

L8 Sowing Time, MRZ Wimmera (Rupanyup), Victoria

Aim

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

Treatments

Varieties:	Boomer, Nipper, Northfield, Nugget, PBA Blitz, PBA Flash, PBA Jumbo, PBA HeraldXT, PBA Bolt, PBA Ace, CIPAL0901, CIPAL1001.
Variety Mixes:	PBA Flash:Nipper, PBA Flash:Nugget, PBA Flash:PBABlitz, PBA Flash:CIPAL0901. All sown with a 50:50 ratio based on targeted plants/m ² .
Sowing dates:	15 May (Early), 13 June (Mid), 18 June (Late).

Other Details

Row Spacings/Stubble:	30 cm row spacing, inter-row, standing stubble.
Fertiliser:	MAP + Zn @ 80 kg/ha at sowing.
Plant Density:	120 plants/m ² .

Results and Interpretation

- Key Message: Delays in harvest, due to weather condition particularly for early sown treatments, is likely to have resulted in significant yield loss. Despite these limitations, the results indicate the relative yield benefit of the newer varieties across a range of sowing dates and environments.
- Plant establishment – Emergence for the early sowing date was delayed due to a dry period during May and growth throughout the season was generally slow for all sowing dates. Establishment for all lentil varieties was below targets in 2012. Generally densities ranged between 60 and 100 plants/m² (data not shown).
- Grain Yield – Grain yields were generally lower than expected, particularly at the early sowing date, due to the dry start of the season and rainfall events during harvest that resulted in losses due to pod drop and shattering. Unfortunately it was impossible to estimate pod loss and shattering, effectively, due to the high stubble loads. However the results from Curryo (Trial L7) can be used as a potential guide. Grain yields ranged from 0.9 t/ha for Boomer sown May 15 to 2.2 t/ha for CIPAL0901 sown June 13 (Table L8.1). Generally, the mid sowing date was highest yielding, 10% and 20% greater than the early and late dates, respectively. However, similar to Curryo, there was a significant interaction between sowing date and variety, meaning that the relative yield of varieties and mixes across sowing dates differed.

In the May 15 sowing date, the PBA Flash:Nugget mix was highest yielding producing 2 t/ha, while Boomer was lowest with 0.9 t/ha. The low yields of Boomer sown early are reflective of its susceptibility to pod drop and shattering, as this sowing date was harvest 7-10 days later than optimum due to rain during harvest. At the June 13 and July 18 sowing dates, the ranking of varieties remained similar to early sown treatment, however CIPAL0901 and PBA Flash produced the greatest yields, respectively. PBA Blitz and Boomer were the lowest yielding varieties, similar to observations at Curryo. The new varieties PBA Ace and PBA Bolt displayed yields similar to the highest yielding variety at each of the sowing dates.

Table L8.1. The effect of sowing date on grain yield (t/ha) of lentil varieties and variety mixes at Rupanyup in 2012.

Variety / Variety mix	15 May	13 June	18 July	Average
CIPAL0901	1.86	2.17	1.50	1.84
PBA Flash:Nugget	2.01	2.01	1.47	1.83
PBA Ace	1.68	2.08	1.57	1.78
PBA Bolt	1.75	1.96	1.56	1.75
PBA Flash	1.71	1.95	1.58	1.75
PBA Flash:Nipper	1.76	1.96	1.51	1.74
CIPAL1001	1.83	1.93	1.40	1.72
PBAFlash:CIPAL0901	1.58	2.17	1.41	1.72
Nugget	1.89	1.62	1.51	1.68
Nipper	1.62	1.85	1.39	1.62
Northfield	1.69	1.70	1.38	1.59
PBA Jumbo	1.79	1.69	1.27	1.58
PBA Flash:PBA Blitz	1.51	1.81	1.30	1.54
PBA HeraldXT	1.41	1.56	1.30	1.42
PBA Blitz	1.22	1.39	1.22	1.28
Boomer	0.93	1.38	1.18	1.16
Average	1.64	1.83	1.41	1.62

lsd(P<0.05)SDxVar = 0.32; lsd(P<0.05)SD = 0.16; lsd(P<0.05)Var = 0.18.

Key Findings and Comments

The general ranking of varieties at Rupanyup was relatively similar to Curyo, although the improvements in yield of PBA Ace and PBA Bolt sown early were not shown in this trial. The delay in harvest, particularly for early sown treatments, is likely to have resulted in significant yield loss, however it is difficult to quantify for individual varieties. Despite these limitations, the results indicate the relative yield benefit of the newer varieties across a range of sowing dates and environments.