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C4 Milk Winter Forage 2020 On-Farm Evaluations



Image 1: Faba beans at Gatton Research Dairy June 4, 2020

Mark Bauer, Johanna Gorman and Ross Warren
Department of Agriculture and Fisheries Queensland



A key part of the C4Milk project is to increase margin over feed cost through on farm improvement in quality and quantity of forages grown. The 2019 winter demonstration conducted at the Gatton Research Dairy (GRD) revealed some forage options that offered alternatives to traditionally grown winter forages such as barley and oats.

These included wheat, triticale, canola and faba beans. Wheat offered an alternative for a multiple and single

harvest option that consistently showed high feed quality, with the added benefit of flexibility around harvest timing, whilst retaining comparable yields to barley and oats. Triticale excelled in yield whilst maintaining quality as a single harvest (silage) option. Canola yielded well and offered high feed quality both as single and multiple cut options. Canola isn't widely grown in subtropical regions and effort needs to be directed towards its ability to be effectively grown and

ensiled. Faba beans excelled as a legume showing potential yields as a single cut silage option comparable to the highest performing cereal crops; an aspect that has always hindered widespread use of legumes in fodder cropping systems. In addition, the potential return of nitrogen to the farming system for subsequent crops and the rotational benefits within the farming system from growing a legume add to faba bean's appeal. As for canola, work needs to be done around

continued page 3

Northern Horizons Editorial SDP Chair August 2020



Welcome to *Northern Horizons*.

Since the last edition of *Northern Horizons*, there has been further progress regarding the reform of industry structures and advocacy arrangements which was one of the key themes that emerged during the nationwide consultation phase of the Australian Dairy Plan (ADP). It is still expected that a decision will be made by industry regarding a new structure by the end of the 2020-21 financial year, with options being communicated by late 2020. These timelines are subject to the ADP Steering Committee and the Organisational Reform Steering Committee (ORSC).

There is still the opportunity to directly influence the design of a new national organisational structure and there are a number of ways to submit your views. To date, some of the design principles have been:

- Developing a structure that is lean, efficient and agile and also financially sustainable long-term, with contributions from farmers and processors;
- There appears general support for a whole-of-industry approach, so long as there is a mechanism to deal with farmer and processor issues separately as needed and an appropriate financial model that is explained to all;
- Ensuring the restructure provides a stronger and clearer advocacy process at state and national level without compromising excellence in R&D;
- Requiring a strong regional presence so that farmers and processors can have a convenient point of access to the organisation and services, with an understanding of regional needs.

If you would like to contribute further to this design process, please submit your feedback by either writing to contact@dairyreform.com.au with your contribution and/or working with any industry

organisation that you are a member of. For more information about the Australian DairyPlan, please visit www.dairyplan.com.au.

In preparation of our 2019-20 Annual Report, I recently had the opportunity to review our achievements from the last financial year. Between July 1 2019 and June 30 2020, Subtropical Dairy delivered 107 workshops and events to industry. This was 14 less than the previous year and represents the impact of drought and Covid-19 on our engagement. Similarly, our attendance at these events (1603 people) was down 22% compared to the previous year. Some of the disciplines covered during 2019-20 focussed on managing feed shortages, transition cow nutrition, better heifer management, mastitis, herd nutrition and silage management. Our extension team had a particular focus on farm safety during 2019-20 delivering many of these events through our Discussion Groups. Subtropical Dairy also facilitated working groups during the year to monitor the impact of Covid 19 and seasonal conditions and to recommend further support measures.

Given the challenging operating conditions, Dairy Australia again supported Taking Stock consultations. We facilitated 127 one-on-one consultations in Queensland and northern NSW over 2019-20. This was almost double the number delivered during the previous financial year. 2019-20 saw the continued investment in *Northern Horizons*. Six editions were published and emailed to 1,060 recipients as well as being posted in hard copy to all dairy businesses in our region. We are very grateful to our sponsors of *Northern Horizons* during 2019-20: Dept of Agriculture & Fisheries Queensland; Dairy Express; Feed Central; Feedworks; Alltech; BioGreen Solutions Australia; Biomin; Queensland Machinery Agency and Sunsuper.

Our Regional Groups continue to be an integral component of Subtropical Dairy with their oversight of local farmer-led R&D providing key local engagement and outcomes. During 2019-20, Subtropical Dairy invested in nine Regional Group projects. These were: the effect of leaf stage on the nutritive value of setaria forage for silage production (FNQ); the incidence of mycotoxins in tropical grass swards (FNQ); the effects of the leaf stage and defoliation intensity on the nutritive value of setaria pastures (Sunshine Coast); modelling of season of calving on the profitability of Sunshine Coast dairy farms; a survey of current treatment methods for buffalo fly and ticks (Sunshine Coast); DNA profiling mastitis pathogens (SEQ); an evaluation of rumen bolus technology (Smaxtec) to aid with the detection of calving and heats (Darling Downs); and an evaluation of precision nutrient mapping and tactical fertiliser application on northern NSW dairy farms (Far North Coast NSW). Unfortunately, drought saw our CalGran fertiliser trial on the NSW Mid North Coast abandoned in September 2019.

Despite the challenges bought on by drought and Covid-19 during 2019-20, Subtropical Dairy continued to deliver a range of services to the Queensland and northern NSW dairy industries. Over 67% of businesses either attended an event, joined a webinar or received a one on one consultation over the year. Your support is greatly appreciated.

Once again, welcome to *Northern Horizons* and I hope you find this edition of value and interest to your business.

Paul Roderick,
Chair, Subtropical Dairy
Programme Ltd.



Young Dairy Network (YDN) grow, network, support and inspire

It comes as no surprise that over the past five months the Young Dairy Network has encountered many hurdles as a result of the Coronavirus. With social distancing rules and public gathering restrictions we have seen a slowdown in regional activities.

As restrictions ease in the Subtropical Dairy region, we will be seeing more face to face activities being rolled out in the near future. In the upcoming

months, the YDN coordinators will be meeting with local steering committees to review plans for the year ahead. We are also currently looking to run a combination of social and technical activities throughout different regional groups along with online Q&A discussion sessions on a range of technical topics.

In conclusion, I'd like to remind everyone that as restrictions ease we'll

see an increase in regional activity. So make sure you read the Subtropical Dairy and YDN emails for information about upcoming events.

Cheers,

Jason McInnes
Chair Young Dairy Network
0400 974 712



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▶ continued from page 1

its ability to ensile effectively, the palatability of the ensiled product and general agronomic suitability to subtropical regions.

Following from the success of the 2019 winter crop demonstration at GRD, sixteen members from three discussion group regions have chosen to implement one or more of the crops evaluated in their own cropping system and region. Wheat is the most prominent crop with Bennett, Elmore and Naparoo wheat varieties being grown on five farms in the South east Queensland region, six farms in the Sunshine Coast region and one farm in northern New South Wales. Other crops being evaluated on farm include triticale (south-east Qld and Sunshine Coast), faba beans (south-east Qld and northern NSW), barley (south-east Qld and Sunshine Coast) and canola (south-east Qld and central Qld). The performance of these crops on farm, with comparisons from the differing regions and agronomic practices will be monitored and reported by C4Milk team members and disseminated to other discussion groups and the wider industry. It is envisaged that the crops will be harvested as either silage, hay or grazing options depending upon farm requirements and seasonal conditions. Image 2 shows Bennett wheat on the Mullins' farm at Allora in June 2020.

The Gatton Research Dairy will evaluate the largest and most diverse range of crops in one location. Barley (10 hectares), wheat, consisting of 2 varieties (42 hectares), triticale (4 hectares) and faba beans (2 hectares) comprise the on-farm planting. Crops will be harvested as both single and multiple cut options. The faba bean crop was harvested for silage on July 31 2020, which is 113 days post-planting. Image 1 (page 1) and images 3 and 4 (opposite) show the development of the crop over its growth cycle.

Measurements to be taken at GRD crop sites include:

1. Agronomic practices;
2. Multiple harvest yields throughout season;
3. Final harvest yield;
4. Quality of harvested cuts;
5. Soil test results pre plant and post harvest;
6. Ensiling practices and nutritional quality.

Measurements on commercial farms will include:

1. Agronomic practices;
2. Final yield harvest;
3. Quality of harvested cuts.

In addition, the C4Milk team have another winter demonstration planted at the Gatton Research Dairy for 2020. This year's demonstration is looking at additional wheat varieties, varied planting rates of faba beans and selected combination plantings based on the outcomes from the 2019 demonstration. ■■



Image 2: Bennett wheat grown at Mullins' farm Allora. Photo taken late June 2020



Image 3: Faba beans Gatton Research Dairy June 26, 2020



Image 4: Faba beans Gatton Research Dairy (GRD) July 21 2020, seven days prior to mowing and wind rowing. Note for reference Steven Duncan, GRD unit manager, is approximately 195 cm tall.



