

## 8. PULSE TRIALS

### 8.1 Pulse Observation Trial on Raised Beds

#### Researcher

Bruce Wightman DNRE – Geelong

#### Site

Gnarwarre 1998, 1999

#### Aim

To find a reliable high yielding and profitable pulse crop for the "high rainfall, cool climate" zone of southern Victoria and one which suits raised beds.

#### Background

The southern high rainfall region of Victoria has struggled to find a reliable pulse crop to fit into a cereal/canola rotation. Many of the legumes have poor tolerance of waterlogging, a problem which occurs in many years in this area.

#### Method

Raised beds (1.7m) were established to overcome waterlogging problems.

Sowing date 1999 : End of May

Fertiliser : 100 kg/ha MAP

Weed, Insect and disease control : as required.

Harvesting : Hand sampled (1 sq metre quadrats replicated 3 times) in December.

## RESULTS

Crop	Variety	1998	1999
Lentils	Digger	not harvested	not sown
Lupins	Ludet	1.77	0 (duck attack)
Lupins	Gungurru	2.76	0 (duck attack)
Narbon beans	ATC60105	2.84	not sown
Chick peas	Kaniva	1.70	not sown
Chick peas	Lasseter	<1.00	not sown
Faba beans	Aquadulce	3.54	not sown
Faba beans	Icarus	4.08	4.07
Faba beans	Ascot	4.59	5.07
Field peas	Magnet	5.46	not sown
Field peas	Jupiter	4.25	2.60
Field peas	Paravic	4.79	3.65
Field peas	PSH4	4.32	not sown
Field peas	Snowy	4.50	not sown
Field peas	Leopard	not sown	3.02
Field peas	Barney	not sown	3.18

## DISCUSSION

Both 1998 and 1999 were particularly dry years with a growing season rainfall (GSR May – November rainfall) of 303 mm in 1998 and 248 mm in 1999. This contrasts with a long term GSR of 341 mm

In 1998, outstanding yields and gross margins of both field peas and faba beans were achieved. The decision was made to concentrate on varieties of these crop types. Although yielding poorly in 1998, lupins were included due to the interest from farmers in the white lupin Ludet, but they once again failed. In the dry season, the field peas yielded well but the faba beans were particularly successful.

Both crop types have their difficulties. Peas usually stand erect for most of the season but then lodge as they ripen. Of the varieties tried over the past two years, Jupiter appears to stand far superior to the older Dun types but on beds the risk is always going to be of the plants and pods lodging into the furrow. Field peas require close monitoring for insects, particularly heliothis and pea weevil. On the other hand, Faba beans stand upright throughout the season, however, the pods of some varieties can remain quite close to the ground (5-10cm) and this may pose a harvesting problem on beds. Faba beans require a vigilant spray program to control fungal diseases throughout the season.



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## COMMENTS FROM 1999 OBSERVATIONS

### Paravic

Good early standability; lodged after seed set; some pods touching ground and some plants lodged into furrow.

### Barney

Excellent early standability; lodged very late but most pods clear of the ground. Should make excellent baled straw – good colour and prolific.

### Leopard

Good early standability however lodged quite early and ended very flat on ground.

### Jupiter

Good standability throughout the season. Pods well clear of the ground at harvest.

### Ascot

Excellent standability throughout the season. However, some pods close to the ground (5-10cm) at maturity. Small seeded bean which should be successfully sown with normal machinery.

### Icarus

Excellent standability throughout the season. Pods clear of the ground by 10-20cm. Larger seeds than Ascot and could not be sown with normal machinery.

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## CONCLUSION

Faba beans appear to be the most promising pulse crop for raised beds in the Geelong area. Field peas have been grown for decades in this district and if varieties with improved standability can be found, they should be a second viable pulse. The present semi-leafless varieties offer a crop architecture that is almost suitable for our requirements.

It is suggested that faba beans and field peas be commercially trailed on raised beds in 2000.

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