REGISTRATION OF NODAWAY 70 OATS

J. M. Poehlman and Dale T. Sechler

'Nodaway 70' spring oats (Avena sativa L.), C.I. 8442, Mo. 04978, originated at the Missouri Agricultural Experiment Station as a panicle selection from 'Nodaway.' Parentage of Nodaway included the varieties 'Columbia,' 'Marion,' 'Victoria,' 'Hajira,' 'Banuer,' 'Victory,' and 'Roxton' (Crop Science 2:553, 1962). Nodaway was increased directly from an F1 plant selection, and was variable in heading date and maturity. Nodaway 70 is more uniform for these characters.

Plant type and seed characteristics of Nodaway 70 are similar to those of Nodaway. Both have a large culm, distinctive brace roots, wide spreading panicles, broad short glumes which spread wide at maturity, and short, plump, white kernels. Nodaway 70 has been tested in Missouri since 1961 and in the Uniform Early Oat Performance Nursery since 1966. In the Uniform Early Oat Performance Nursery Nodaway 70 compared with Nodaway, averaged 1 day earlier, 2.5 cm shorter, .65 kg/hl heavier in test weight, and 108 kg/ha higher in yield. Nodaway 70 is resistant to smut, has a generalized resistance to certain races of crown rust, and has the AB genes for stem rust resistance. Nodaway 70 was released jointly with the Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture in 1970. Breeder seed will be maintained by the Missouri Agricultural Experiment Station.

1 Registered by Crop Science Society of America. Published with the approval of Director, Missouri Agricultural Experiment Station as Journal Series No. 6035. Received Nov. 7, 1970.
2 Professor of Agronomy and Associate Professor of Agronomy, respectively, University of Missouri, Columbia, Missouri.

REGISTRATION OF CHECOTA OATS


'Checota' winter oats (Avena sativa L.), C.I. 8311, Stillwater 594576, originated as an F4 head selection from a bulk population of the cross 'Arlington'/'Winok.' The initial cross was made in 1953. The F5, which eventually became Checota, was selected in 1958 at the Oklahoma Agricultural Experiment Station, Stillwater, grown as a head row in 1959, and grown in the Stillwater Oat Observation Nursery in 1960. Checota has been entered in rod-row yield trials at several locations in Oklahoma since 1960.

Checota is a high-yielding winter oat variety. The early growth is semiprostrate to slightly upright, and maturity is midseason. Plants tiller well and have mid-sized, stiff culms. A few hairs are present on internodes. Leaf blades are midwide with glabrous margins, and sheaths are glabrous. Ligules are present. Panicles are equalateral, spreading, mid sized, and milodial. The rachis is slightly flexuous. Lemmas are yellow, short, distich, plump, glabrous, and long. Awns are absent. Awns are common, twisted, and geniculate. Awns are present. Panicles are equalateral, spreading, mid sized, and milodial. The rachis is slightly flexuous. Lemmas are yellow, short, distich, plump, glabrous, and long. Awns are absent. Awns are common, twisted, and geniculate. Awns are present. Panicles are equalateral, spreading, mid sized, and milodial. The rachis is slightly flexuous. Lemmas are yellow, short, distich, plump, glabrous, and long. Awns are absent. Awns are common, twisted, and geniculate.

Checota yielded 290.5 kg/ha more than 'Cimarron' and 405.3 kg/ha more than 'Forkedeer' in Oklahoma tests over an 8-year period. The test weight (kg/hl) of Checota is lower than either Cimarron and Forkedeer. Checota headed 6 days earlier than Forkedeer but 3 days later than Cimarron. It has much better lodging resistance than Cimarron or Forkedeer, even though it is intermediate in height to the check varieties. Checota is superior to all currently grown varieties in Oklahoma for winterhardiness. In regional tests, its winter survival was slightly less than 'Norline' and 'Winok.'

Checota was approved for release and named in 1970. Breeder seed will be maintained by the Oklahoma Agricultural Experiment Station, Stillwater, Oklahoma.

1 Registered by Crop Science Society of America as Journal Series Paper No. 2068 with the approval of the Director of the Oklahoma Agricultural Experiment Station. Received Nov. 7, 1970.
2 Associate Professor, Associate Professor, Assistant Professor, and Research Assistant, respectively, Department of Agronomy, Oklahoma State University, Stillwater, Oklahoma 74074.