Kieran Ison Research Scientist,
Queensland Department of Agriculture and Fisheries, Gatton



The most recent animal experiment completed by the C4Milk research team investigated the effect of mixed ration fibre properties on pasture and total feed intake. This experiment was the third of a series of trials looking at how intake and milk production can be increased in high forage partial mixed ration (PMR) dairy systems.

Fibre properties are usually measured by chemical methods to determine neutral and acid detergent fibre (NDF and ADF, respectively), NDF digestibility (NDFD) and indigestible NDF (INDF). These values are typically used to estimate total intake in ruminants. However, there is often a large variation between theoretical and actual feed consumed by cows in commercial dairy systems when using chemical fibre measures to predict intake. The chemical analysis of feeds is based on ground samples, and does not truly account for the physical properties of forages actually consumed by cows. The size, structure and toughness of forage particles can dictate how easily feed can be broken down in the chewing and ruminating process. The rate at which particles can be broken down is termed fragility, which can be measured as the energy required to grind forages down into fine particles (mincing energy).

This experiment used three common silages, maize, white sorghum and forage sorghum to create three mixed ration diets equal in NDF but differing in NDFD and mincing energy (Table 1). The cows were offered 12.5 kg dry matter (DM)/cow/day of the mixed ration and 10 kg DM/cow/day of the top leafy stratum (TLS) of lucerne pasture. The experiment ran for five weeks in spring 2019, with four replicates of three cows in each of the mixed ration treatment groups. Mixed ration and pasture intake were recorded for each group, as well as eating and grazing behaviour, milk yield and components for individual animals.

The preliminary results showed that there was no statistically significant difference in milk yield averaging 27.3, 27.1 and 26.1 litres/cow/day for cows fed the maize, white sorghum and forage sorghum-based diets, respectively (Table 1). There were also no significant differences in intake, however cows fed the

white sorghum diet consumed 1.0 kg DM more pasture and 0.7 kg total DM intake (pasture + mixed ration) per cow per day more than cows fed the maize or forage sorghum-based diets (Table 1).

The higher pasture and total intake by cows in the white sorghum treatment is possibly driven by the lower mincing energy of the mixed ration (Table 1). Cows likely spent less time chewing and ruminating, allowing for a faster passage rate through the rumen and consequently higher intakes.

These preliminary results indicate that the chemical properties of fibre, NDF and NDFD are likely inadequate to accurately estimate DM intake on farm. Including measures of the physical properties of feeds as well as the chemical measures may provide better estimates for intake. This trial also shows that well formulated diets

using maize, white sorghum or forage sorghum can maintain similar milk production levels when cows are grazing high quality lucerne pasture.

Further analysis of these results will investigate the ruminating, eating and grazing behaviour of the cows, the physically effective fibre levels and mincing energy of individual components within the mixed rations to provide a better understanding of what's driving intake. An economic analysis will also be performed to estimate diet costs and potential margin over feed costs for each treatment from this experiment.

The next experiment in this series will run during early spring 2020 and investigate the effects of the mixed ration concentrate composition on pasture and total intake within high forage PMR sub-tropical dairy systems. ■■

	Maize	White Sorghum	Forage Sorghum
Mixed Ration Intake (kg DM ^a per cow per day)	12.5	12.2	12.6
Lucerne Pasture Intake (kg DM per cow per day)	8.6	9.8	8.8
Total Intake (kg DM per cow per day)	21.2	22.0	21.3
Milk Yield (litres per cow per day)	27.3	27.1	26.1
Total Diet Neutral detergent fibre (NDF) (% DM)	27.9	27.7	27.6
Mixed Ration NDF Digestibility (% DM)	40.9	33.2	37.4
^b Mixed Ration Mincing Energy (J/g DM)	26.4	23.9	35.4

^a Dry matter ^bMincing energy provides indication of fragility. Higher values are more difficult to breakdown.

Table 1. C4Milk Lucerne Grazing Experiment 3 Summary Results. The table shows the averages for each of the mixed ration treatments, indicated by the base forage, maize, white sorghum or forage sorghum.

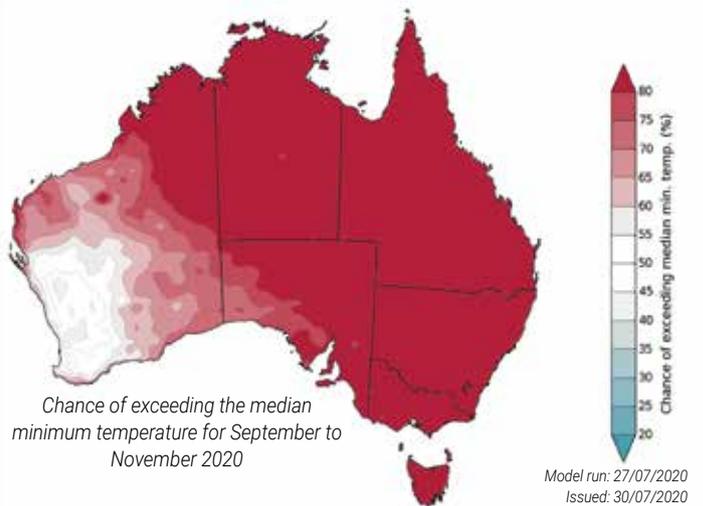
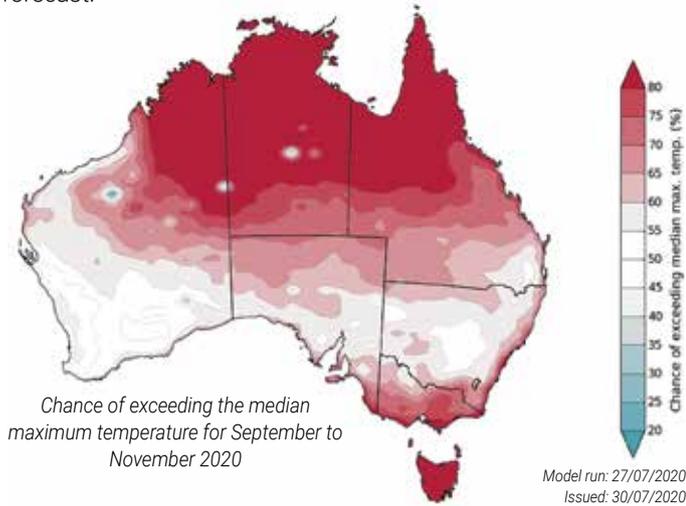
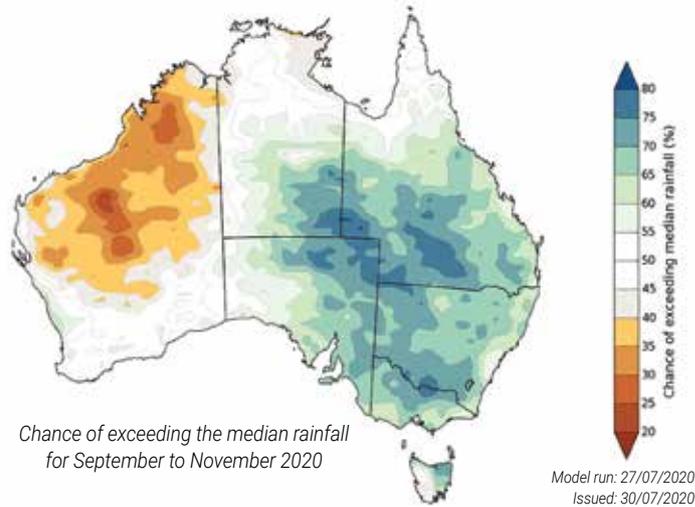
Bureau of Meteorology Spring Outlook – Subtropical Dairy Region



Jo Srhoj
Subtropical Dairy Extension Officer Far North Queensland

The outlook for September to November 2020 indicates a wetter than average three-month period for most of the eastern two thirds of Australia. There is a higher chance of exceeding median rainfall for the spring period in northern New South Wales, south east and central Queensland (above 60%) than in north Queensland (above 50 to 55%).

The tropical Pacific Ocean is expected to approach La Nina levels over the coming months, while warmer than average waters are likely in much of the central and eastern Indian Ocean. Both of these weather patterns are contributing to a wetter spring forecast.



The chance of maximum temperatures exceeding the median are highest for central and north Queensland where there is a 65 to 80% chance of this occurring. Maximum temperatures are more likely to be closer to the median in south east Queensland and northern NSW, however there is still a 50% chance they will exceed the median for the spring period.

