stuart Hildebrand, Extension Specialist; Fred Sackrider, Cass County Extension Agent, and a group of dedicated Cass County farmers.

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Cass originated from a recurrent selection program and has a complex parentage of C19574 x [NY 563a-26-7 x (KYCC 10-68-5 x Dicktoo)]. The cereal index number is C1 13735.

The botanical description is as follows: lax head of variable length; awns more than 2 times the length of head; rough awns; glume awn longer than glume; light red nerves on the glume; aleurone color, white mixed with blue; long rachilla hairs.

Without malting quality there would be no reason for release. However, it is satisfactory agronomically for southwestern Michigan and, because of its malting potential, is recommended for release. It is the first of its kind.

TABLE 1 —Agronomic data from Ingham County for Cass barley in comparison with the standard check varieties, Hudson and Wong, for the 3 years, 1965-67

Variety	Yield Bu/Acre	Test Wt. Lbs/Bu	Winter		Ht. In.	Seed Wt. Mg.
			Lodging %	Survival %		
Hudson	74	51	26	63	39	31
Cass	61	50	18	45	40	35
Wong	49	48	16	32	43	28
L. S. D. <sup>5</sup>	7					

<sup>5</sup> Difference required to be of significance.

TABLE 2 —Agronomic data for Cass barley from southwestern Michigan (Cass and Kalamazoo Counties) in comparison with Hudson and Wong for the 3 years 1965-67

Variety	Yield Bu/Acre	Test Wt. Lbs/Bu	Winter		Ht. In.	Seed Wt. Mg.
			Lodging %	Survival %		
Hudson	62	49	72	35	33	
Cass	57	51	75	32	36	
Wong	50	48	65	30	30	
L. S. D. <sup>5</sup>	6					

<sup>5</sup> Difference required to be of significance.