# Focus Farm - Wogamia Dairy

Situated 15 kilometres west of Nowra, on the NSW South Coast, nestled on a bend in the Shoalhaven River, surrounded by bush for kilometres is the unexpected green paradise of Wogamia Dairy. It is a 115 hectare, 350 cow dairy property, owned and managed by Dan and Bec Cochrane.

During the project from mid-2014 – mid 2016, every 6-8 weeks a trusted group of local farmers and service providers gathered to discuss many varied day-to-day and longer term issues and decisions facing the farming family and the business. Through this support network the Focus Farm and everyone involved gained insights into options and ideas for improving dairy management, production and profitability.

## Calf and heifer rearing – Colostrum feeding

Insights from Wogamia Dairy Open Day #2, September 9th, 2015

There was a great roll up of local dairy farmers and service providers at the Wogamia dairy second Open Day on 09.09.2015. The focus of the day was calf and heifer rearing. One of the many really interesting topics of the day that I felt was worth sharing was colostrum feeding.

**How do you know if you are feeding colostrum adequately?**

This issue is far more common than farmers realise.

At Wogamia dairy they noticed that their calves were not doing as well as they would have liked. After discussions with the support group the decision was made to look at measuring the effectiveness of antibody passive transfer which occurs via colostrum. “Failure of Passive Transfer” or “FPT” occurs when there is inadequate colostrum fed to new born calves so that they do not receive enough antibodies which help fight future infections that the calves encounter.

**So how would you really know if your calves have FPT?**

The most affordable way of measuring this, often in conjunction with your local vet, is to measure the blood protein levels of calves under 7 days of age. If the protein levels are above a set threshold (>50g/L) then there is adequate colostrum feeding. So this was done, with the help of local vet Dr Andrew Havadjia, for a 6 week period at Wogamia dairy. The results were mostly positive but to their surprise a proportion of the calves had low blood protein levels. So what to do? At the Open Day Dr Gemma Chuck’s presentation discussed the importance of colostrum feeding with the three “Q’s” being the most important – “Quickly, Quality, Quantity”:

- **The Quickly** – colostrum needs to be given within 12-24 hours of birth, ideally within 6 hours. This is because the calves’ ability to absorb the antibodies (infection fighting cells) that are in the colostrum, gradually reduces over the first 24 hours of life. After 24 hours of age there is no more antibody absorption from the calves gut into the circulation. The greatest absorption of antibodies occurs in the first 6-12 hours of life. Colostral antibodies are pivotal to helping calves fight infective diseases so the more they get the better chance the calves have.

- **The Quality** – not all colostrum has the same amount or range of antibodies but to optimise the benefits of colostrum we need to use high quality colostrum. It is possible to measure the colostral quality using a brix refractometer which is a very affordable and simple technique that can be used on the colostrum collected from individuals or pooled colostrum. The Brix Refractometer gives a reading on the level of solids/antibodies in the colostrum – good quality colostrum has >50mg/L or >22%. From the results a decision can be made whether that batch is adequate to use on new born calves in the first 24 hours. True colostrum is the colostrum collected from the first milking of the cow after calving and is the colostrum that we want to use and if it's high quality we want to store it for future use.
- **The Quantity** – the more colostrum that is given in the first 24 hours, the more antibodies the calf will absorb. The quantity recommended is two feeds of colostrum in the first 24 hours e.g. at 6 and then at 12 hours of age, of 2-3 L. Whether it is 2L or 3L depends on the size of the calf (e.g. Jersey vs Holstein) and quality of the colostrum (e.g. 2L of higher quality, 3L of poorer quality). And yes….calves can easily cope with that quantity of fluid in one feed.

**Suggested targets to know if your colostrum feeding is adequate is to have a FPT rate**

< 20% of calves. Good calf management operations have a morbidity (sick) rate < 10% and a mortality (death) rate of < 3%.

Can you identify if you have a problem with the rate of FPT, sick and dying calves?

How do you know if your calves are growing well? Do you record the health and disease events of your calves? That is the only way to know if you are meeting the targets. If these targets look like they might be issue for you, start looking at the beginning with your colostrum feeding.

Healthy, well grown calves make healthy, higher producing cows! So ask yourself; how do you know if you are feeding colostrum properly and adequately? And are you feeding colostrum adequately all the time? Does everyone who feeds the calves know how to do the job properly?