Table 1. Mean performance of Renville, Capital, and Mandarin (Ottawa) in regional tests at various locations in their areas of adaptation.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Seed yield bu./A.</th>
<th>Seed yield lb./A.</th>
<th>Relative Lodging score</th>
<th>Planting height, ft.</th>
<th>Seed quality score</th>
<th>Seed yield, g./100 lbs.</th>
<th>Seed oil, %</th>
<th>Seed protein, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renville</td>
<td>32.2</td>
<td>1932</td>
<td>+3.6</td>
<td>1.7</td>
<td>31</td>
<td>2.1</td>
<td>16.8</td>
<td>39.8</td>
</tr>
<tr>
<td>Capital</td>
<td>32.3</td>
<td>1933</td>
<td>+3.3</td>
<td>2.0</td>
<td>33</td>
<td>3.5</td>
<td>13.3</td>
<td>40.3</td>
</tr>
<tr>
<td>Mandarin</td>
<td>31.7</td>
<td>1962</td>
<td>0</td>
<td>1.6</td>
<td>29</td>
<td>1.6</td>
<td>19.0</td>
<td>41.6</td>
</tr>
</tbody>
</table>

* From 1 (erect) to 5 (prostrate). † From 1 (excellent) to 5 (very poor).

maturity. It was equal to Mandarin (Ottawa) in lodging resistance and exceeded both varieties in oil content (Table 1).

Renville was released in Minnesota in 1952 and by 1957 was grown on 2% of the state's soybean acreage (52,000 acres). Since then Renville has largely been replaced by newer improved varieties such as Chippewa and Grant. Other information on Renville has been published by the Minnesota Agricultural Experiment Station responsible for the maintenance of breeder seed.


SONORA ALFALFA

(Reg. No. 21)


'SONORA' alfalfa (Medicago sativa L.) was developed and tested cooperatively by members of the Southwestern Alfalfa Group, which includes alfalfa breeders, agronomists, and entomologists of the Arizona, California, and Nevada Agricultural Experiment Stations, and the Crops and Entomology Research Divisions, U. S. Department of Agriculture. It was released by these Agencies in January 1965.

Sonora is a 13-clone synthetic. Four of the parent clones were obtained from plantings in Arizona, 6 from the Imperial Valley of California, 2 from Bakersfield, California, and 1 from Logan-dale, Nevada. All were selected from the variety African. Initial selection was based on resistance to the common biotype of the spotted alfalfa aphid, Thrips aphis maculata Buckton. Final selection was based on polycross progeny performance for forage production and other agronomic characteristics. These tests, consisting of progeny from a total of 110 African selections, were conducted at Arizona's Branch Stations at Mesa, Safford, and Yuma. Similar tests with fewer entries were conducted at Stations in southern California and Nevada. Arizona members of the Southwestern Alfalfa Group made the original combination of the 13 parent clones of Sonora.

Sonora is similar to the variety Moapa in resistance to the spotted alfalfa aphid and to the two species of southern root-knot nematode. Sonora has shown less susceptibility to downy mildew than Moapa or African in field trials at Mesa, Arizona, and El Centro, California. Stand persistence of Sonora has been equal to that of African, but less than that of Moapa.

Sonora appears best adapted to the lower desert valley areas of Arizona, California, and southern Nevada. It is outstanding in its ability to establish a stand rapidly, and to produce more forage during the cooler months of the year than Moapa or African (1, 2, 4). In the Southwest, winter forage production is desired both for grazing and hay.

Breeder seed is produced and maintained by the Agricultural Experiment Station. Breeder seed consists of first generation polycross seed produced from each of the 13 parent clones arranged in a latin square design. Certified seed for commercial hay fields is available in the fall of 1965.

The area of seed production for Sonora has been in those portions of the Southern Alfalfa Region, south of 37° N latitude at elevations below 2,500 feet. Eligibility of a stand of Sonora to produce a given class of seed (foundation, certified) will be limited to four years. Otherwise the stand is subject to approved for release by the certifying agency for producing certified seed.

Sonora was favorably reviewed by the National Alfalfa Variety Review Board November 12, 1962, and was subsequently approved for release.

LITERATURE CITED


LINORE FLAX

(Reg. No. 24)

Wheeler Calhoun, Jr.

'LINORE' flax (Linum usitatissimum L.) (C.I. 2023) was developed as a single plant selection from among 10 different varieties that had survived a freeze of —1° F. on January 11 and 12, 1963, at the Agricultural Experiment Station in Corvallis, Oregon. Linore is not a fiber type; it probably originates with seed flax or from an outcross with seed flax. Linore was released for distribution in Oregon in 1962.

Linore is a cold-tolerant variety of winter flax that develops a dormant growth habit during the winter months, surviving more erect with the advent of warm spring weather. It is more susceptible to a longer period in the late winter or early spring than do Caldwell, Newtuck, C.I. 1909, and Davis, western Oregon conditions it is a more cold-tolerant variety than any of the other varieties tested.

Linore has survived temperatures as low as —12° F. on January 11 and 12, respectively, at the Pendleton Branch Experiment Station, with less than an inch of snow cover.

This variety has a characteristic of profuse tillering which fest itself particularly at lower rates of seeding. It grows to a height of 30 inches with blue flowers, large blue indehiscent bolls.

Linore is resistant to all North American races of fusarium, moderately susceptible to pasmo and has some wilt resistance.

The quantity and quality of oil of this variety is good.

Linore ranks first among all other varieties tested.