

8.5 Field Pea Variety Trial

Researchers

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Sites

Gnarwarre, Hamilton (Blackwood)

Background

The search for the elusive pulse crop that can be used profitably in crop rotations in the south west is still continuing. Field peas are useful in some districts if waterlogging can be controlled and for many areas in the Western Districts spring sowing of field peas is an option. There is a ready market for peas of different types and seed colour for human consumption as well as stock feed.

Aims

The aims of the field pea breeding program are to develop high yielding lines with good disease resistance. Many of the crossbreeds are semi-leafless which may help disease control by keeping the canopy open and drier, and which also helps harvesting the crop, since the crop stands better and holds its pods off the ground when ripe. High grain quality is also important, particularly in the white and blue types used for human foods such as yellow and green split peas. Grain size and colour are both important

Management

Gnarwarre was sown in the first week of September while Hamilton was sown in the first week of October.

Sowing rates vary between lines with the rate determined by the required plant density, germination rate and seed weight. The intended plant densities were 75 plants per square metre for the semi-dwarf lines and 50 plants per square metre for the tall varieties.

RESULTS

| | Gnarwarre | | Hamilton | |
|--------------------|-----------|------------------|----------|------------------|
| | T/ha | % of Snowpeak | T/ha | % of Snowpeak |
| BLUE PEAS | | | | |
| Bluey | * | * | 2.23 | 79 |
| Excell | 2.40 | 85 | 2.41 | 85 |
| Jupiter | 3.41 | 121 | 2.04 | 72 |
| PSL9 | 2.30 | 82 | 2.50 | 89 |
| Soupa | 2.04 | 72 | * | * |
| 90-158*8-1 | * | * | 2.72 | 96 |
| DUN PEAS | | | | |
| Dundale | 3.29 | 117 | 2.75 | 98 |
| Glenroy | 2.76 | 98 | 2.20 | 78 |
| King | 3.44 | 122 | 2.70 | 96 |
| Magnet | 3.56 | 126 | 3.66 | 130 |
| Morgan | 2.36 | 84 | 2.45 | 87 |
| Parafield | 3.00 | 106 | * | * |
| Paravic | 3.11 | 110 | 2.60 | 92 |
| PSL4 | 3.76 | 133 | 2.67 | 95 |
| PSM7 | 2.53 | 90 | 3.12 | 111 |
| PSM10 | 2.76 | 98 | 2.35 | 83 |
| 90-027-*32-5 | * | * | 2.56 | 91 |
| Dun (no inoculant) | * | * | 1.60 | 57 |
| Dun (inoculated) | * | * | 2.40 | 85 |

| | Gnarwarre | | Hamilton | |
|-------------------|-------------|------------------|-------------|------------------|
| | T/ha | % of Snowpeak | T/ha | % of Snowpeak |
| WHITE | | | | |
| Bohatyr | 3.05 | 108 | 1.88 | 67 |
| Bonzer | * | * | 2.38 | 84 |
| Laura | 2.51 | 89 | 3.47 | 123 |
| Mukta | 3.38 | 120 | 3.53 | 125 |
| Snowpeak (PSI5) | 2.82 | 100 | 2.82 | 100 |
| PSL6 | 2.64 | 94 | 3.42 | 121 |
| PSL10 | 3.26 | 116 | 2.48 | 88 |
| PSL20 | | * | | |
| PSM1 | 2.18 | 77 | * | * |
| PSM2 | 2.96 | 105 | * | * |
| PSM5 | 2.79 | 99 | * | * |
| PSM3 | 2.51 | 89 | 3.09 | 110 |
| PSM9 | 2.70 | 96 | 2.75 | 98 |
| Santi | 2.47 | 88 | * | * |
| 90-131-*28-7 | * | | 2.88 | 102 |
| LSD (T/ha) | 0.96 | | 0.90 | |

DISCUSSION

Yields for the spring sown field peas at both Gnarwarre and Hamilton were promising this year, despite the dry spring conditions. Site means of 2.89 and 2.51 t/ha were obtained for Gnarwarre and Hamilton respectively.

. There was a delay in harvesting the Hamilton site and shattering occurred in a number of lines resulting in lower yields in these varieties compared with Gnarwarre. Likewise Gnarwarre had problems with the disease powdery mildew and this led to lower yields in the susceptible varieties.



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