

## 2007 CANOLA & JUNCEA CANOLA TRIALS

# How early can we successfully sow crops in the Mallee?

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### TAKE HOME MESSAGES

- Opportunistic early sowing (from late March) of canola, juncea canola and lupins can be very worthwhile in the Mallee.
- Canola and juncea canola appear to offer a real alternative to costly summer weed control as rapid early growth of early sown crops helped smother weeds
- Plants escaped damage from redlegged earthmites and native budworm as the critical growth stages did not synchronise with times of high insect levels.
- Severe frosts did not have a marked effect on pods or flowers of either the oilseeds or lupins.
- Additional trials with more crop types will be undertaken in early 2008, subject to rainfall.
- Note: data and grain quality still to be analysed. This report will be updated when the information becomes available.

### Introduction

If climate change comes to fruition, the Mallee may experience both more frequent and intense summer rain events and less winter rainfall. If significant rains fall in March, instead of spending money on weed control, can winter crops be successfully grown and thereby capitalise on this soil moisture? Two time of sowing trials were undertaken in the Mallee in 2007 to determine if early sowing of lupins and canola is worthwhile.

### Method

In an attempt to determine how early winter crops can be successfully grown in the Mallee, time of sowing trials, consisting of 4 replicates and 3 sowing times, were established at both Walpeup and Hopetoun in 2007. The Walpeup trial commenced following a summer rainfall event of 75 mm with lupins and oilseeds sown on the 23 March into adequate seedbed moisture.

The 3 varieties of oilseeds sown were canola varieties <sup>AV</sup>Outback and <sup>AV</sup>Sapphire and juncea canola variety Dune. The lupin varieties were Mandelup, Wonga and Kiev Mutant.

The moist warm seedbed resulted in very rapid germination from both the oilseeds and lupins,

**Sowing time trials:** early-sown plots of field peas, lupins and canola were in full flower in the Mallee on 26 July 2007



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## 2007 CANOLA & JUNCEA CANOLA TRIALS

although grazing by hares on the lupins resulted in plant damage.

The second time of sowing was on 8 May into adequate moisture, with the lupin block fenced to reduce grazing damage by hares.

On 29 May, the third time of sowing was completed, although the Kiev Mutant lupins and the three oilseeds struggled with weed competition and drying soil conditions during the growing season, and failed to establish adequately to warrant harvesting.

The Hopetoun site was not harvested due to extreme bird damage.

### Results

#### Oilseeds:

The early sowing (23 March) gave some very interesting results. Apart from appearing to produce the highest yields\*, growth was spectacular. Plant in the early sown plots commenced flowering in late April and were in full flower and pod set by late May and into June/July. Severe frosts during these months, as low as -1 to -5 degrees C, did not markedly damage any flower or pods.

**Table 1:**

Oilseed grain yields (t/ha) and sowing dates - Walpeup 2007. Grain quality still to be analysed. \*Note: data analysis not complete.

Variety	Time of sowing		
	23 Mar	8 May	30 May
<sup>A</sup> VOutback	0.88	0.28	Not harvested
<sup>A</sup> V Sapphire	0.68	0.22	Not harvested
Dune(juncea canola)	0.55	0.35	Not harvested

The extremely vigorous early growth was excellent for weed competitiveness and, as no redlegged earth mites or budworms were around during critical growth periods, these two potential pests were not an issue. Seeding rates in future may also be reduced.

From research previously completed in the Mallee, the oil quality is anticipated to be superior in the earliest-sown trials. This will be reported when results are available.

**Right:** Neil Vallance, Michael Moodie, Melissa Cann and Ashley Waite in canola at Walpeup on 24 July 2007



## 2007 CANOLA & JUNCEA CANOLA TRIALS

### Lupins:

**Table 2:**

Lupin grain yields and sowing dates - Walpeup 2007. \*Note: data analysis not complete.

Variety	Time of sowing		
	23 Mar	8 May	30 May
Wonga	0.81	0.68	0.25
Mandelup	0.74	1.11	0.44
Kiev Mutant	0.37	0.84	Not harvested

The grazing damage by hares to the early-sown lupins make this trial difficult to analyse. The growth of ungrazed lupins was excellent and, like the oilseeds, they exhibited no signs of frost damage, even though they were also flowering and setting pods during severe frost events. This trial must be repeated with control of hares a priority.

### Commercial practice

Early time of sowing of conventional winter crops in the Victorian Mallee appears very attractive. Additional trials, with expanded crop types, will be carried out in March/April 2008, subject to rainfall. Canola and juncea canola appear to offer a real alternative to costly summer weed control.

DPI Mallee agronomists are keen to carry out similar trials in 2008, and plan to include more legumes and some cereals.