Research Notes: A high percentage of multifoliolate leaves in S.J. 2 soybean

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1) A high percentage of multifoliolate leaves in S.J. 2 soybean.

During the 1976 rainy season the multifoliolate plants (with four to five leaflets) were observed in an adapted and widely cultivated soybean cultivar, 'S.J. 2', grown at the Northeast Agricultural Center. A total of 3774 plants from every 10 rows was counted for this multifoliolate character. Plants with four or five leaflets were classed as multi-leafleted (Table 1). Multifoliolate plants constituted about 6.84%, which was a relatively high frequency in such a population with no previous selection. It was suspected that this genetical expression might have occurred, but unobserved, for years in this soybean cultivar.

Only plants with most leaves with five leaflets were tagged and harvested for further investigation. In December 1976, 130-plant rows were grown in the field for observation. A number of plant rows with multileaflets and some segregating rows were found, indicating that the multifoliolate character is controlled by a single major gene. This gene may be the same as that reported by Fehr (1972), Lf1. Further investigation is underway.

<table>
<thead>
<tr>
<th>Row</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plants counted</td>
<td>310</td>
<td>347</td>
<td>326</td>
<td>475</td>
<td>233</td>
<td>443</td>
<td>479</td>
<td>531</td>
<td>630</td>
<td>3774</td>
</tr>
<tr>
<td>Plants with multileaflets</td>
<td>21</td>
<td>33</td>
<td>26</td>
<td>27</td>
<td>16</td>
<td>47</td>
<td>31</td>
<td>26</td>
<td>31</td>
<td>258</td>
</tr>
<tr>
<td>Multileafleted plants, %</td>
<td>6.8</td>
<td>9.5</td>
<td>8.0</td>
<td>5.7</td>
<td>6.9</td>
<td>10.6</td>
<td>6.5</td>
<td>4.9</td>
<td>4.9</td>
<td>6.84</td>
</tr>
</tbody>
</table>

Reference

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