

High Forage Feeding Systems – Mullins Case Study Farm

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Andrew & Chris Mullins have been operating as a dairy partnership for nine years and during this time they have focussed intensively on managing their forage base and feeding strategies. The brothers have grown crops themselves as well as establishing partnerships with local forage growers. They have grown and fed soybean silage over the past three years and have embarked on growing and ensiling wheat headlage in 2016.

Andrew said that they have gradually increased the forage levels in their cow's diets throughout the dry years and high forage feeding is now a standard practice. The high forage system is working well with feed budgeting is an important and crucial part of the system. Knowing what the cows will eat, what you have grown and what you have to buy are crucial to get through the year.

The latest addition to the suite of home-grown forage crops is wheat headlage this spring. Andrew is open minded about this crop and keen to analyse its effectiveness. Andrew said, "it's a trial for us this year. Our grain silos were full so we thought we would give headlage a go. There is no reason why it won't be cost effective, anything home-grown well is going to compete with purchased grain." The wheat headlage presents a home-grown starch source and spreads the operations risk so as not to only rely on corn. Andrew had a preference to grow wheat as opposed to other cereals such as barley as it suits his system and he has found that wheat doesn't lodge as readily. The other benefit of headlage is the expected increased digestibility over cracked grain.

Andrew has grown and fed winter cereal crops for many years but a few years ago was looking for something for summer. Andrew said that, "after seeing a soybean crop at the Gatton Research Dairy I thought it would be a good summer protein option for me." Three years on and Andrew has made soybean a staple summer silage option. There are some critical elements to ensure an excellent soybean silage, harvest at the right pod stage and moisture content (35% drymatter) and swathing is preferred to raking to avoid soil getting into the silage. Andrew said, "that once the plant is established it is pretty tough, but getting that plant established in a dryland situation can be a bit tricky. Last year we had a heat wave right at flowering and that paddock didn't set any pods, but that is something out of our control."

Variety selection is very important, Hayman has performed well in southern Queensland. This variety has been bred as a forage and silage variety, it is a taller soybean that presents a longer harvest window, about 2 weeks, than other varieties. Andrew has tried other soybean grain varieties and the Hayman has performed considerably better. The other benefits of soybean silage that Andrew noted were its good source of digestible fibre and positive effects on milk components.

The soybean silage has tested at 19-22% crude protein; this has reduced the reliance on purchased protein meals for the Mullins'. Andrew commented, "it has definitely reduced the amount of purchased protein meals we feed, by about half. Last year we were blessed with a good season and we have piles of soybean silage in the bunkers. So long as the seasons and other factors align we will continue to grow and feed soybean silage as part of the cow's diet."

The financial and nutritional benefits of a high forage feeding system are positive for Andrew and Chris Mullins. Andrew said, "our high forage feeding system was established to reduce the reliance on purchased concentrates and by-products. We have found this system to be useful for us in both the wet and dry years. We have been able to feed budget better and provide the cows with a consistent ration day in day out."

The DAF C4 Milk team will be holding a field day at Andrew & Chris Mullins' dairy on November 24 to discuss the recently harvested wheat headlage and the effectiveness of soybean silage on their farm. The C4 Milk team will also discuss results from the High Milk from Forage project being undertaken at the Gatton Research Dairy.

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