1980

Pasture species research

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DEPARTMENT OF AGRICULTURE
Western Australia

SUMMARY OF EXPERIMENTAL RESULTS 1980

. Pasture species research
EARLY MATURING MEDICS

Early maturing Libyan lines with some tolerance to bluegreen aphids were sown at 6 sites, five in Western Australia and one in South Australia. Seed yield and hard seed data are currently being collated.

Maturity and vigour was assessed at all sites and many of the new introductions are earlier than cv. Harbinger and its equal in vegetative growth. A much larger range (300 lines) was grown at Medina and will be introduced into country sites next year.

More than 2000 additional lines are expected from the Libyan FAO collection and the project will thus have at its disposal the largest resource of early maturing Medicago littoralis and M. trunculata ecotypes anywhere in the world. Arrangements have been made for seed increase of promising lines in Libya during the Australian summer via the Western Australian project located in Tripoli. This will greatly increase the rate of seed increase and enable rapid build up of the best lines. On the basis of our preliminary data, ecotypes of the 1493, 1471 and 1504 series are highly promising and are already earmarked for seed increase.

Cv. Serena (M. polymorpha) showed great promise in first year stands at Tenindewa, Merredin and Esperance area. Its better performance could be related to the use of the correct rhizobial strain NA2290. If regeneration data is satisfactory the cultivar will be a useful addition to pasture species suited to neutral or slightly acid soils over much of the drier areas of the south west.

Kabatiella RESEARCH

In cooperation with Dr. D.L. Chatel, screening of introductions for resistance to Kabatiella caulivora continued in 1980. The Sardinian collection produced over 200 lines with at least moderate resistance. The Sardinian collection had been specifically made on the basis of data from Dr. Gladstones on the Southern Italian collection which yielded a high percentage of reasonably resistant lines compared with collections from elsewhere (Table 1).
TABLE 1

THE RELATIONSHIP OF COUNTRY OF ORIGIN WITH RESISTANCE TO CLOVER SCORCH (*Kabatiella caulivora*)

<table>
<thead>
<tr>
<th>Genotypes tested</th>
<th>% with resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>38 31.8</td>
</tr>
<tr>
<td>Sardinia</td>
<td>840 26.1</td>
</tr>
<tr>
<td>Spain</td>
<td>140 15.4</td>
</tr>
<tr>
<td>Western Australia</td>
<td>159 7.5</td>
</tr>
<tr>
<td>Greece</td>
<td>193 6.2</td>
</tr>
<tr>
<td>Portugal</td>
<td>72 2.8</td>
</tr>
<tr>
<td>Tunisia</td>
<td>111 0.9</td>
</tr>
<tr>
<td>Morocco</td>
<td>120 0.8</td>
</tr>
<tr>
<td>Eastern Australia</td>
<td>45 0.0</td>
</tr>
</tbody>
</table>

Varieties with *Kabatiella* resistance will be introduced in turn to other screening programmes for aphid and root rot tolerance.