Registration of Crop Varieties

WOCUS BARLEY1

(Reg. No. 80)
Wilson H. Foote and A. E. Gross2

‘WOcus’ (Hordeum vulgare L., emend Lam.), CI 8059, (Utah B1270-78-10) was developed at the Utah Agricultural Experiment Station in cooperation with the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture. Wocus originated as a selection from the cross Coast X Lion 2 X Winter Club made by R. W. Woodward at Logan, Utah, and entered in the Rocky Mountain Uniform Barley Nursery in 1949. Tests at the Klamath Experiment Station, Klamath Falls, Oregon, showed that Wocus was well adapted to the organic soils in the area. Wocus was named and released by the Oregon Agricultural Experiment Station in 1958. In 1964 Wocus was grown on 16% of the barley acreage in Klamath and 20% of the acreage in Jackson and Josephine counties. Wocus also has proved popular in the Tule Lake area of California.

Wocus is a six-rowed, hulled, smooth-awned spring barley. Wocus has a dense, mid-long, parallel spike with a tough rachis, and the straw is short and stiff. The kernels are white, long, and the hulls are slightly wrinkled. Wocus is classed as a feed barley. Because of its early maturity, Wocus is able to escape serious frost damage at critical times in the Klamath area of Oregon.

Yield comparisons of Wocus and Hannchen for the Klamath area of Oregon are given in Table 1.

Table 1. Performance of Wocus and Hannchen Barleys at 3 locations in the Klamath Falls area of Oregon from 1950 to 1964.

<table>
<thead>
<tr>
<th>Variety</th>
<th>CI no.</th>
<th>Lower lake 3125 (1 yr.)</th>
<th>Upper lake 3575 (2 yr.)</th>
<th>Main station 3297 (4 yr.)</th>
<th>Average 3125-3575-3297</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wocus</td>
<td>8059</td>
<td>2015</td>
<td>4496</td>
<td>2197</td>
<td>3917</td>
</tr>
<tr>
<td>Hannchen</td>
<td>331</td>
<td>2602</td>
<td>3125</td>
<td>3575</td>
<td>3297</td>
</tr>
</tbody>
</table>

The Klamath Experiment Station, Klamath Falls, Oregon, maintains a small supply of foundation seed and certified seed is available from local growers and seedsmen. Yields of over 8,000 pounds per acre have been reported by growers from highly productive soils in the Tule Lake area of California.

Additional information about Wocus has been published by Wiebe and Reid3.

1 Registered under a memorandum of understanding between the Crops Research Division, ARS, USDA, and the American Society of Agronomy. Received August 6, 1965.
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NIAGARA OATS1

(Reg. No. 194)
N. F. Jensen4

‘NIAGARA’ (Avena sativa L.), CI 7528, was developed at the Cornell University Agricultural Experiment Station from the cross, CI 6589 4X ‘Goldwin’ 2X ‘Victoria’ X ‘Rainbow’ 3X ‘Branch’, made at Ithaca by N. F. Jensen in 1952. CI 6589 is the Cornell selection, Garry Sel. 3, from the original Garry variety. The Goldwin 2X, Victoria X Rainbow parent is C.I. 7211. Known during testing as N.Y. Sel. 5220a2-2B-23, Niagara received wider

1 Registered under a memorandum of understanding between the Crops Research Division, ARS, USDA, and the American Society of Agronomy. Received August 11, 1965.
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3 Published November, 1965

evaluation in cooperative tests conducted by the USDA and other experiment stations.

Niagara was approved for release in October 1960, and the first commercial distribution of certified seed took place in the spring of 1964 when approximately 100,000 bushels were planted. The recognized classes of seed are breeder, foundation, registered, and certified.

Niagara is a medium late, mid-tall spring oat with white kernels of high quality. At maturity fields have a golden brown color. Niagara has shown no smut in several years of tests with seed inoculated with a composite of New York smut collections. It carries the AB genes for stem rust resistance. Compared with the standard commercial variety, Garry, Niagara is more resistant to lodging, 2% higher yielding, and has heavier groats; on the debit side it is 2 days later in maturity and one-half pound per bushel lighter in test weight; the two varieties are of equal height. Additional information on Niagara was reported by Jensen, Crowder, Kent, and Tyler5.


ORA OATS1

(Reg. No. 195)
R. L. Thurman and J. P. Jones6

‘Ora’ (Arkansas 3-74-543, CI. 7976) was derived from a cross of (Lee X Victoria, 2 X Fulwin 3 X Bonda 4 X Land-bauer) X Moregran. The cross was made in the fall of 1957 by R. L. Thurman of the Arkansas Agricultural Experiment Station. The female parent ‘Ark. C4-5-7-3-4’ was selected by H. R. Rosen at Fayetteville from a cross made by F. A. Coffman. The F1 was grown in the greenhouse in the spring of 1958 and the F2 was grown that summer at Aberdeen, Idaho. The F2 was space planted at Stuttgart in 1958-59, and single plant selections were made in the spring. These selections were grown in individual plant rows in 1959-60.

Several hundred single heads were selected from the superior increase plots of 1960-61 and the seed removed. The seed was sent to Aberdeen for increase during the summer. Ora was row number 543, which came from plot 74 in 1960-61.

Culms are short, and stiffer, nodes hairy (short), sheaths and leaf margins glabrous. There are four to six nodes per rachis; panicles are generally erect. Approximately half of the spikelets possess awns 30 to 35 mm. long. Glumes are 22 to 28 mm. long and 8 to 10 mm. wide, 10 to 12 veined. Spikelets are often three-flowered, lemmas are tannish in color, first lemma is 16 to 20 mm. long with a few long basal hairs, second lemma 12 to 14 mm. long and awns absent, second floret rachilla segments 1 to 2 mm. long and glabrous. Primary grains are large and plump. Primary kernels are larger than the grains of presently known varieties of fall-sown oats.

Bulk line 3-74 (seed from the plot from which Ora and advanced sister selections were made) was grown at 12 locations in 9 southern states in 1961-63. Its yield was 5.1 bushels per acre higher than yields of other entries when only the southernmost locations were considered.

Ora produced the highest grain yields of the entries in the Uniform Nurseries at the Southern locations in 1963-64.

Ora has shown superior performance in tests in Arkansas and the southern States. It is short strawed and has high lodging resistance, large kernels, and medium maturity. It possesses resistance to crown rust (Puccinia coronata) races 203, 216, 290, 294 and 326. It is also resistant to Helminthosporium blight. Ora has produced high fall forage yields. It is similar to Arkwin in winterhardiness.

1 Registered under a memorandum of understanding between the Crops Research Division, ARS, USDA, and the American Society of Agronomy. Received August 27, 1965.
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