

# Comparison of lentil and field pea varieties

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## Key findings

- Lentil grain yields ranged between 1.50– 1.74 t/ha, with a trial average of 1.62 t/ha.
- The average grain yield for all field pea varieties at Hart was 1.38 t/ha with yields ranging between 1.15 and 1.55 t/ha.
- New lentil and field pea varieties at Hart in 2020 performed similar to current industry standards.

## Why do the trial?

To compare the performance of newly released pulse varieties; PBA Kelpie XT and GIA Leader (lentil) and GIA Kastar and GIA Ourstar (field pea) alongside current commercial standards.

## How was it done?

<b>Plot size (field pea)</b>	2.0 m x 10.0 m	<b>Fertiliser</b>	DAP (18:20) + 1% Zn + Impact @ 80 kg/ha
<b>Plot size (Lentil)</b>	1.75 m x 10.0 m		
<b>Seeding date</b>	May 18, 2020		
<b>Field pea harvest date</b>	October 10, 2020		
<b>Lentil harvest date</b>	November 12, 2020		
<b>Location</b>	Hart, SA		

Each trial was a randomised complete block design with three replicates and six varieties. Both trials were managed with the application of pesticides to ensure a weed, insect and disease-free canopy. All plots were assessed for grain yield (t/ha).

## Results and discussion

### *Lentil*

The average grain yield for lentils at Hart was 1.62 t/ha (Table 1), with a range of 1.50 t/ha – 1.74 t/ha. Lentil variety grain yields were similar with no single variety out yielding another.

### *Field pea*

Field pea grain yields ranged from 1.15 – 1.55 t/ha (Table 1), with a trial average of 1.38 t/ha. Visual plant height differences were observed at flowering through to harvest (Figure 1). Newly released varieties GIA Kastar and GIA Ourstar yielded similarly to current commercial standards this season.

Table 1. Average grain yield for lentil and field pea varieties (t/ha) at Hart, 2020.

Field pea	Grain yield t/ha	Lentil	Grain yield t/ha
GIA Kastar <sup>1</sup>	1.35	PBA Kelpie XT <sup>1</sup>	1.74
GIA Ourstar <sup>1</sup>	1.54	PBA Hallmark XT <sup>1</sup>	1.57
Kaspa <sup>1</sup>	1.55	PBA Hurricane XT <sup>1</sup>	1.50
PBA Oura <sup>1</sup>	1.40	PBA Highland XT <sup>1</sup>	1.64
PBA Butler <sup>1</sup>	1.30	PBA Jumbo2 <sup>1</sup>	1.71
PBA Wharton <sup>1</sup>	1.15	GIA Leader <sup>1</sup>	1.58
Average grain yield	1.38	Average grain yield	1.62
LSD (P≤0.05)	NS	LSD (P≤0.05)	NS



Figure 1. (L-R) Kaspa, GIA Ourstar, PBA Oura, PBA Butler, PBA Wharton and GIA Kastar.

### Acknowledgements

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