SNAP BEAN YIELD TRIAL
Ron Goldy, Virginia Wendzel and Dave Francis
Southwest Michigan Research and Extension Center

OBJECTIVES:

To evaluate the performance of eight bean varieties under Southwest Michigan conditions.

SUMMARY:

‘Keeper’, at 5.97 tons/A had the highest yield of the eight lines tested. Only GB87 (3.90 tons/A) was statistically different from ‘Keeper’. ‘Keeper had the highest yield of sieve size 4 and 5 pods. It was lowest in sieve size 3. PLS442 was the highest Romano-type at 5.61 tons/A.

METHODS:

Fertilizer: Prior to planting, 0-0-60, 21-0-0, sulfur, Solubor and Cal Fortified (calcium plus micronutrients) were broadcast at a rate of 200, 250, 25, 5, and 100 pounds/A, respectively.

Herbicide: Prior to planting, Treflan 4E was applied at a rate of one pint/A.

Planting: Planting was done on 6 June, 2001 using an Earthway seeder. Spacing was 4" in the row and 30" between rows (~52,000 plants/A). Each plot was 20 feet long. Planting and analysis was done as a completely randomized design with five replications.

Harvest: Two weeks after germination the best 10' of row was marked for harvest. Pods were hand harvested when mature, 2 August, 2001 for PLS442 and Roma II and 9 August, 2001 for the other entries. All entries except PLS442 and Roma II were mechanically graded into sieve sizes 3, 4, and 5.

RESULTS:

Due to poor growing conditions, bean yields and quality were 30 - 50% lower in 2001 than in previous years. Total yields for 2001 ranged from 5.97 (‘Keeper’) to 3.90 (GB87) tons/A (Table 1). ‘Keeper’ also had the highest yield of sieve size 4 and 5 pods. PLS442 was the highest Romano-type at 5.61 tons/A, but it was not significantly different that Roma II at 4.62 tons. Higher yields may have been obtained with later harvest, but quality would have decreased on the more mature pods.
Table 1. Yield in tons/A of eight bean varieties at the Southwest Michigan Research and Extension Center. Plant spacing was 4" in the row and 30" between rows (≈52,000 plants/A). SWMREC 2001.

<table>
<thead>
<tr>
<th>Variety</th>
<th>SS</th>
<th>TY</th>
<th>No3Y</th>
<th>No4Y</th>
<th>No5Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keeper PL</td>
<td>PL</td>
<td>5.97</td>
<td>0.94</td>
<td>3.55</td>
<td>1.48</td>
</tr>
<tr>
<td>PLS442* PL</td>
<td>PL</td>
<td>5.61</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>GB88 PL</td>
<td>PL</td>
<td>5.44</td>
<td>1.00</td>
<td>3.20</td>
<td>1.24</td>
</tr>
<tr>
<td>Igloo PL</td>
<td>PL</td>
<td>5.20</td>
<td>1.96</td>
<td>2.92</td>
<td>0.33</td>
</tr>
<tr>
<td>Roma II*</td>
<td>PL</td>
<td>4.62</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Topps PL</td>
<td>PL</td>
<td>4.48</td>
<td>1.79</td>
<td>2.31</td>
<td>0.39</td>
</tr>
<tr>
<td>Goldito VL</td>
<td>VL</td>
<td>4.31</td>
<td>2.79</td>
<td>1.52</td>
<td>0.00</td>
</tr>
<tr>
<td>GB87 PL</td>
<td>PL</td>
<td>3.90</td>
<td>2.84</td>
<td>1.07</td>
<td>0.00</td>
</tr>
</tbody>
</table>

\[
\text{LSD}_{(0.05)} \,
\begin{array}{cccc}
  1.72 & 0.64 & 1.24 & 0.45 \\
\end{array}
\]

\*Mean separation within columns according to Fisher’s test for least significance. P <= 0.05.

SS = Seed Source; TY = total yield; No3Y = yield of number three sieve size; No4Y = yield of number four sieve size; No5Y = yield number five sieve size.

Due to shape, Romano-type beans were not graded into individual sieve sizes.