

GRAIN & GRAZE 2 CASE STUDY

Grazing crops – the next thing

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Profile

Luke Caelli

Location: West River, south coast of Western Australia

Farm Size: 2,200ha

Annual Rainfall: 425 mm

Soil Type: Sand over gravel over clay.

Enterprises: 4,500 Merino sheep & cropping

The Caelli family are always looking for the next thing to improve their farming business. Four years ago they wondered if grazing crops was going to be the next big thing to improve their profitability. Now in their fourth year, they are grazing crops to provide feed to their 4,500 Merino ewes in the early winter period, when there is a feed gap.

Initially, the Caelli's planned to simply graze crops in order to let the pasture get in front of the sheep. However, they are now using grazing to manipulate crop maturity dates and to control leaf diseases such as powdery mildew. Today the Caelli's see grazing crops as an opportunity to maintain sheep number's whilst increasing crop area on their 2,200ha property.

Lambing starts in the middle of May at their West River property on the south coast. This allows the lambs to be weaned onto spring pastures. But the disadvantage of lambing mid-May to June had meant that feed was always short and Luke saw grazing cereals as a way to make it work.

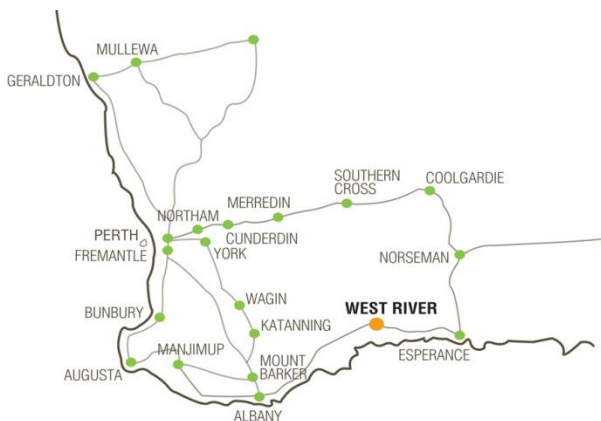
Management of grazing crops

Grazing crops are sown from early April and once they reach early tillering they are grazed. The sheep are usually removed before the end of July, as grazing after stem elongation impacts on yield.

From 2008- 2010 the Caelli's used Wedgetail wheat and in 2010, Gairdner barley was also trailed. In 2011 they only used Gairdner barley because in the previous year, the grazed Gairdner yielded 50% more than grazed Wedgetail wheat.

According to Farm and General's Greg Warren, Gairdner barley is made for grazing as it has a large leaf area and a long vegetative stage. He said that if the timing of grazing was right, there were few yield penalties.

Luke said it was important that the paddocks were clean of grass weeds from the previous year and that using MCPA or 2-4D prior to grazing is a good option to take out the broad leaves. In 2010 the crops didn't get sown till mid-May and hence they weren't grazed until early July, but it was determined that this was too late as pastures



were already growing. Luke said he needed the feed mid-May to mid-July.

Luke also mentioned that early sowing of crops means early finishing crops. Wedgetail (as a longer season winter wheat) has fewer issues with maturity than spring cereals. However, he feels confident he can hold the maturity of the spring cereal crop back with grazing. On the flip side, later sowing means a shorter grazing period: these are the things that need to be considered when you contemplate introducing grazing crops into the farming system.

Example grazing crop paddock

In 2011, 95ha of Gairdner barley was planted dry on the 6th April, with good stored soil moisture from summer thunder storms. Two days later the paddock received 7mm rain, enough for a germination. A knock-down herbicide was applied prior to sowing, and the barley was planted at 80kg/ha using a disc seeder with 60kg/ha DAP max plus 20kg/ha sulphate of potash down the tube. The paddock was sand over gravel, over clay.

On the 14th of May, 400 ewes and lambs went into the paddock, but failed to keep-up with the growing crop. Therefore Luke introduced an extra 400 ewes and lambs on the 7th June. All of the sheep were removed on the 21st June, five weeks later.

Despite the high stocking rate [~ 25 DSE/ha (with one ewe and lamb unit estimated at 2.8DSE)], the large group managed to keep only two-thirds of the paddock grazed. The third of the paddock that was under-grazed caused management issues for Luke. It started to flower, the capeweed escaped, and the prevalence of powdery mildew increased.

Tilt was applied to control the powdery mildew when the sheep were removed at the end of June. Due to a four week withholding period associated with the chemical, a second grazing was not an option on this paddock. When a Grain and Graze 2 group visited the site in early July, it was ready for another powdery mildew spray and for nitrogen to be applied – to take the crop through to harvest in mid-October.



ABOVE: Single bearing ewes on Gairdner barley –

Issues lead to future strategies

Luke admits the crop could have quality issues at the under-grazed end of the paddock, with both ends expected to yield the same. He was disappointed with the unevenness of the grazing. He would have preferred that the whole paddock was grazed right down to reduce the risk of powdery mildew and delay the maturity of the crop across the entire paddock. Unfortunately, it did not happen this year, but it would still be a strategy in the future.

Luke said he was worried when the sheep first went in, that the crop didn't have a fully developed root system and plants may pull out. Since it was so dry at the time, possible wind erosion was a concern and therefore they chose not to introduce as many sheep as they had originally planned. However, three days later 20mm of rain was received, the fears have proved unfounded and the crop has performed well.

Sheep management considerations

Luke was astounded as to the amount of feed the paddock had grown. While it needed more sheep, there wasn't another mob that could be safely used. However it raises the question - *what do you do with a mob of 800 ewes and lambs when you've finished grazing the crop?* Luke said they went into the next-door paddock and were moved again after mulesing and they remained as a large mob until after weaning.

By grazing the crops, the pasture paddocks were rested for five weeks, which enabled the pasture to get in-front of the sheep (even such a large number).

He said ewes and lambs were tricky to deal with, as it is hard to get the numbers right for even grazing. In 2012 he planned to ensure there were enough stock on-hand (25-30DSE/ha) from the start, to get an even grazing. For spring cereals this was important because you need the stocking density over time to delay the maturity.

Luke also provided supplements for the livestock while they were grazing the crops which included hay and a calcium magnesium lick.

Teasers were used on their Merino ewes to limit their joining period to 35 days. This enabled the length of their lambing period to be matched to the period over which the grazing crop would be available to them. The shorter lambing period also has other management benefits which include less age and size variation at lamb marking and weaning, but it can be a disadvantage if the weather at the time of lambing is conducive to lamb losses. The ewes are scanned early – the dry ones are removed, whilst the rest are separated into twin and single bearers so they can be managed accordingly.



ABOVE: Grazed barley – 6/7/2011.

Acknowledgments



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