

F7 Sowing Time, LRZ Southern Mallee (Curyo), Victoria

Aim

To investigate the adaptability of a range of field pea varieties and variety mixes to varying sowing dates.

Treatments

Varieties:	Kaspa, Morgan, PBA Oura, OZP0805, PBA Pearl, PBA Hayman, PBA Percy, PBA Gunyah, PBA Twilight, Sturt, OZP1101, OZP1103, OZP1104.
Variety Mixes:	Kaspa:PBA Pearl and Kaspa:Sturt sown with a 50:50 ratio based on targeted plants/m ² , and Kaspa:PBA Twilight:PBA Gunyah sown with a 33:33:33 ratio based on targeted plants/m ²
Sowing dates:	4 May (Early), 5 June (Mid), 26 June (Late).

Other Details

Row Spacings/Stubble:	30 cm row spacing, inter-row, standing stubble.
Fertiliser:	MAP + Zn @ 60 kg/ha at sowing.
Plant Density:	35 plants/m ² .

Results and Interpretation

- **Key Message:** The data highlighted the yield stability of a variety like Sturt in drier seasons and the importance of early sowing to maximise yields in Kaspa. OZP0805, appears to have excellent yield and may provide an excellent replacement for Kaspa into the future.
- **Plant establishment** – Establishment for all field pea varieties was below target for all sowing dates at approximately 25 plants/m².
- **Biomass production and quality (forage types)** – Due to the introduction of potential biomass types of field peas, assessments were made in both biomass production and quality in selected varieties. Total biomass produced at flat pod ranged between 2 and 5t/ha, but there was no significant difference between varieties at each of the sowing dates or overall (Fig. 1). Only the main effect of sowing date was significant, showing a significant drop in biomass production as sowing was delayed. The data suggests that based purely on biomass at the flat pod stage there is no significant benefit in growing the forage types PBA Hayman and OZP1103.
A full 'feedtest' was completed on biomass samples and crude protein and metabolisable energy are presented below (other data can be supplied up on request). Generally crude protein was slightly higher for the forage types compared with Kaspa and Morgan and increased as sowing was delayed (Table 1). Metabolisable energy of OZP1103 was similar to Kaspa for OZP1103, but lower for PBA Hayman.
- **Grain Yield** – Grain yields were generally good, ranging from 1.0t/ha for PBA Hayman sown June 26 to 2.6 t/ha for Kaspa sown May 4 (Fig. 2). Early sowing was highest yielding for all varieties, except PBA Oura, approximately 13% greater than the June 5 sown plot and 31% greater than the June 26 plots. Varieties like Kaspa and PBA Pearl, along with PBA Hayman and Morgan showed the greatest drop in yield with delayed sowing, while PBA Twilight, PBA Gunyah, PBA Oura and PBA Percy showed the least drop in grain yield. The data highlights the yield stability of a variety like Sturt in drier seasons and the importance of early sowing to maximise yields in Kaspa. OZP0805, appear to have excellent yield and may provide an excellent replacement for Kaspa into the future.

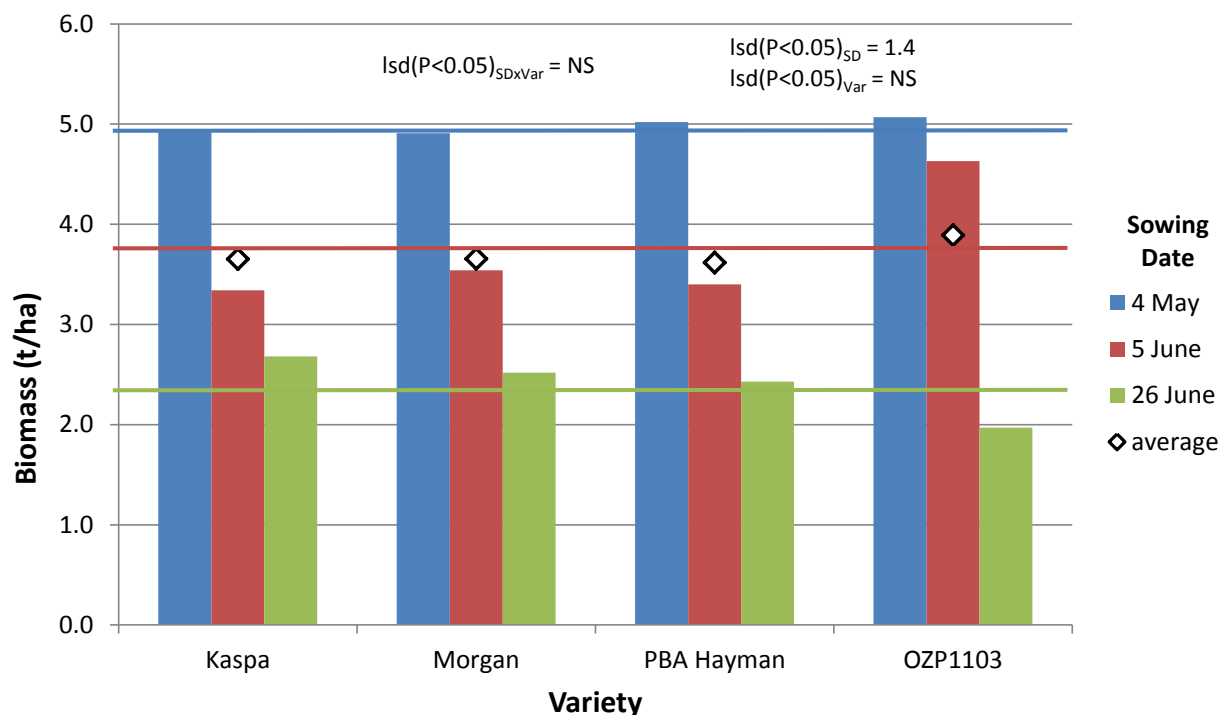


Figure 1. The effect of the interaction between sowing date and field pea variety on biomass production at flat pod at Curyo in 2012. Mean sowing date biomass indicated by horizontal lines; mean variety grain yield indicated by diamonds.