The chance of the minimum temperature exceeding the median across eastern Australia is 80%. So we can expect days and nights to be warmer than average across the Subtropical Dairy region for the spring period. ■■

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The effect of leaf stage and pasture residue height on pasture utilisation and nutritive value of annual ryegrass

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Dairy cows can only achieve high levels of pasture intake when grazing the top leafy stratum (TLS) of pastures. Pasture intake declines when the cows are forced to graze the bottom stemmy stratum (BSS) of lower quality (Image 1). Therefore, continuously grazing only the leaf portion is likely to result in greater animal performance. However, there is a concern about the potential negative impact of this grazing management strategy on the growth rate and utilisation of the pastures due to the accumulation of pasture residues. Both grazing height and leaf stage are likely to affect residue accumulation and therefore growth rate and utilisation.

In a plot trial conducted at the Gatton Research Dairy (GRD) in 2019, the effect of leaf stage and pasture residue height on the growth rate, utilisation and nutritive value of annual ryegrass pastures was examined (Image 2). The research trial consisted of ten treatments including two growth stages (2 and 3 leaf stages) and five residue heights (5, 10, 15, 15-10 and 15-5 cm). Plots were cut every time they reached the target leaf stage. The season started on 21 June 2019 for all treatments and ended on 15 and 5 November 2019 for the 2 and 3 leaf stage treatments, respectively. Irrespective of the height of the stem, the leaf was cut to simulate grazing. The stemmy stratum was cut only when its height was greater than the target residue height for each height treatment. Therefore, stems were allowed to accumulate over time and then cut to simulate the removal of residues at different threshold heights to imitate a mulching event.

Preliminary Results and Conclusions

The average **utilisation per cut** of the total pasture mass (leaf and stem) was greater for the 3 leaf stage treatments (2,105 vs 3,794 kg DM/ha average of 2 and 3 leaf stage treatments, respectively) (Figure 1). The average utilisation per cut of both the leaf (1,662 vs 2,391 kg DM/ha) and stem portions (443 vs 1,404 kg DM/ha) was also greater for the 3 leaf stage treatments. Utilisation per cut of the leaf was found to increase and the stem portion tended to decrease with cutting height for both 2 and 3 leaf stage treatments (Figure 1 – page 7).

When considering the **utilisation per season**, the 2 leaf stage treatments were cut more frequently than the 3-leaf stage treatments (on average every 21 and 32 days respectively) and hence, cut more times in the season (8 and 5 times respectively). Consequently, the utilisation per season of the leafy portion was higher

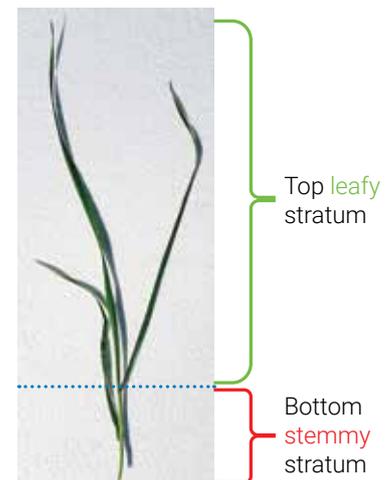


Image 1 Strata of annual ryegrass

for the 2-leaf stage treatments, 13,296 kg DM/ha compared to 11,954 kg DM/ha average of 3 leaf stage. In contrast, the utilisation per season of the stemmy portion was 3,545kg DM/ha compared to 7,018 kg DM/ha average for the 3-leaf stage. Although the total pasture mass (leaf and stem) was higher for the 3 leaf stage treatments, 18,972kg/DM compared to 16,841 kg DM/ha, a larger proportion of this total is the lower quality stemmy plant material.



Image 2 Annual ryegrass plots at Gatton Research Dairy

The utilisation of the leafy portion was higher for the 2-leaf stage treatments, 13,296 kg DM/ha compared to 11,954 kg DM/ha average of 3 leaf stage.

The trial further quantified that there was a significant difference in the nutritive value of the leaf and stem portions. Figure 2 also outlines the differences in quality of the leaf and stem portions between winter (June, July and August) and spring (September, October and November). Interestingly, leaf stage and residue height did not seem to have a significant impact on the nutritive value where the nutritive value of the leaf was significantly higher than the stem in both

seasons. Both the energy and protein content of the leaf was higher and its fibre content (NDF) was lower than the stem in both seasons (Figure 2). The nutritive value of both strata was significantly lower in spring in comparison with winter which can be associated with the flowering of ryegrass during spring.

In conclusion, the combination of utilising the pasture at 2 leaf stage and maintaining the residue height at 10 cm resulted in a reasonable balance between

high and low utilisation per season of the leafy (13,145 kg DM/ha) and stemmy portions of the plant (2,196 kg DM/ha respectively). Allowing cows to graze only the top leafy portion of the plant at the 2-leaf stage would maximise diet quality and pasture intake. If cows are forced to graze the bottom stemmy portion of the plant, diet quality is likely to decrease and in turn, pasture intake. ■■

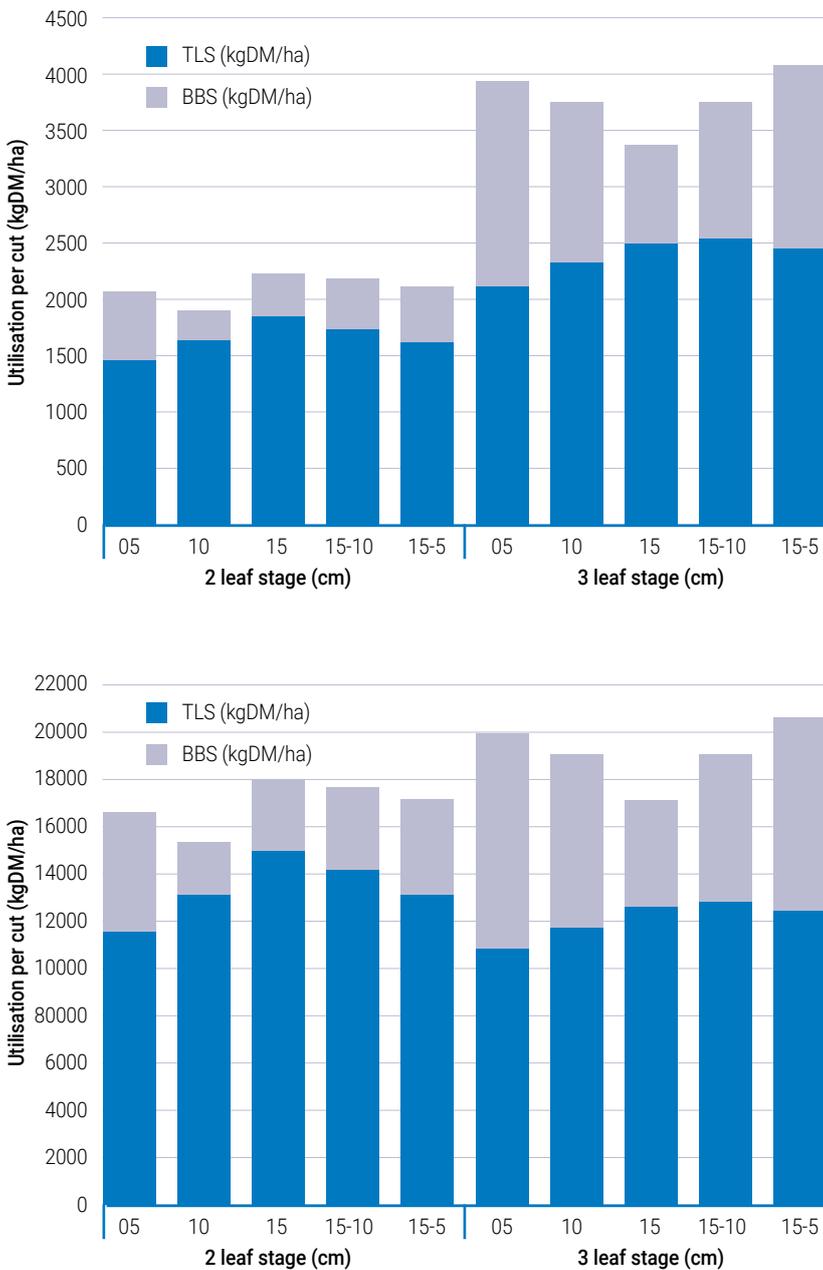


Figure 1 The effect of leaf stage and pasture residue height on the utilisation per cut and utilisation per season of the top leafy stratum (TLS) and the bottom stemmy stratum (BSS) of annual ryegrass pastures. The season started on 21 June 2019 for all treatments and ended on 15 and 5 November 2019 for the 2 and 3 leaf stage treatments, respectively.