REGISTRATION OF CHILOCCO OATS

B. R. Steffanson

'Chillico' winter oats (Avena sativa L.), C.I. 8185, Stillwater 610577, originated from the cross 'Wintok Early Selection'/'Le-Comte,' made in 1955 at the Oklahoma Agricultural Experiment Station. The F7 which became Chillico was selected in 1960 grown as a head row in 1961, and entered Oklahoma yield tests in 1962. It has been grown in rod-row yield trials at several locations in Oklahoma since 1962.

Chillico is a high yielding winter oat variety with extremely good weight per hectoliter, winterhardiness, and lodging resistance. The early growth is semiprostrate to slightly upright, and maturity is midseason to early. Plants tiller well and have very stiff culms. A few hairs are present on internodes. Leaf blades are midwide with glabrous margins, and sheaths are glabrous. Ligules are present. Panicles are equalateral, spreading, mid sized, and milodial. The rachis is slightly flexuous. Chillico has numerous spikelets per panicle and spikelet separation is by florret. Florret separation is by disarticulation. Lemmas are yellow, short, distichal, plump, glabrous, and long. Awns are absent. Awns are common, twisted, and geniculate.

Chillico yielded slightly more than 'Cimarron' and 593.2 kg/ha more than 'Forkedeer,' over a 4-year period in Oklahoma tests. The test weight of Chillico was 2.5 kg/hl better than Cimarron and 2.4 kg/hl better than Forkedeer. Chillico headed 6 days earlier than Forkedeer but 3 days later than Cimarron. It has much better lodging resistance than Cimarron or Forkedeer, though it is intermediate in height to the check varieties. Chillico is superior to all currently grown varieties in Oklahoma for winterhardiness. In regional tests, its winter survival was slightly less than 'Norline' and 'Wintok.'

Chillico was approved for release and named in 1970. Breeder seed will be maintained by the Oklahoma Agricultural Experiment Station, Stillwater, Oklahoma.

1 Registered by Crop Science Society of America as Journal Series Paper No. 2068 with the approval of the Director of the Oklahoma Agricultural Experiment Station. Received Nov. 7, 1970.
2 Associate Professor, Associate Professor, Assistant Professor, and Research Assistant, respectively, Department of Agronomy, Oklahoma State University, Stillwater, Oklahoma 74074.

REGISTRATION OF POLAR SUMMER TURNIP RAPE

B. R. Steffanson

Polar (Brassica campestris L.), a summer turnip rape variety developed by the Plant Science Department of the University of Manitoba, originated as an individual plant selection from seed stocks known as 'Polish' in Canada. Prior to release in March 1969, Polar was identified as 861-2419 in Cooperative Tests. Polar may replace 'Echo,' 'Arlo,' and other turnip rape varieties grown in Manitoba, Saskatchewan, and Alberta.

1 Registered by Crop Science Society of America as Journal Series Paper No. 2069 from the Department of Plant Science of the University of Manitoba. Received Sept. 28, 1970.
2 Associate Professor, Department of Plant Science, University of Manitoba, Winnipeg, Manitoba.

Table 1. Performance of turnip rape cultivars 1967 to 1969

<table>
<thead>
<tr>
<th>Variety and location</th>
<th>No. of tests</th>
<th>Seed yield</th>
<th>Seed oil</th>
<th>Molar ratio</th>
<th>Maturity</th>
<th>Plant height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kg/ha</td>
<td>%</td>
<td>5</td>
<td>days</td>
<td>cm</td>
<td></td>
</tr>
<tr>
<td>Western Canada &amp; North Dakota</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polar</td>
<td>52</td>
<td>1,750</td>
<td>42.6</td>
<td>44.2</td>
<td>88</td>
<td>79</td>
</tr>
<tr>
<td>Echo</td>
<td>52</td>
<td>1,770</td>
<td>43.5</td>
<td>45.7</td>
<td>89</td>
<td>81</td>
</tr>
<tr>
<td>Eastern Canada</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polar</td>
<td>24</td>
<td>1,560</td>
<td>42.7</td>
<td>84</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>Echo</td>
<td>24</td>
<td>1,580</td>
<td>41.0</td>
<td>84</td>
<td>89</td>
<td></td>
</tr>
</tbody>
</table>

* Over dry basis.