REGISTRATION OF VARIETIES

by R. P. Murphy from Narragansett seed fields at Riverton, Wyoming, in 1957 (in cooperation with W. A. Riedl of the University of Wyoming) and Firebaugh, California, in 1958 (in cooperation with E. H. Stanford of the University of California). These clones were studied extensively for fertility. After forage evaluation of seed progenies, 25 clones were combined in the synthetic variety Mark II.

Mark II has been widely tested in New York and it has proved to be similar in forage production to Narragansett. These varieties are similar in plant type and in fall and winter dormancy. In some experiments Mark II appears slightly more upright in growth habit and slightly more variable in fall dormancy than Narragansett. The flower color of Mark II is variegated with the frequency of yellowish-flowered plants somewhat lower than in Narragansett.

Seed of Mark II is produced on a three-generation basis: breeder, foundation and certified. Breeder seed of Mark II is produced by Cornell University by interpolation of the 25 parent clones that are maintained vegetatively at Ithaca, New York. Foundation seed is produced in Idaho, Oregon, and Washington under the direction of the New York Foundation Seed Stocks Cooperative, Inc. Certified seed for Mark II can be produced only from fields planted with foundation or breeder seed. The National Certified Alfalfa Variety Review Board reported favorably on Mark II in December 1965.

1 Registered by the Crop Science Society of America. Received August 1, 1966.
2 Professors, Department of Plant Breeding, Cornell University, Ithaca, New York.

REGISTRATION OF SARANAC ALFALFA1

(Reg. No. 27)

R. P. Murphy and C. C. Lowe

'SARANAC' alfalfa, Medicago sativa L., is a wilt-resistant, Flamande-type variety developed by the Department of Plant Breeding, New York State College of Agriculture and Cornell University Agricultural Experiment Station, Cornell University.

Saranac was produced by backcrossing for three generations using plants from the Flamande-type varieties, 'Du Puits,' 'Alfa,' and 'Flamande' (commercial source) as recurrent parents and plants from the experimental U.S.D.A. synthetic, A 225, as the wilt-resistant nonrecurrent parent. Two generations of intercrossing with selection for wilt resistance and winter survival followed the backcrossing program. Seed from approximately 500 interpollinated parent clones was composit ed and used to plant the breeder seed field.

Saranac has the foliage and growth habit characteristics of the Flamande-type varieties. Foliage color, leaf disease tolerance, fall and winter dormancy and regrowth rate of Saranac are similar to those of Du Puits and Alfa with slightly less uniformity in plant type. Saranac may be distinguished from Flamande-type varieties such as Du Puits and Alfa by the presence of approximately 15 percent of plants with variegated flower color.

Saranac has been tested extensively in New York and the Northeast. Yield of Saranac is equal to the best Flamande-type varieties in the first year. With each subsequent year of production it exhibits an increasing yield advantage over the Flamande-type varieties in common use because of greater persistence.

Seed of Saranac is produced on a three-generation basis: breeder, foundation and certified. Breeder seed will be maintained by Cornell University. Foundation seed is produced in Idaho, Oregon, and Washington under the direction of the New York Foundation Seed Stocks Cooperative, Inc. Certified seed of the variety Saranac can be produced only from fields planted with foundation or breeder seed. Saranac was released in 1963 and was considered favorably for certification by the National Certified Alfalfa Variety Review Board in December 1965.

1 Registered by the Crop Science Society of America. Received August 1, 1966.
2 Professors, Department of Plant Breeding, Cornell University, Ithaca, New York.

REGISTRATION OF BESBAR BARLEY1

(Reg. No. 90)

I. K. Bepaselov

'BESBAR' (Hordeum vulgare L., emend Lam.), CI 10882, was developed at the Crops Research Center of Eastern States Farmers' Exchange, Inc., located at Feeding Hills, Massachusetts. In 1955, two sister lines, 6-W-3-55 and 5-W-1-55, were selected by I. K. Bespalow as natural hybrids from the variety Wong. The 1955-60 winter was very severe and all surviving plants of both selections were composed under selection No. 6-W-3-55. This seed was increased in 1960 and designated as breeder seed of Besbar. In 1962, Besbar was increased for first commercial sale of seed to Eastern States Farmers' Exchange (now Agway, Inc.) members in Pennsylvania, Maryland, and Delaware. In 1963, in most areas and on most farms, Besbar outyielded Wong by a significant amount and compared favorably with 'Hudson.

Besbar is the first privately developed small grain to be offered to farmers in the Northeast.

Besbar is a six-rowed, awnleted winter barley. The spike is erect and dense, with light blue kernels in yellow lemmas. Lemmas may be awnless or with full length awns on the two central rows of kernels.

Besbar is similar in general appearance to Wong. It is stiff-strawed, with better lodging resistance than Wong. Besbar exceeds Wong in winter hardiness. Besbar is more resistant to stripe and more tolerant to scald than Wong, but moderately susceptible to loose smut. Besbar, like Wong, generally produces lower test weight grain than awned varieties.

Comparative performance data for Besbar, Wong, and Hudson from Massachusetts and USDA cooperative tests are given in Table 1. Additional information on Besbar was reported by Hugh MacWilliam.

Description. Six-rowed, awnleted winter barley, early growth, semi-prostrate; plant midseason, midtall; basal leaf sheaths hairy or without hairs, green or faintly purple; upper leaf sheaths slightly waxy, yellow at maturity; auricles white; leaves long, wide, drooping; flagleaves long and wide; stems yellow at maturity; exposed nodes green; distance flagleaf to spike 8 to 20 cm; collars closed or open; basal rachis internode straight, 1 to 3 mm. long; rachis tough, with long-haired edges. Spike dense, short to mid-long, slightly waxy, erect; lemma awns short, on central rows 0 to 0 cm. long, on lateral rows from 0 to 2 cm long; awns rough; glume awn twice the length of the glume; glumes half the length of the lemma with short or middling hairs; rachilla long- or short-haired; lemma yellow, several teeth on lateral nerves with few or none on marginal nerves; stigma hairy, kernels light blue, midlong, weight 30 to 34 mg; hulls semismirled.

Breeder seed will be maintained by Agway, Inc.

Table 1. Performance data for Besbar, Wong, and Hudson barleys, 1961-1965.

<table>
<thead>
<tr>
<th>C.I. no.</th>
<th>Variety</th>
<th>Yield, bu./A.</th>
<th>Test wt., lb./A.</th>
<th>Plant ht., in.</th>
<th>Date headed, May</th>
</tr>
</thead>
<tbody>
<tr>
<td>10882</td>
<td>Besbar</td>
<td>54.7</td>
<td>43.1</td>
<td>39.9</td>
<td>24.8</td>
</tr>
<tr>
<td>6770</td>
<td>Wong</td>
<td>54.2</td>
<td>43.1</td>
<td>39.8</td>
<td>25.0</td>
</tr>
<tr>
<td>6451</td>
<td>Hudson</td>
<td>38.3</td>
<td>49.2</td>
<td>37.7</td>
<td>22.7</td>
</tr>
</tbody>
</table>

1 Registered by the Crop Science Society of America. Received August 1, 1966.

REGISTRATION OF AMSOY SOYBEANS1

(Reg. No. 57)

C. R. Weber

'AMSOY' soybeans (Glycine max (L.) Merr.) originated as an F1 plant selection from the cross 'Adams' X 'Harosoy'. Hybridization, selection, and development of AMSoy was done at the Iowa Agricultural and Home Economics Experiment Station in cooperation with the Crops Research Division, Agricultural Re-