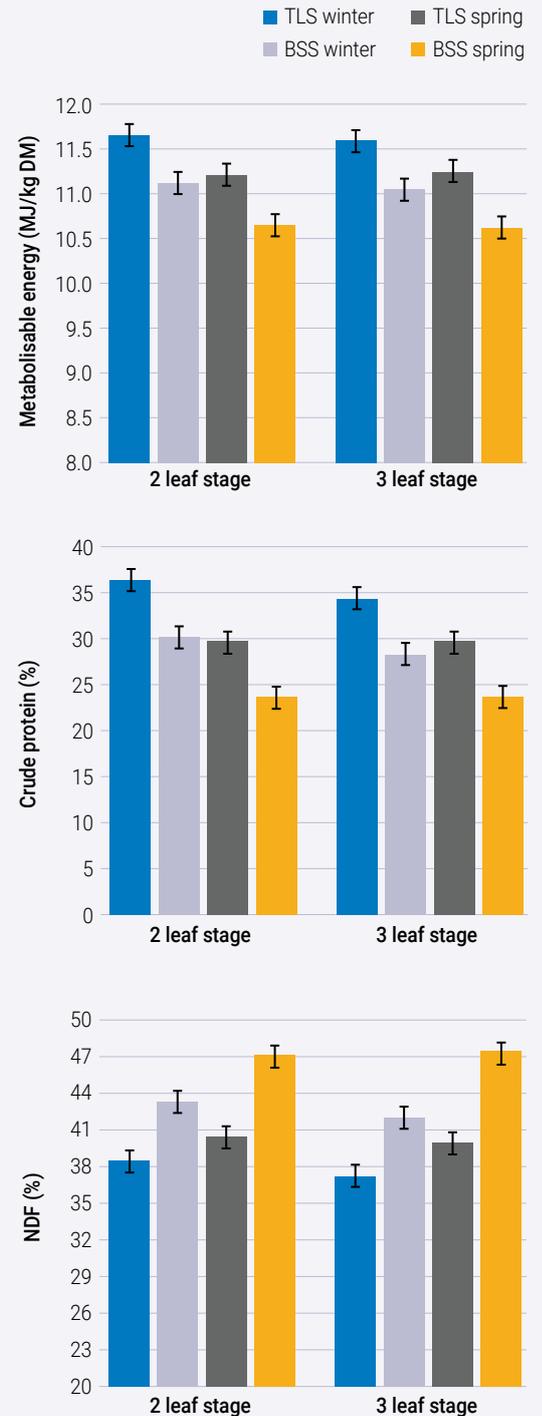


Figure 2 Nutritive value of the top leafy stratum (TLS) and the bottom stemmy stratum (BSS) of annual ryegrass pastures in winter and spring. Values are averages of the five pasture residue height treatments.

Evaluating setaria quality at different stages of regrowth in Far North Queensland (FNQ)



Jo Srhoj

Subtropical Dairy Extension Officer Far North Queensland

Farmers in FNQ typically experience an abundance of tropical pasture in February and March each year. The autumn, early winter feed gap on FNQ dairy farms is currently managed through the feeding of byproducts such as whole cottonseed meal, the use of stand-over tropical pastures, and the limited use of corn silage. During the 1990s, perennial tropical grasses were evaluated as a silage resource, however there was poor implementation of this practice due to their relatively poor nutritional content, spoilage due to weather events and other more cost-effective alternatives. Given the recent record supplement prices in FNQ, the local Subtropical Dairy Regional Group (FNQ RG) decided to revisit the feasibility of ensiling local tropical grasses, such as setaria, given the changed operating environment.

The FNQ RG decided that the impact of the season on the yield and quality of setaria pasture under contemporary management practices was a good starting point to research. The two seasons selected were before the onset of the wet season (December), and during the wet season (March).

A trial site was established on Merragallen Road just outside of Malanda. During December 2019 and March 2020, setaria pasture was sampled over four ranges of leaf stages (2 to 7 leaves per tiller), which was achieved by mowing swards to result in 10, 15, 20 and 25-days regrowth. On the day of cutting, nine 0.25 m² quadrats were cut for each stage of regrowth, wet weights were

recorded and a subsample taken from cut pasture. Leaf counts were recorded from six randomly selected tillers within each quadrant. Subsamples were dried at Walkamin Research Station, then ground and sent away for analysis.

The highest energy level from setaria pasture cut in December 2019 was 8.8 megajoules (MJ) metabolisable energy (ME) per kg dry matter (DM) (15 days regrowth). At this level of energy content, the value of this forage for ensiling for lactating cows is questionable. In comparison, metabolisable energy concentrations were above 10.0 MJ/kg DM from both 10 and 15-day regrowth herbage during March. These differences in energy content between seasons

can be partially attributed to ambient temperature changes between these months. Further information regarding the nutrient content of these cuts versus maize silage and whole cottonseed are shown in Table 1.

The high metabolizable energy content of setaria during March provides scope for further investigation regarding the feasibility of ensiling this forage. Further modelling regarding yields, particularly from the perspective of increasing soil nutrition, also requires additional work.

A final report for this project will be available at the end of August and will be circulated to all FNQ RG group members at this time. ■■

Analysis (dry matter (DM) basis)	10-day regrowth	15-day regrowth	Whole Cottonseed	Maize silage
Metabolisable Energy (MJ)	10.3	10.0	13.0	10.5
Neutral detergent fibre (NDF) %	52	56	54	43
Acid detergent fibre (ADF) %	24	26	40	25
Crude Protein %	27	24	23	8.5
Water Soluble Carbohydrates %	3	5	4	3
Yields tonnes DM/ha	0.5	1.1		

Table 1. Key nutrition parameters and yield of 10 and 15-day setaria pasture regrowth during March versus maize silage and whole cottonseed.



10 days
Setaria regrowth plot 10 days
March 2020 FNQ

15 days
Setaria regrowth plot 15 days
March 2020 FNQ

Subtropical Dairy Weekly eNews

Alicia Richters

Subtropical Dairy Regional
Extension Officer Northern NSW



Every week, Subtropical Dairy publishes our electronic newsletter, the Northern Weekly eNews. Each edition includes a great range of information including:

- COVID-19 related information and updates;
- Subtropical Dairy events including workshops, online webinars and Q&A sessions;
- Other Dairy Australia and industry events;
- Links to resources and information such as surveys, grants, climate reports, Australian Dairy Plan updates and general information;
- Dairy Australia Hay and Grain Report links; and
- Seasonal Reminders.

The eNews is sent out on Thursday mornings. If you aren't receiving the Northern Weekly ENews, please get in touch with Alicia Richters on 0427 916 650 so we can add you to our email list. If you have any feedback about the layout or content of the eNews, please don't hesitate to get in contact with any of the Subtropical Dairy team. ■ ■



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Managing Cell Counts and the Dry Period



Belinda Haddow

Subtropical Dairy Extension Officer Darling Downs and South-east Queensland

Throughout June 2020, Subtropical Dairy held several online sessions focused on the key principles of managing cell counts in dairy herds, in particular, drying off procedures and management of the dry herd. The sessions were facilitated by Dr Carl Hockey, from RuralVet Pty Ltd, and continued on from discussions held during the Managing Mastitis online sessions held earlier in 2020.

One of the most frustrating situations for farmers managing mastitis in dairy herds is the presence of a consistently moderate to high bulk milk cell count in the milk vat but the absence of clinical, or observable, cases of mastitis in the herd.

When cows are challenged by infections in the udder, the body responds by sending large numbers of cells to the mammary gland and into the milk to fight the infection. These cells are called somatic cells. The somatic cell count (SCC) of an individual cow is referred to as an Individual Somatic Cell count (ISCC) and is an indicator of subclinical mastitis in the cow. Similarly, the Bulk Somatic Cell Count (BMCC) taken from the milk vat is an indicator of the estimated level of subclinical mastitis in the herd. BMCC are dynamic and will change over time and with changes in the herd so it is advisable to use a series of BMCCs to assess a herd for mastitis.

A dairy farm business from the southern Darling Downs region of Queensland with a bulk somatic cell count challenge joined us for one of the online 'Managing Cell Counts and the Dry period' sessions. Their story helps demonstrate the decision-making process regarding getting cell count issues under control. During the online workshop Carl Hockey lead a question and answer session with the farmer to work through a description of the current situation and suggest some actions that may help moving forward.

The farm is a multi-generational farm with a long-standing issue with BMCCs averaging 300,000 - 400,000. Whilst these levels were not excessively high, they do indicate a moderate mastitis problem in the herd and inhibit the farm from gaining milk quality bonuses.

