The use of bromegrass (Bromus inermis) for hay and pasture has been increasing in Minnesota during the past 10 or 12 years. It has been found to be winter hardy, palatable, productive, and adapted to a wide range of soil and moisture conditions and to do well in a mixture with alfalfa.

The present paper deals with comparisons of hay yield of 16 strains and seed yield of four out of the 16 strains.

Wilkie, Peterson, and Hughes (3) reported in 1945 that based on experiments at six separate locations over a 3-year period Lincoln, Fischer, and Achenbach were clearly superior to Canadian commercial and two other sources of northern types. In row plots the average for the northern types was 66% of the southern ones and in broadcast plots 77%. They state that perhaps Lincoln showed a slight superiority over the other two southern types.

Fuelleman, Burlison, and Kammlade (1) in 1943 indicate that southern types of brome are best, especially in Southern Illinois, and state that tests are being continued.

In the Yearbook of Agriculture for 1946, others (2) say that the southern type is best adapted to the Corn Belt states and parts of the northern Great Plains that have protracted dry periods and summer temperatures. They say further that the northern type has been found adapted to Canadian commercial and two other sources of northern Great Plains where long periods of hot weather seldom occur.

Several other experiment stations are engaged in testing brome strains, and as far as the authors are aware, results to date are in general agreement with those above.

**Methods**

Seedings were made in early spring in broadcast plots alone, without mixtures of legumes or other grasses. A 6 by 20 foot plot was used in each entry and seed was mixed with moist sawdust, spread by hand on a well prepared seedbed, and covered with a 1 inch layer of soil. No nurse crop was used.

Seedling rates were computed as follows: Five were chosen at random from each entry and the number of living seedlings counted. Canadian commercial was used as a standard at the rate of 12

The weights of other seed lots to be planted were calculated by proportion to give the same number of viable seedlings. Fertilizer was used at some of the locations during the years that yields are reported. In each case it was applied uniformly to the whole experiment at any location.

All the data represent one cutting of hay taken in the latter part of June in each crop year. Ends of the plots were cut off first. Then a 3 by 16 foot swath down the center of the plot was taken for a yield determination. A small sample (approximately 10 pounds) was dried and yields calculated to tons per acre at 15% moisture. Aftermath cuttings were

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**Table 1.** Forage yield from one cutting (15% moisture), 3-year average. Seven Minnesota locations, three randomized replications at each location. Stands uniformly good and free of mixtures or weeds.

<table>
<thead>
<tr>
<th>Strain</th>
<th>USDA No.</th>
<th>Waseca</th>
<th>Mantonville</th>
<th>Winona</th>
<th>Orrock</th>
<th>Morris</th>
<th>Breckenridge</th>
<th>Crookston</th>
<th>Average of southern stations: Waseca, Mantonville, and Winona</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincoln, Neb. 30-3599</td>
<td>B. in 16</td>
<td>1.7</td>
<td>2.2</td>
<td>2.0</td>
<td>1.5</td>
<td>3.4</td>
<td>1.5</td>
<td>2.8</td>
<td>2.0</td>
</tr>
<tr>
<td>Achenbach</td>
<td>B. in 1</td>
<td>1.7</td>
<td>2.0</td>
<td>2.1</td>
<td>1.5</td>
<td>3.1</td>
<td>1.5</td>
<td>3.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Fischer M2-10203</td>
<td>B. in 10</td>
<td>1.7</td>
<td>1.9</td>
<td>1.9</td>
<td>1.6</td>
<td>3.3</td>
<td>1.5</td>
<td>2.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Neb. Plant Sel. 30-34000</td>
<td>B. in 9</td>
<td>1.4</td>
<td>1.9</td>
<td>1.9</td>
<td>1.5</td>
<td>3.2</td>
<td>1.4</td>
<td>2.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Martin Minnesota 1329</td>
<td>B. in 8</td>
<td>1.5</td>
<td>1.9</td>
<td>1.6</td>
<td>1.4</td>
<td>3.2</td>
<td>1.5</td>
<td>2.6</td>
<td>1.7</td>
</tr>
</tbody>
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