average for 1961 and 1963 for yield per acre of seed for Linore was 1651 pounds; Newturk, 1564 pounds; C.I. 1909, 1520 pounds; C.I. 1910, 1453 pounds; and Caldwell, 1267 pounds, as shown in Table 1.

Breeder seed of Linore will be maintained by the Oregon Agricultural Experiment Station. The seed classes of Linore flax permitted under Oregon certification standards are breeder, foundation or registered.

GEORGIA 337 SUDANGRASS

(Reg. No. 111)
Glenn W. Burton

'GEORGIA 337' sudangrass, *Sorghum sudanense* (Piper) Stapf, was bred during the period 1941 through 1951 to combine in one variety the desirable traits in sudan and sorghum varieties available at that time. Georgia 337 has a high degree of resistance to *Coleotrichum graminicola*, *Helminthosporium turcicum*, and *Gloeocercospora sorghi*. It has sweet juicy stalks, wide leaves, and a low HCN content. It is late maturing and has brown seeds enclosed in straw-colored glumes. It has often outyielded other sudangrass varieties during long growing seasons and has shown good yield potential under irrigation.

Georgia 337 sudan was bred by hybridizing good parents carrying different desired traits. Enough F1 seed was produced in the greenhouse to give rise to large F2 populations grown in the field. The best of these, sometimes more than 1,000, were tested in the F2 generation the following year in single rows between rows of common and Tift sudan. The common sudan placed a uniform source of disease inoculum adjacent to each F2 population and the Tift sudan served as a direct check for high disease resistance. HCN ratings were made by analyzing chopped leaf roll from young aftermat growth of five F2 plants. Superior F2s were hybridized with commercial varieties or other F2s in order to bring together desired traits carried by each parent. Usually a number of such crosses were made. The approximate number of F2 plants screened in 1942, 1944, 1947, and 1949 were 25,000, 30,000, 60,000, and 25,000, respectively. In 1950 a sibbed progeny of 337 was tested for HCN content and those plants low in HCN were sibbed to give rise to Georgia 337 sudan. Since 1951, it has been maintained with seed increases in isolation. The pedigree of Georgia 337 follows:

CHASE BARLEY

(Reg. No. 60)
D. P. McGill, O. J. Webster, and W. K. Smith

'CHASE' (*Hordeum vulgare* L., emend. Lain.), C.I. 9581 (Nebraska 52434), was developed at the Nebraska Agricultural Experiment Station in cooperation with the Crop Science, Agricultural Research Service, U. S. Department of Agriculture. Chase originated as a single plant selection (C.I. 7404) from Korea. This plant number which survived the winter of 1949 at the barley nursery at the Nebraska Agricultural Experiment Station.

The selection of individual plants in 1950 and the subsequent selection among progenies were based primarily on yield and straw strength.

Chase is a 6-rowed, hulled, rough awned barley. This variety is similar to 'Kearney' in general appearance, plant height and maturity. Chase is slightly taller than 'Kearney' but superior to 'Kearney' and 'Denta'.

Yield and test weight of Chase are superior to 'Kearney', 'Dicktoo', 'Reno' and 'Ward' at Lincoln. Table 1 gives the performance of Chase and four other winter barleys in tests at Lincoln and North Platte, Nebraska.

Table 1. Performance of Winter Barley Varieties in tests at Lincoln and North Platte, Nebraska.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chase</td>
<td>5.7</td>
<td>74.1</td>
<td>46.6</td>
<td></td>
</tr>
<tr>
<td>Kearney</td>
<td>38.1</td>
<td>82.2</td>
<td>45.7</td>
<td></td>
</tr>
<tr>
<td>Dicktoo</td>
<td>34.8</td>
<td>77.9</td>
<td>45.8</td>
<td></td>
</tr>
<tr>
<td>Reno</td>
<td>11.0</td>
<td>63.5</td>
<td>45.1</td>
<td></td>
</tr>
<tr>
<td>Ward</td>
<td>10.3</td>
<td>64.9</td>
<td>44.8</td>
<td></td>
</tr>
<tr>
<td>No. tests</td>
<td>6</td>
<td>9</td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

Chase tends to be deciduous-awned type and shed one or two weeks before maturity leaving many spikes nearly awnless at maturity. The degree of expression of this character is influenced by environmental factors.

Chase was released to farmers in 1960 and is being maintained by the Nebraska Agricultural Experiment Station.

*Registered under memorandum of understanding between the Crops Research Division, ARS, USDA, and the American Society of Agronomy. Published with the approval of the Director as Cooperative investigations of the Crops Research Division, ARS, USDA, and the American Society of Agronomy. Received June 10, 1964.*

D. P. McGill, O. J. Webster, and W. K. Smith

DENTA SWEETCLOVER

(Reg. No. 5)
W. K. Smith

DENTA SWEETCLOVER (Reg. No. 5)