What we know about the herd

Bulk Milk Cell Counts (BMCC)	<p>Initial BMCC 300,000 – 400,000.</p> <p>This range is considered to indicate a moderate mastitis level in the herd and will prohibit the farm from accessing milk quality bonus payments. A cell count higher than 400,000 is considered unsuitable for human consumption by European standards and may result in milk payment penalties.</p> <p>Implementation of some of the procedures below have brought the BMCC to an average of 270,000, but further improvement is needed to access milk quality bonus payments and ensure there is a low level of infection in the herd.</p>
Individual Cow Cell Counts (ICCC)	<p>Not herd recording at present so no ICCCs. There is a DeLaval Cell Count tester on farm, which can assist with decision-making.</p>
Milk cultures – pathogen identification	<p>Culture results from working with the local vet indicate the pathogens causing the problem are <i>Staphylococcus aureus</i> and <i>Streptococcus agalactiae</i>.</p> <p>These pathogens are cow associated or contagious which means they are generally spread through contamination with infected milk at milking time.</p> <p><i>Staphylococcus aureus</i> is a major cause of mastitis in Australia and is difficult to cure especially during lactation so prevention is essential.</p> <p><i>Streptococcus agalactiae</i> is very sensitive to penicillin so treatment has a high cure rate.</p>
Current control measures implemented	<p>DeLaval Cell Count tester.</p> <p>Cows udders washed, stripped to detect mastitis then cups on.</p> <p>Post-pathogen identification have now added a teat spray pre-cups on. Udders are dried with individual cloths per cow and a disinfectant (peracetic acid) is used in the cups between cows.</p> <p>Gloves are worn by milkers and disinfected between cows.</p>
Herd dynamics - Culling	<p>Have culled significant numbers in a number of batches, particularly those with stubborn high cell counts.</p>

Where to from here?

With cow associated (or contagious) mastitis there are two main control points in the management plan:

- ▶ **Stopping the spread at milking time by reducing contamination between cows and quarters with infected milk.**

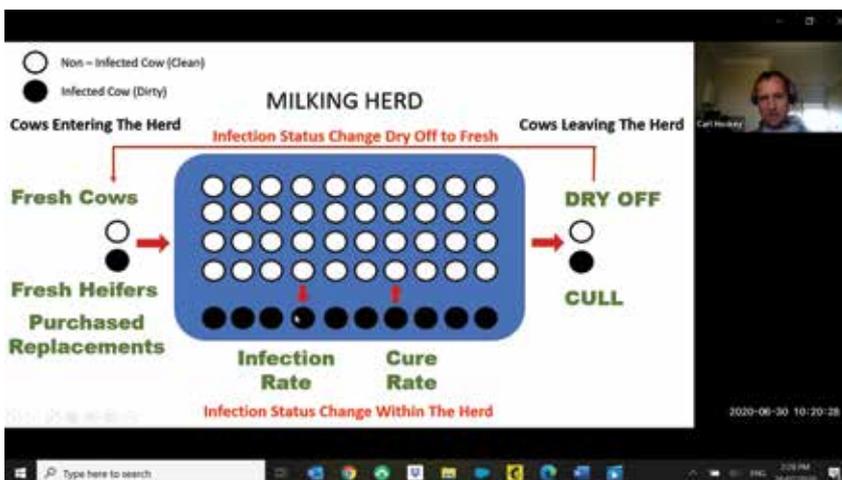
This means having excellent milking time hygiene between cows and milkers in the dairy and also minimising any damage to teat ends or milking machine issues that could increase contamination between cows and individual quarters.

- ▶ **Controlling the infection and preventing new infections by implementing a good drying off routine.**

For contagious pathogens the use of blanket dry cow treatment and/or teat sealants is recommended. Be cautious that long lasting, effective dry cow treatments used for control will require good record keeping and accurate breeding records to ensure withholding periods for milk are met. Ensure that good hygiene and correct practice are used when administering intra-mammary treatments or teat sealants.

Additional control options to consider for managing contagious mastitis in the herd.

- Consider milking those suspected of being infected last or keep them in a separate herd.
- Consider a consultation with a qualified consultant or veterinarian. Often having someone observing at milking time will pick up small things that get missed in a conversation.
- Are there other factors that are predisposing cows to infection – the quality of the liners and cups, milking times and over-milking resulting in teat end damage making cows more susceptible to pathogens.
- Installing in line mastitis filters to catch individual cows with infections.
- Ensuring pre-milk procedure is correct. Wash if udders are dirty or it helps with let-down, then dry thoroughly with individual cloths. Strip if needed then cups on. Hand or glove hygiene is crucial.
- The dry period is the best chance to cure infected animals. Consider some options to improve dry off procedure.
- Use the Dry Cow treatment decision tree (page 12) to decide on blanket or selective dry cow treatment. For this farm, with contagious pathogens, and a relatively consistent high cell count Blanket Dry cow treatment is advisable.



Dry Off Considerations

- Get milk production down to 5-12L
 - Remove concentrate from diet 1 week before dry off and consider changing environment
- Dry off abruptly
 - Preferably don't skip milkings
 - Definitely don't skip days
- Decide dry cow treatment strategy
 - Blanket Antibiotic Dry Cow Therapy vs Selective
 - +/- Internal Teat Sealant
- Clean environment post dry off
- Monitor daily

Image 1 The dynamics of the herd is a key consideration when considering a mastitis control plan. In our year-round calving herds there is a constant flow of cows entering and leaving the herd so the infection status of individuals in the herd will change constantly.

Freshly calved heifers and cows come in – some cows will be clean and others may carry infection. Hopefully, heifers will be clean. Cows that leave the herd and are dried off have the option to leave without infection or potentially be cured during the dry period. Others will leave and be culled.

Without individual cells counts we don't know whether cows are clean or infected when they enter or leave the herd. We also do not know the number of new infections in the herd, repeat offenders or cure rate.

In the absence of ICCCs and a consistently high BMCC, the dry period is the most effective time to address the level of infection in the herd and blanket dry cow treatment is advisable.

Image 2 Some considerations for Drying Off from the Managing Cell Counts and the Dry Period online session



For more information on mastitis and managing cell counts in your dairy herd visit the Dairy Australia web page www.dairyaustralia.com.au/farm/animal-management/mastitis/countdown-resources

There are also a number of courses and workshops available to assist with mastitis management on farm including Cups On Cups Off and the recently released online training course Milking and Mastitis Management - www.dairyaustralia.com.au/farm/animal-management/mastitis/mastitis-workshops

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Guide to choosing an appropriate dry cow treatment (DCT) strategy



Step 1 Treatment of existing infections in cows – antibiotic DCT

- 1
 - » Has your Bulk Milk Cell Count been <250,000 cells/ml the past 3 months
 - » Do you have 4 or more Individual Cow Cell Counts (ICCCs) for each cow for the year and is at least one result within 80 days of planned dry off date?
 - » Are your clinical case records complete and accurate?
 - » Do you have less than 25 clinical cases per 100 cows over the last 12 months
 - » Does PCR testing and individual cow milk cultures indicate that Strep ag is NOT present on your farm?

Yes to all

If you answered YES to ALL of these questions, you could use part herd antibiotic Dry Cow Treatment. Treat all quarters of any cow that had clinical mastitis during lactation and/or had a high ICCC. Consult with your veterinarian to establish an appropriate ICCC threshold.

No to any

If you answered NO to ANY of these questions, use whole herd antibiotic Dry Cow Treatment: treat all quarters of all cows in your herd.

For both part herd and whole herd antibiotic DCT you should consult with your veterinarian as to the most appropriate antibiotic to use in your herd and review your administration protocols

Step 2 Prevention of new infection in cows – internal teat sealant

- 2
 - » In their first 2 weeks after calving, do 5% or less of cows have clinical mastitis? OR
Did you treat 5 or less cases of clinical mastitis per 100 cows in the months your herd was calving?
 - » Are you using whole herd antibiotics Dry Cow Treatment?

Yes to all

If you answered YES to BOTH of these questions, discuss any potential changes to drying off and calving management as to whether Internal Teat Sealants are still required to reduce risk of new infections.

No to any

If you answered NO to ANY of these questions, use whole herd Internal Teat Sealant: treat all quarters of all cows in addition to your chosen antibiotic Dry Cow Treatment.

Step 3 Prevention of new infection in heifers – Internal Teat Sealant

- 3
 - » Did less than 5% of heifers have clinical mastitis in their first 2 weeks after calving OR
Did you treat less than 3 cases per 50 heifers in the months your herd was calving

Yes to all

If you answered YES to this question, discuss any potential changes to heifer calving management as to whether Internal Teat Sealants are required to reduce risk of new infections.

No to any

If you answered NO to this question, consider the use Internal Teat Sealant in your heifers, 4–6 weeks prior to calving.

