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HIGH YIELDS FROM IMPROVED ONION STRAIN

By M. HARDIE, Vegetable Instructor, and R. G. NAILARD, Manager, Vegetable Research Station.

FOLLOWING an intensive programme of bulb selection over a period of 10 years, a special strain of the locally developed Spearwood Brown Globe onion has been produced by the Department of Agriculture.

Before the Department undertook to produce seed, onion growers selected and grew bulbs from their own crops. This resulted in natural variation due to the proximity of the gardens and the certainty of cross-pollination. Each grower selected for somewhat different attributes and a wide range of types was marketed under the common name of Spearwood Brown Globe.

As production increased and a surplus to local requirements became available for export to Eastern States and overseas markets, greater uniformity in appearance and quality was needed.

Selection

A programme of pure line and mass selection began at the Vegetable Research Station in 1961. A marked improvement in appearance and keeping quality of bulbs was effected within the first few years. Since then, by gradually raising the quality of the bulbs selected, the standard has steadily improved. Supplies of the improved seed were made available to the industry each year to a ready demand.

Bulb selection and the production of "mother" seed will continue at the Medina Vegetable Research Station, but it is proposed that the main bulk of seed will, in future, be produced by selected growers under Departmental supervision.

Trials

To test this improved seed against other varieties, a trial using transplants was carried out at the Vegetable Research Station, Medina, during the 1970-71 season.

The varieties used in this trial were Creamgold, Spearwood Brown Globe (imported strain), Spearwood Brown Globe (Medina strain), and Pukekohe Longkeeper (said to be synonymous with Creamgold).

The seedlings were planted on the 11th November, 1970, and were ready for harvest by the 5th March, 1971. Results were analysed for gross yield, No. 1 grade and coloured rejects, the latter being particularly important in a certified seed scheme (Table 1).

Table 1.—Onion yields, tons per acre.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Gross yield</th>
<th>Grade 1</th>
<th>Coloured rejects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creamgold</td>
<td>22-8</td>
<td>11-4</td>
<td>0-73</td>
</tr>
<tr>
<td>Spearwood Brown Globe (Commercial)</td>
<td>41-0</td>
<td>24-5</td>
<td>1-11</td>
</tr>
<tr>
<td>Spearwood Brown Globe (Medina)</td>
<td>42-6</td>
<td>28-2</td>
<td>0-15</td>
</tr>
<tr>
<td>Pukekohe Longkeeper</td>
<td>26-4</td>
<td>15-2</td>
<td>0-81</td>
</tr>
</tbody>
</table>

Both strains of Spearwood Brown Globe outyielded Creamgold and Pukekohe Longkeeper for gross yield and marketable yield. The Medina strain had fewer colour rejects than the other varieties.

Total yields are exceptionally high. The seemingly large discrepancy between total yields and grade 1 consisted mainly of onions not quite up to the grade 1 standard and which would normally be marketed as grade 2.

These results indicate that the improved Spearwood Brown Globe onion is well suited to the conditions prevailing in the Perth metropolitan area.