



## Faba beans in Dalby

*St John Kent*



St John Kent, a farmer from "Coondarra", 36 kilometres North West of Dalby on the Jimbour Plain, is looking at alternative legumes in his cropping mix.

St John explains; "The reason for this is that my vision for the future of grain and cotton production at

Coondarra is twofold.

1. To wean ourselves off applied nitrogen (our biggest variable cost).
2. To move beyond our dependence on Glyphosate."

Traditionally the cropping mix at Coondarra has been two thirds summer crop, sorghum, and one third winter crops, principally feed barley and chick peas. As they have gained confidence in their ability to reliably grow legumes profitably, the mix is moving more to half legumes and half cereals with no preference for summer or winter. St John sees this as a climate change management strategy, where "if the profile is wet, we plant it." The change in the cropping mix has been possible as a result of better understanding of the agronomy of the different crops, as well as improvements in headers and varieties.

"Chick peas have been a part of our program for a long time and are more reliable and profitable than wheat and usually a better gross margin than barley. Says St John

We wanted to look at other legumes, so in 2014 commercial strips of faba beans were planted at Coondarra in conjunction with the Conservation Farmers Legume Soil Health project. The faba beans were chosen for a number of reasons;

- Firstly they provided an opportunity to plant and harvest earlier, giving more flexibility to fit with soil moisture availability.
- Secondly they have different disease issues to chickpeas and they can handle wetter conditions better than chickpeas.
- Thirdly faba beans are sold through different markets to chickpeas, new varieties with larger seed size are well suited to these markets.
- Finally faba beans produce a bigger biomass than chickpeas which contributes to soil nitrogen status, an important consideration if we are to address our reliance on applied Nitrogen."

### Winter 2014

There was one fallow spray of glyphosate/24D in January followed by a pre plant application of glyphosate 800mls and 24D 80mls, and a Terbyne 1kg and gramoxone 1.5L ha post plant.



Inoculated Warda faba beans were planted at 100kg/ha in a zero till field from the 7th to the 17th April 2014. There was no starter fertiliser applied at planting. The previous crop was chickpeas, double cropped after sorghum. Planting was done with a 12 meter JD Max Emerge at 750 mm row spacing and single disc at 400 mm. Establishment was in the order of 187,000 plants per ha.

Soil moisture conditions at planting were satisfactory following an effective fallow rain event of 200mm over four days at the end of March. During the season there was a 15mm shower in late April and showers of 40mm over three weeks in August.

Crop monitoring was done by John and Kylie Fuelling, Fuelling Ag. There were some issues such as Heliopsis from late June, which required two sprays. This was unusual, as Heliopsis are not normally a problem during winter. Other issues were frost and rust, although chocolate rust is not generally such a problem in the north.

Harvest was with a JD 9670 on the 7th of October for a yield of 3.4 t/ha, No 1 quality. Returning a gross margin of \$900/ha (Machinery operations are costed in at contract rates).

According to current thinking there could be up to \$100/ha of residual nitrogen. As St John says "Let's see."

According to the GRDC Nitrogen fixation fact sheet, well-grown pulses will fix 80 to 120kg N/ha, increase soil nitrate levels by 30 to 40kg N/ha and boost the grain yield of the following wheat crop by 0.5 to 1.5t/ha.

### Winter 2015

St John is going to plant faba beans again next season. He is aiming to have them planted by the 10th April, and will use a Max Emerge fitted with edible bean plates. He believes he needs to establish a minimum of 200,000 plants/ha.

The question is; Are Faba beans a fit in St John's vision?

"I think so. If the price is above \$400 a tonne and there is a Nitrogen and disease break advantage, then the rolling three year gross margin average should improve and our vision of not being captive to a Fertilizer company should be getting a little closer."

### References

<http://www.grdc.com.au/Resources/Factsheets/2013/07/Nitrogen-fixation-and-N-benefits-of-chickpeas-and-faba-beans-in-northern-farming-systems>