New online Dairy Australia program offers easy access to milking and mastitis management training

Alicia Richters

Subtropical Dairy Regional Extension Officer Northern NSW



Before the impacts of COVID-19 and temporary suspension of face-to-face extension activities, Subtropical Dairy was working with Dairy Australia to develop more online training resources for dairy farm businesses to access. With our region facing the biggest geographical challenge in all of Australia, providing access to farmers online is a key priority for Subtropical Dairy. A new course offered in conjunction with Dairy Australia is serving to meet these needs by allowing dairy farm businesses and their employees access to training online with the added feature of being able to complete this training at their own pace. The new Dairy Australia Mastitis and Milking Management program has been designed to bring staff up to speed on safe animal handling, milking procedures and the prevention and identification of mastitis. The course is aimed at new or less experienced staff or as refresher training for more experienced staff.

The online course consists of modules including:

- Bringing cows into the dairy;
- Putting cups on;
- Taking cups off;
- Post-milking teat disinfection;
- Detecting clinical mastitis.

The program utilises Dairy Australia's newly refreshed online training platform, Enlight, followed by a series of on-farm tasks which are checked off by an on-farm coach from the dairy farm business.

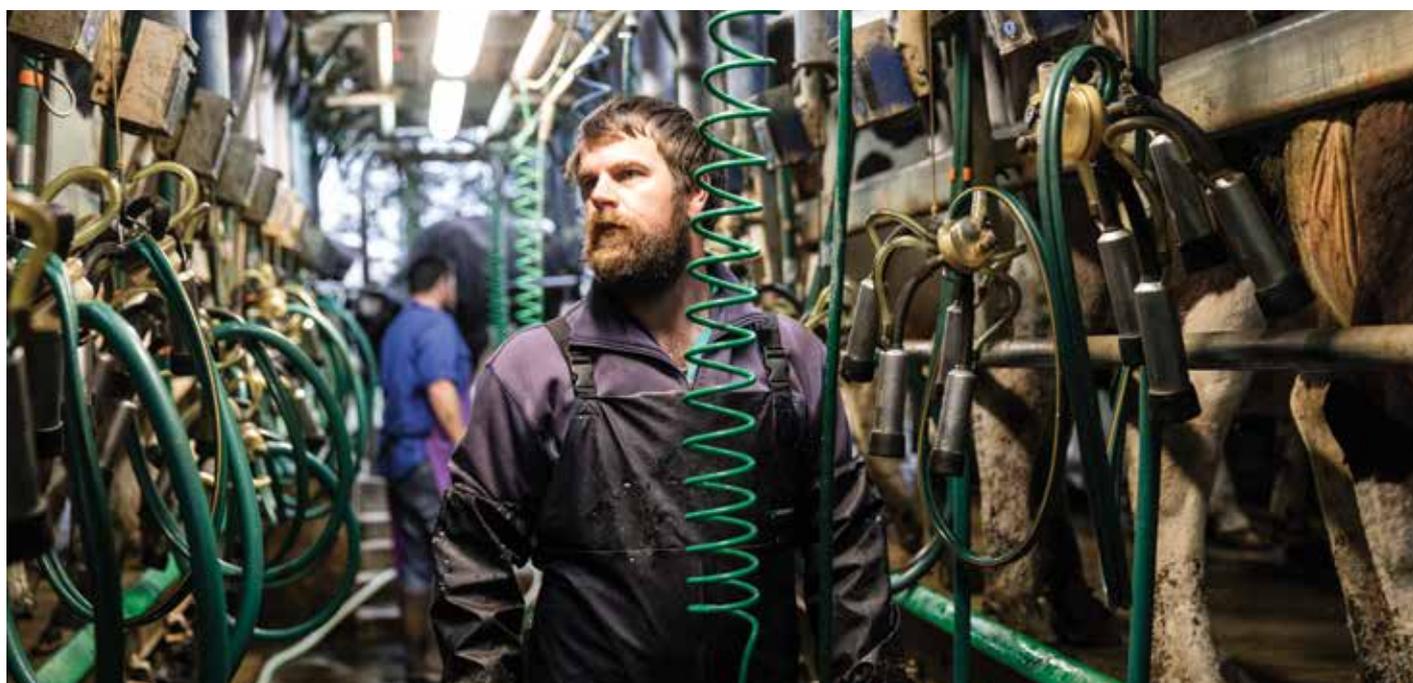
Since launching the program in June 2020, there have been 36 participants from 20 farm businesses in the Subtropical Dairy region enrol in the program. One of these participants is Joel Tessmer, an employee at Sam and Fleur

Tonge's dairy farm at Casino in northern NSW. Sam and Fleur have always sent staff along to the Dairy Australia Cups On Cups Off workshop over the years. They jumped at the chance to enrol their newest staff member, Joel, in this online course to get the basics covered and reinforce the training they have provided on farm. Sam and Fleur think the course is a wonderful resource and provides them with the chance to go through the training with Joel and discuss the modules. They have also seen improvements in the way Joel handles the herd when milking.

Joel has enjoyed the course saying that it has helped to fill in the gap and background of what he had learnt on farm from Sam and Fleur and their other staff. He is feeling much more

comfortable in handling cattle and finds milking running smoother. He also enjoys the course being broken up into smaller segments that are easy to complete, rather than finding time to head along to a full day course offsite. Joel has also enjoyed completing the course alongside his employer, enabling him to discuss and understand how these new skills integrate into their dairy system.

The Milking and Mastitis Management course is available throughout the year. If you or a staff member are interested in this program, please contact Alicia Richters from the Subtropical Dairy team on 0427 916 650 or alicia@subtropicaldairy.com.au for more information or to help get enrolled in the course. ■ ■



Technical area	What is this about?
----------------	---------------------

Farm Business Management

Our Farm Our Plan	A risk and strategic business planning program that aims to support dairy farmers to consistently make decisions over time that increases profit and wealth, while confidently responding to challenges and opportunities, manage risk and achieve their own business and personal goals.
Farm Business Fundamentals	Farm Business Fundamentals provides participants with the skills and knowledge to setup and use good record keeping systems for farm financial and physical information, prepare an annual farm budget and create a balance sheet for their business.
Leadership (Dairy NSW)	This project focuses on farm level leadership and culture, with the purpose of enhancing staff engagement and retention, and further fostering an awareness and desire to pursue advanced leadership opportunities across the NSW dairy supply chain.
Resilient Farm Systems	This project reviews strategic and tactical on-farm opportunities for Northern Australian dairy businesses located in the West Moreton, Darling Downs and South Burnett regions to improve their sustainability including financial, biophysical and social outcomes. The project is funded through the National Landcare Program and is being delivered by Subtropical Dairy & Queensland Department of Agriculture and Fisheries (QDAF).
Discussion groups	Group-based extension and farm change activities that support the adoption and application of new technology and practices, and support farmers to improve farm business management performance.
Taking Stock	Taking Stocks address the specific needs of dairy businesses during challenging operating conditions. These may include financial, biophysical and human resource issues.
Dairy Farm Monitor - benchmarking	Participating farmers are provided with data regarding their cost of production and profit drivers that can be most readily improved.

Herd Performance

Cool Cows	Tactics to manage high heat loads in milking herds.
Healthy Hooves	Covers key aspects for prevention of lameness, how to recognize lame cows early and treat simple cases.
Milking and Mastitis Management	An online course covering how and why mastitis infections occur, minimising mastitis during wet conditions, practical methods to detect, identify and treat mastitis, adapting milking processes to reduce the risk of infections, drying off procedures and mastitis culturing to identify pathogens.
Transition Cow Management	This online classroom delivers contemporary knowledge and skills regarding transition cow management. The course is a blend of online resources supported by facilitated online sessions. Participants are required to complete learning activities between online sessions.
Biosecurity (NSW)	A workshop to introduce a Biosecurity Tool and assist farmers to develop or enhance their own biosecurity plan.

Forages and Feeding

Nutrition Fundamentals	A course which reviews fundamental nutritional science and its application in subtropical and tropical dairy farming systems.
Grazing Management - Summer (TBC)	These workshops will discuss some of the latest findings from the C4Milk R&D project including forage management and herd nutrition, revisit some fundamentals and discuss some timely topics. A summer and winter series will be delivered. Co-delivered with Department of Agriculture and Fisheries Qld.
Grazing Management - Winter (TBC)	
Smarter Irrigation for Profit 2 (SIP2)	This project has ten sites across mainland Australia. The SIP2 reference groups (participatory action group) are set up alongside these optimisation sites to generate and address regional research questions, with the aim being to generate strategies that will assist in reducing the irrigation yield gap. The groups function as discussion groups with a local site co-ordinator.

