

## 6. PULSE TRIALS

### 6.1 PULSE AGRONOMY TRIALS

#### 6.1.1 SPRING SOWN PULSE TRIAL (GNARWARRE)

**Location:** Gnarwarre, SFS Ltd Site.

**Background:**

Southern Farming Systems has been attempting to identify a suitable pulse crop for the high rainfall, cool climate zone of southern Victoria for some years. The research to date has shown that autumn and winter sowing of pulse crops has generally given poor results mainly due to high disease pressure in the crops. Following a successful trial in 2001/02 where a number of pulse crops were sown in Spring it has been decided to further investigate this option.

**Aim:**

To evaluate the performance of chick peas, faba beans, lupins and field peas under a spring sowing regime.

**Inputs:**

- Knockdown herbicide: Roundup Max @ 2.0 l/ha
- Sown 27<sup>th</sup> September
- Fertiliser: 100kg/ha of Incitec Granulock 15
- Grass spray: Select @ 250ml/ha; 12/11/02
- Insecticide spray: Fastac Duo @ 200ml/ha; 30/11/02

**Researcher:**

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**Treatments:**

1. Chick Peas (Howzat) - Desi type chick pea available for the first year in 2002. It has the best Ascochyta resistance of all varieties. It is expected to be grown widely with the resurgence of chickpeas. Sowing rate: 100kg/ha
2. Chick Peas (Bumper) - Kabuli type chick pea to replace Kaniva. Sowing rate: 150kg/ha
3. Faba Beans (Manafest) - A large seeded faba bean suited to medium/high rainfall areas. Moderately resistant to Chocolate spot and rust but susceptible to Ascochyta Blight. Sowing rate: 150kg/ha
4. Lupins (Jindalee) - A new narrow leaf lupin variety licensed to AWB seeds which is suited to the medium to higher rainfall areas. Sowing rate: 100kg/ha
5. Field peas (Kaspa) - A new variety from AWB for commercial release in 2004. Semi-leafless. Sowing rate: 100kg/ha

The above treatments were replicated 6 times on raised beds; plot size: 1.7m x 60m

**Results:**

Pulses were harvested between the 10<sup>th</sup> and 14<sup>th</sup> of February.

| Variety  | Yield | \$/tonne | Gross income \$/ha |
|----------|-------|----------|--------------------|
| Howzat   | 1.5   | 525      | 788                |
| Bumper   | 1.2   | 900      | 1080               |
| Manafest | 1.4   | 380      | 532                |
| Kaspa    | 1.0   | 425      | 425                |

**Discussion:**

The trial was sown a month too late due to windy conditions not allowing us to get a knockdown herbicide sprayed before sowing. The close proximity to other trials made this process very risky.

This late sowing combined with the below average spring rainfall were the main factors limiting yield in this trial. Certainly any one who looked at the trial at the SFS field day (7<sup>th</sup> Nov) would not have thought they would have yielded as well as they did.

Chick Peas again performed well in this trial. Decreased yields have been compensated by good prices; giving some excellent gross returns/ha. Chick peas have the ability to extract stored sub-soil moisture and can also tolerate hot weather in Spring.

Chick peas can be used in the rotation where there are problems with ryegrass resistance; the late sowing allowing several knockdowns of weeds.

Chick peas also provide an excellent disease break from cereals and being a legume they fix nitrogen into the soil. In a wet year where sowing of canola or cereals was delayed, chick peas would provide a good late sowing option. They can be direct headed and have no problems with shattering.

No visible signs of disease showed up on any of the pulse varieties; therefore the quality of the seed was very good.

Lupins were not harvested due to early damage from hares.