

F4. Sowing Date, MRZ Mid North (Hart), South Australia

Aim

To maximise yield of new field pea varieties through the identification of optimum sowing dates.

Treatments

Varieties: Kaspa, Alma, PBA Gunyah, PBA Twilight, OZP0703, OZP0903
Sowing dates: 30 April (Early), 21 May (Mid), 11 June (Late)
Fertiliser: Map + Zn @ 75kg/ha

Results and Interpretation

Yield of field peas averaged 2.5 t/ha at Hart in 2010, the same as in 2009. Grain yield showed no response to sowing time. This was likely due to the moderate blackspot, which penalised yield of early sown Kaspa by 35% (as evidenced by the fungicide trial), and the favourable season finish (which favoured later sown peas).

Varietal differences in grain yield were observed (Figure F4.1). Alma, a tall, trailing conventional type pea, yielded lowest (17% lower than Kaspa). Yield of Alma may have been compromised by the large biomass and severe lodging. Kaspa performed similarly to the site mean. PBA Gunyah and PBA Twilight performed similarly, and slightly lower than the site mean. PBA Twilight performed similarly to Kaspa, while PBA Gunyah yielded slightly (8%) lower than Kaspa, but still 11% higher than Alma. Both recent releases outperformed Alma and were only slightly lower yielding than Kaspa in a wet season which generally favoured later maturing lines. This data demonstrates their reliability across seasons. Over the last three seasons PBA Gunyah has performed between 7% below (2010) and 15% above (2008) Kaspa at Hart across all sowing dates, averaging 4% greater than Kaspa. PBA Twilight has been included in Hart trials in both the favourable seasons of 2009 and 2010, but has still averaged just 2% below Kaspa over those seasons.

Prospective releases OZP0703 and OZP0903 both yielded similarly and greater than the site mean. OZP0703 is a high yielding early flowering dun variety with greater tolerance to bacterial blight than current pea varieties. OZP0903 is a high yielding, early flowering and erect growing dun pea variety with pod shatter resistance and high field resistance to bacterial blight and the new strain of downy mildew present in SA. OZP0903 yielded 10% higher than Kaspa and 33% higher than Alma and OZP0703 yielded similar to Kaspa.

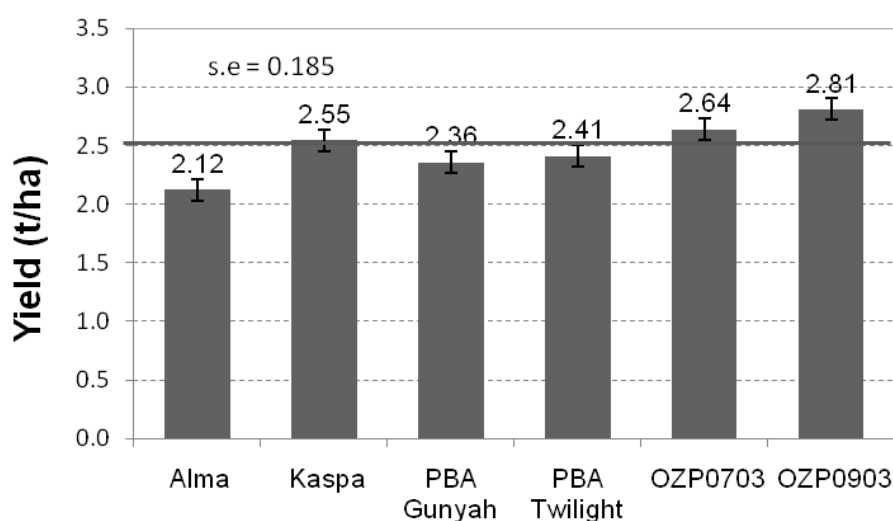


Figure F4.1. Grain yield of field pea cultivars at Hart, 2010.

Key Findings and Comments

- Grain yield of field peas sown at Hart in 2010 averaged 2.5t/ha across all varieties, similar to 2009.
- No sowing time response was observed in 2010 due to disease in early sown plots and the favourable season finish that promoted yield in later sown plots.
- Early sown plots with uncontrolled blackspot showed a 35% yield loss compared to the optimum control (fortnightly chlorothalonil), which yielded 3.6t/ha.
- Recently released early maturing varieties PBA Gunyah and PBA Twilight performed slightly below the site mean yield in a year which favoured later maturing types like Kaspera.
- Prospective releases OZP0703 and OZP0903 show a lot of promise, with OZP0703 performing similarly to Kaspera and OZP0903 yielding 10% greater.