People

Farm Safety Manual	This project makes sustainable improvement to the safety of farm owners, employees, families, contractors, service providers and visitors that come onto the farm through provision of materials and workshops.
Industrial Relations Webinars	Webinars covering various topics such as the fundamentals of employment law and industrial relations, improving employment skills, creating functional teams and workplaces.
Young Dairy Network	Supporting young people to develop through networking and personal development.
Cows Create Careers	Cows Create Careers is a Dairy Australia program designed to promote dairy industry careers and industry education to students in years 7-11.

Other events and projects

Regional Dinners	A chance to meet and hear what services are available for dairy businesses.
Northern Horizons	The latest regional RD&E. Northern Horizons is published bimonthly and posted to all Subtropical Dairy businesses.
Weekly e News	The latest news, upcoming events, industry developments and feed markets.
Website www.dairyinfo.biz	An international online extension resource for tropical and subtropical dairy businesses.
Facebook	Subtropical Dairy has eight Facebook groups, with local closed groups for YDN members.
Regional Groups	Local farmer led groups undertaking local R&D, identifying local priorities and advocating for Subtropical Dairy services.



Dairy organisational reform

Australian Dairy Plan

The Australian Dairy Plan (ADP) has been developed to set a clear industry vision for the next five years and beyond. It brings together farmers, processors and other stakeholders from across the Australian dairy industry to set out in a single document, the roadmap to build a more profitable, confident and united industry. The final ADP is due to be launched in the second half of 2020.

The establishment of the ADP is an industry-driven initiative being developed by Australian Dairy Farmers, Australian Dairy Products Federation, Dairy Australia and the Gardiner Dairy Foundation.

To define the priorities of the ADP, the industry came together in 2019 to voice its views through one of the largest consultation exercises ever undertaken by dairy. Over 1,500 farmers and other industry stakeholders from around the country participated.

The ADP identified five key commitments that would deliver the target of profit, confidence and unity. At the top of the list was reform of industry organisations, where the commitment stated:

Reform dairy industry structures and how we work together to create a more cohesive dairy industry and a more influential advocacy voice.

Whilst all five ADP commitments are now being addressed. The challenge to bring about reform is undeniably the most complex.

Organisational reform

A strong theme through the ADP consultation, was that the current system of industry representation is not fit for purpose and is financially constrained. This is supported by a clear desire from industry for change in organisational structures.

In response a group of dairy farmers (called the *Joint Transition Team* or JTT),

was appointed to explore reform options. Their recommended model was the creation of a single, whole of industry national dairy organisation supporting industry services including policy, advocacy, research and development (R&D) and marketing.

While there is general industry support for this model, there are several key challenges subsequently identified through feedback and consultation. It was clear that further exploration, consultation and consideration around design of a new model was required, particularly in the areas of governance, advocacy and funding.

The ADP partner organisations have now established a process to consult with industry and develop a proposed new industry structure. It is based on a phased approach that engages industry around organisational design challenges and develops a new design for industry consultation and a vote on the recommended model. The new model will be determined in 2021. This time is needed due to the complexity and consultation required in determining the appropriate model of reform.

Process to reform

Industry partners are working towards organisational reform that will:

- Deliver a stronger and unified industry voice with an ability to represent diverse views throughout the supply chain.
- Ensure streamlined execution of whole-of-industry strategic priorities.
- Create a single point of contact for all industry services including advocacy, R&D and marketing.
- Deliver stronger industry funding with co-investment through a levy contribution by the whole of supply chain including farmers and processors.

- Drive greater reach and impact in marketing, health and nutrition work on behalf of the industry, trade and market access, commitment to sustainability.
- Ensure regional interests directly shape industry policy and advocacy

Organisational reform phases

To achieve the reform destination, the team is working to the following phases and timeline:

Organisational reform phases	Date
1 Exploring reform (work of the Joint Transition Team)	2019
2 Establishing the pathway to reform	
3 Industry and government engagement on reform challenges	
4 Design of reform operating model options	2020
5 Industry consultation on reform model options	
6 Industry vote on reform model and final outcome determined	2021

Given the complexities of dairy organisational reform and the need to consider broad views of stakeholders across the supply chain, an Organisational Reform Steering Committee was formed to oversee this in a coordinated and structured way.

This committee comprises two Directors from three of the Dairy Plan partner organisations – Australian Dairy Farmers, Australian Dairy Products Federation and Dairy Australia. The committee will guide the pathway to reform with appropriate consultation and a vote prior to recommending a model. Independence of this process will be key. To ensure this and draw on expertise outside of industry, Ernst & Young and former Meat & Livestock Australia Managing Director David Palmer will lead the coordination, engagement and design efforts. ■■

For more information visit www.dairyplan.com.au or request to receive regular updates by email contact@dairyreform.com.au

Subtropical Dairy Young Dairy Network update

Alicia Richters

Subtropical Dairy Young Dairy Network Project Supervisor



It has certainly been a year for the history books, but in the absence of face-to-face events, it has been great to see a number of Subtropical Dairy Young Dairy Network members embracing the availability of online activities over the past few months. With planning well underway for the year ahead, each of the regional Operational Steering Committees have taken the time to catchup and discuss their plans for the coming year, with a range of social and technical topic ideas being flagged. Some topics that have been suggested in northern NSW and south-east Queensland include an AI course and Healthy Hooves workshop. We will look to schedule these activities over the coming year as we navigate the changing environment and adhere to COVID regulations and guidelines across NSW and Queensland.

Along with face-to-face activities, we will be also offering some online Q&A sessions with our YDN. If you have any topics or speaker suggestions, please let your local co-ordinator know. Some topics already suggested include farm management technology and what you need to setup a business. We are also working with Dairy Australia to offer some national webinars and Q&A sessions, such as share-farming and leasing. As we navigate COVID restrictions, a range of social catchups will be organised, so keep an eye out for what is on offer for your region. These may be held closer to the end of the 2020-21 financial year.

We would also like to congratulate Anna Bevan, our Far North Queensland YDN Co-ordinator on the safe arrival of her son, Keaton. Whilst Anna is on maternity leave, Jo Srhoj will be helping out in the YDN role and is the key contact for YDN in the region. The Far North Queensland YDN group kicked off the resumption of face-to-face activities, recently hosting a Calf health discussion day, facilitated by local vet, Dr Gemma Chuck and Subtropical Dairy's Jo Srhoj. The group heard from the host farmers Greg and Bronwyn English, sharing their calf rearing story and experience. The group also went through how to tube a calf, take rectal temperatures and some practical tips for vaccinations.

We would like to thank our sponsors for their ongoing support for YDN again this financial year – BEC Feed Solutions and Dairy Express. They help make events possible for our network and we highly value their support.

If you would like to be more involved in the YDN, or alternatively have some younger staff that you would like to get involved, please contact Alicia Richters on 0427 916 650 or alicia@subtropicaldairy.com.au

We also have a number of closed Facebook groups for YDN members, so please get in touch to be added to these groups or have staff members added. ■ ■

AUGUST 2020

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Resilient Farm Systems Expression of Interest



Ruth Chalk

Project Officer Subtropical Dairy

There are still opportunities available to become involved in the Resilient Farms System Project. The major objective of this project is to look at strategic and tactical on-farm opportunities for Northern Australian dairy businesses located in the West Moreton, Darling Downs and South Burnett regions to improve their sustainability including financial, biophysical and social outcomes. The project is funded through the National Landcare Program and is being delivered by Subtropical Dairy & Queensland Department of Agriculture and Fisheries (QDAF).

A resilient farm can service its debt, pay its bills on time and in full, never runs out of feed in a drought and gets paid consummate for their time and skill level.

Benefits of Involvement

- Understand the impact of weather variability and future climate patterns on your business's financial and biophysical performance
- Identify and understand what the risks are in your business and how to manage them
- Understand financial impact of risks and strategies
- Identify aspects of your business that could be changed to improve its overall performance and resilience
- Develop action/s to make these changes
- Develop a multi-year feed budget, considering rainfall variability and irrigation availability
- Identify opportunities within your business to make significant improvements while also recognising associated risk
- A number of one-on-one consultations, with an experienced adviser to discuss the ongoing implementation of actions

	Resilience Framework Dashboard	Your Result	Risk Level	
Fiscal	EBIT (\$/cow)	866	Low	
	ROA managed (%)	4.8%	Low	
	Debt per cow (\$/cow)	2,986	Low	
	Operating cash surplus (c/L)	18.26	Medium	
Soil Productivity & Health				
Biophysical	Milk platform		Medium	
	Support area		Medium	
	Water Security			
	Rainfall reliability		High	
	Irrigation water		Medium	
	Overall water security		High	
	Herd Reproduction & Health			
Resource Performance	Average days in milk (all year)	174	Medium	
	200 day not in calf rate (T<19%)	19	Low	
	Average SCC (,000 cells/mL)	170	Low	
	Litres per hectare	15,533	Low	
	Stocking rate (cows/ha)	2.9	High	
	Forage consumed (t DM/cow)	5.13	Low	
	% of Forage consumed that is homegrown	79%	Medium	
	Production per cow (L/lactation)	7264	Low	
	MOFC (c/L)	31.8	Low	
	Human Resource	Litres per labour unit	466,103	Low
Cows per labour unit		64	Medium	
Staff Turnover			Low	
Risk Management	Climate outlook		Medium	
	Feed		Medium	
	Management risk (human)		Low	

Attitude	Medium
Skills audit	Medium

What's involved?