Table 1. The effect of the interaction between sowing date and field pea variety on biomass quality (Crude Protein and Metabolisable Energy) at flat pod at Curyo in 2012.

Crude Protein (%)

Sowing Date	Kaspa	Morgan	PBA Hayman	OZP1103	Average
4 May	13.3	15.0	16.7	15.1	15.0
5 June	14.8	13.2	17.2	15.5	15.1
26 June	17.9	17.6	18.4	19.8	18.4
Average	15.3	15.3	17.4	16.8	16.2

Metabolisable Energy (MJ/kg DM)

Sowing Date	Kaspa	Morgan	PBA Hayman	OZP1103	Average
4 May	11.1	11.0	9.9	11.7	11.0
5 June	11.4	9.1	8.8	10.8	10.0
26 June	10.2	9.1	8.2	10.6	9.5
Average	10.9	9.7	9.0	11.0	10.2

Crude Protein: Isd(P<0.05)SDxVar = NS; Isd(P<0.05)SD = 1.7; Isd(P<0.05)Var = NS.

Metabolisable Energy: Isd(P<0.05)SDxVar = NS; Isd(P<0.05)SD = 0.6; Isd(P<0.05)Var = 0.5.

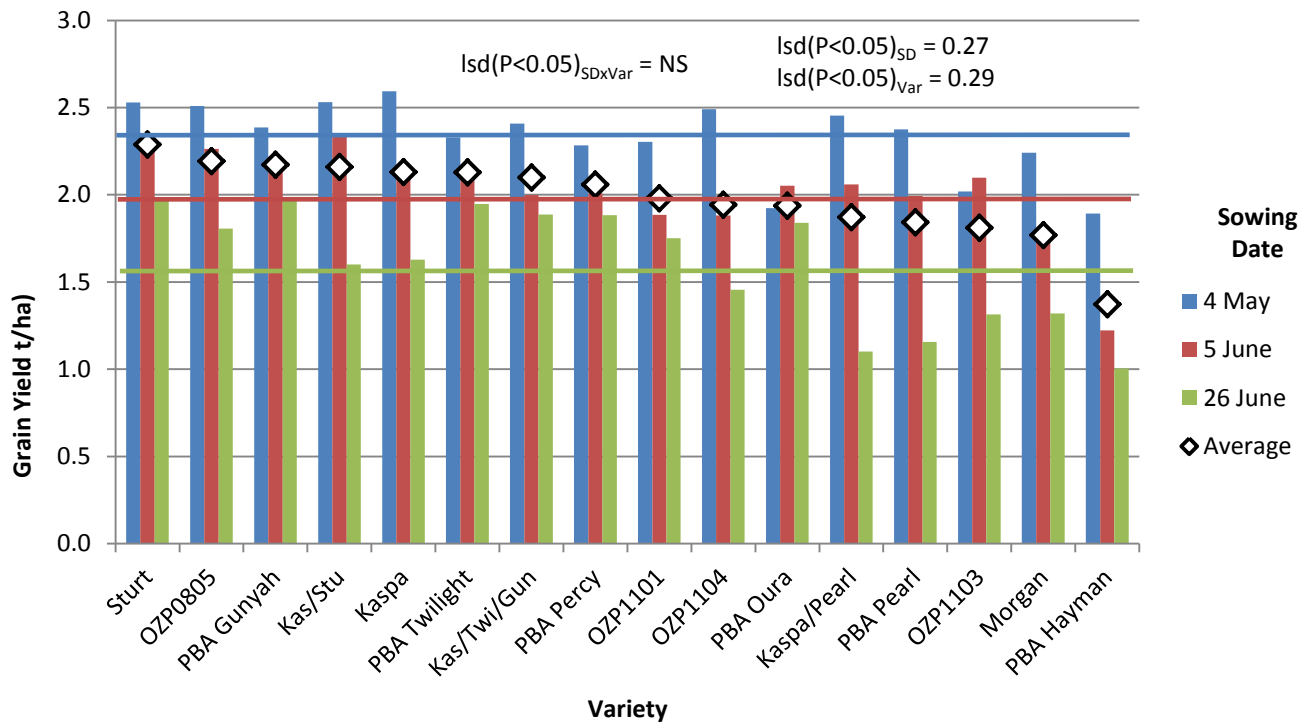


Figure 2. The effect of the interaction between sowing date and field pea variety on grain yield at Curyo in 2012. Mean sowing date grain yield indicated by horizontal lines; mean variety grain yield indicated by diamonds.

Key Findings and Comments

Similar to previous trials in the southern Mallee, earlier sowing is either highest or equal highest yielding. In most instances delaying sowing into June will result in yield declines. This trial demonstrated that the earlier maturing varieties like PBA Gunyah, PBA Twilight, PBA Oura and PBA Percy, generally have less yield decline at the later sowing dates. However there were some inconsistencies, with PBA Pearl, showing a higher relative drop in yield despite its early maturity. OZP0805, was the best of the new lines being tested and appear to have excellent yields and potentially more yield stability than Kaspas and may provide an excellent replacement as a 'Kaspas type'.