

TRIAL SUMMARIES

Lentil, Sowing Time, HRZ Western District (Inverleigh), Victoria

Aim

To evaluate the impact of sowing date on lentil varieties for the Victorian high rainfall zone (HRZ).

Treatments

- Sowing dates: May 14, May 31
- Varieties: PBA Jumbo2, PBA Hurricane XT, PBA Ace

Table 1. Other Site Details

Stubble management	Burnt
Row spacing (cm)	20
Plant density (pl/m ²)	118
Fertiliser ¹ (kg/ha)	60

1. MAP

Results and Interpretation

- **Key Messages:** Lentils are not traditionally grown in the Victorian HRZ. Mid-season vigour was good and suggested a promising fit for lentils in the region, but late rain in November caused lodging and significantly reduced yields, highlighting the importance of sowing into standing residue.
- Sowing on May 14 increased crop biomass compared to sowing on May 31, but this did not translate into greater grain yields.
- **Summary:** Lentils are not traditionally grown in the Victorian HRZ. Several varieties were tested at two sites with two sowing dates to explore their potential for the region. Early sowing increased biomass at flowering by almost 1 t/ha of dried biomass (Table 2). PBA Ace produced more biomass than PBA Jumbo2 or PBA Hurricane XT. Higher biomass at flowering did not convert into greater grain yields, possibly due to lodging or weather conditions during the reproductive phase. At Inverleigh, there were several periods of cold weather where minimum temperatures were less than 3°C for several days in a row. There were four frost events in August and September where minimum temperature was less than -1.5°C. In addition, lodging at harvest was severe, with plants nearly flat on the ground, caused by a heavy rainfall event in late November. Despite the lodging and weather conditions, significant differences in grain yield were measured between varieties, with PBA Hurricane XT showing significantly higher grain yield than PBA Ace and PBA Jumbo2. There was no interaction between sowing date and variety for any measurement recorded.

Table 2. Main effects of sowing date and variety on disease score (0=no disease; 10 = 100% diseased), biomass at flowering, lodging at maturity and grain yield of lentil varieties sown at Inverleigh in 2018.

Biomass at flowering, lodging at maturity and grain yield of ten varieties sown at two									
	Biomass		Lodging		Lodging		Grain Yield		
	(t/ha)		(% of plot)		severity (0-10)		(t/ha)		
Sowing date									
May 14	3.4	a	86	-	8.4	-	1.0	-	
May 31	2.6	b	79	-	8.2	-	1.1	-	
LSD (P<0.05)	0.4		NS		NS		NS		
Variety									
PBA Jumbo2	2.8	b	85	-	8.2	-	1.0	b	
PBA Hurricane XT	3.0	b	80	-	8.3	-	1.2	a	
PBA Ace	3.4	a	82	-	8.4	-	0.9	b	
LSD (P<0.05)	0.4		NS		NS		0.2		