

Rotation Position observations**Peechelba East, Victoria****Sown:** 4 November 2020**Harvested:** 5 May 2021**Soil Type:** Red loam over clay**Previous summer crop:** Maize**Hybrid:** Pioneer Hybrid 1756**FAR code:** 2020 Irrigated Maize Research Site**Irrigation Type:** Overhead pivot**Winter Management:** Fallow**Key Points:**

- The following observations were made on the same farm using similar management, but it was not possible to conclude exactly what factors were responsible for the differences observed (since this has not been statistically compared).
- Grain maize following a terminated faba bean crop planted into the previous maize residues generated higher dry matter offtakes and grain yields than leaving the land fallow over winter and spring.
- Grain maize yielded 21.13 t/ha (14% moisture) following the terminated faba beans and 19.29t/ha following winter fallow (*recorded from hand harvested quadrats which are typically higher yielding than machine harvested plots*).

Table 1. Summary of previous crop rotations for Pivot 1 (Research site) v Pivot 2

Year	Grain Maize following maize (no cover) Pivot 1	Grain Maize following faba bean cover crop Pivot 2
2018	Barley	Barley
2018	Maize Silage	Maize Silage
2019	Oats (hay)	Oats (hay)
2019	Maize Grain	Maize Grain
2020	Winter/early spring fallow (Research site)	Faba beans (terminated in October)
2020	Maize Grain (sown 5 November)	Maize Grain (sown 5 November)

Pivot 2 was sown following a winter cover crop of faba beans sown into grain maize residues in early June 2020 while the research centre was left as a winter fallow in grain maize residues from the previous crop. The faba beans were terminated in October. N levels were matched from specific treatments at the research site to the level of N applied to Pivot 2 (approximately 135kg N as predrill urea and 230N as fertigation. Both pivots received similar irrigation and fertigation schedules (5.1 mega L & 230N as fertigation.

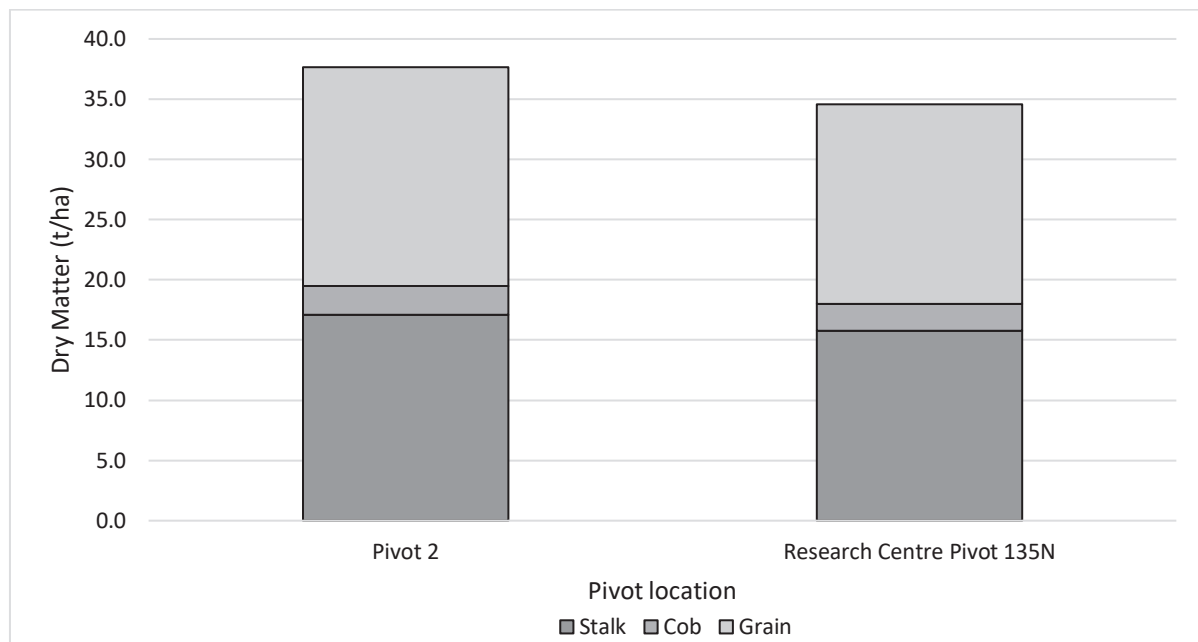


Figure 1. Harvest dry matter components from different paddocks with varying winter crop rotations.

Table 2. Summary of harvest components from the two paddocks with and without winter faba bean cover crop.

Winter	Stalk DM	Cob DM	Grain DM	Harvest Index	Grain Yield (14% moisture) (t/ha)*
Following Faba bean cover	17.11	2.40	18.17	0.48	21.13
Following winter fallow (no cover)	15.79	2.19	16.59	0.48	19.29

* Calculated from 1.5m² quadrats (14 plants) cut at harvest time (5 May)