Senior advisors with an average of 20 years' experience in the northern Australian dairy industry will work with participating farms to assess the farm's feedbase, animal and fiscal operations, looking in depth at the soil productivity (soil health, condition and type), water security (both irrigated and rainfed systems), herd performance, feedbase production, human resources, financial performance and risk management to identify areas of opportunities and risks. Together with an advisor, farms will develop priority actions to assist in improving the farm's resilience.

A minimum of 3 on farm visits will occur with five (5) soil tests completed (2 paid by the participating farm) over a period of 12 months. The cost of soil samples is \$102 per test excluding GST.

Interested farms in the regions mentioned above are encouraged to lodge an expression of interest.

In order for advisers to provide assistance, participants are expected to agree to complete the following activities:

- complete some level of financial,

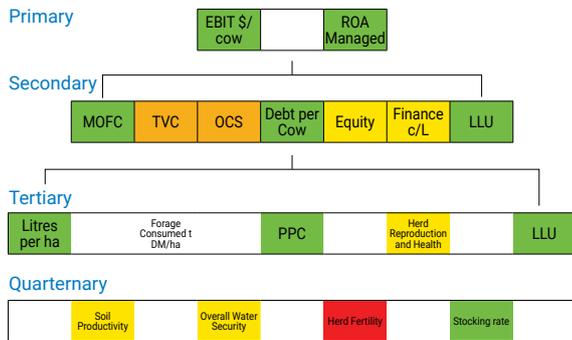
biophysical and technical benchmarking;

- look at options for business improvements;
- pay for 2 soil tests as part of the project (an additional 3 soil tests will be subsidised by the project);
- Monitor impact of priority actions.

If the expression of interest process is oversubscribed, applicants will be prioritised by the Subtropical Dairy Board Project Committee.

Example of A Benefit of The Program – Forage Scenarios

The management and performance of a farm's feedbase is a key profit driver. One of the single biggest crippling costs to dairy farming businesses in droughts is the cost of purchased forage. A key part of the framework is a forage scenario simulation. The farm's crops and/or pastures which are normally grown are overlaid with 8 different rainfall scenarios that span over a 5-year period. Combination of rainfall include 5 years below average rainfall, 5 years average rainfall and other variations of below average, average and above average rainfall over a 5-year period.



An example of an output of the project The diagram above shows an example of the map of KPIs including financial, biophysical and human parameters, and their link to primary business resilience indicators of Earnings Before Interest and Tax (EBIT) per cow and Return on Investment (ROA). The colours indicate the level of risk for the business for any KPI. Green has a low level of risk, yellow is medium, orange is high, and red is severe.

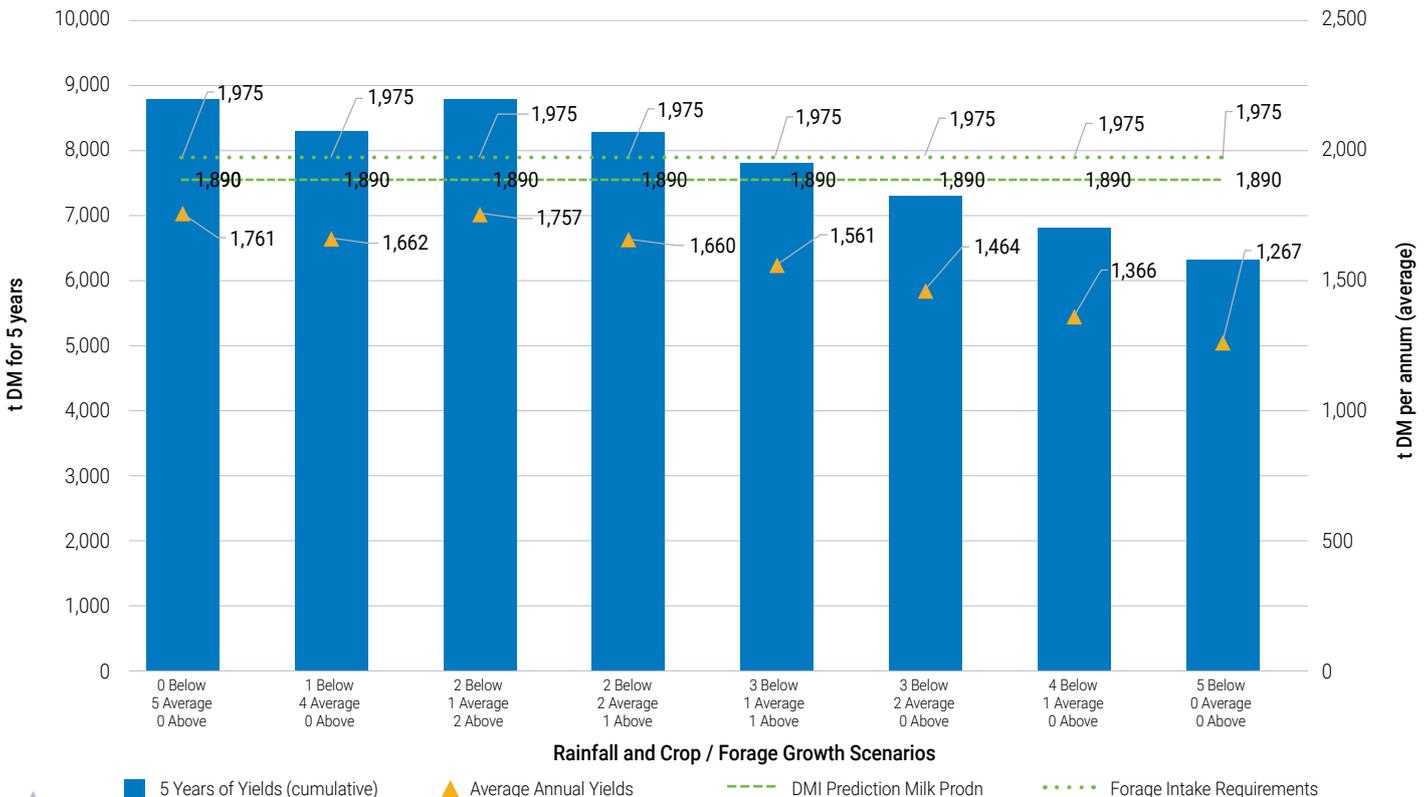
Involved Farmer Case Study #1

Through their involvement in the RFS project, one farms analysis identified that in 3 out of 8 scenarios forage production would not meet their herd's requirements. The analysis showed that under the worst-case scenario (5 years below average rainfall), an additional 3,000 tonnes of dry matter over 5 years would need to be purchased to meet forage requirements. This farm is now analysing the feasibility of a combination of scenarios to ensure long term feed requirements are met whilst taking into consideration feed price fluctuations during droughts.

Involved Farmer Case Study #2

The analysis of this farm showed a long-term forage gap. This business has always purchased silage due to lack of availability of suitable land and water to grow such crops. The analysis confirmed their shortage under the 8 different scenarios and quantified this as between 130 t DM per year up to 353 t DM per year in the worst scenario. The farm recently invested additional money to improve water security and have rented additional land where they have now set goals regarding homegrown forage production that will reduce their reliance on purchased forage.

Forage Yields Sensitivity Analysis Cows



The graph shows a combination of forage yields (tonnes Dry Matter (DM)) under 8 different 5-year rainfall combination scenarios. The blue bars show the cumulative yields for the 5 years. The yellow triangles show the 5-year average of the cumulative yields. The two green lines show two different DM intake predictions, one based on DM intake predictions from milk production and the other using predicted DM intake based on cow liveweight. The graph shows that in every year under these scenarios the farm does not have enough homegrown forage to meet their forage requirements. This varies from a shortfall of between 129-214 tonnes DM in scenario 1 to 623-708 tonnes DM in scenario 8.

Privacy

Subtropical Dairy and QDAF respects your privacy and the confidentiality of the information provided. Both organisations and the farm will sign a privacy agreement outlining the protection of the farm's information. ■ ■ ■

For more information contact

Ruth Chalk Project Manager 0418 877 190
Brad Granzin Subtropical Dairy Executive Officer 0431 197 479
Belinda Haddow Darling Downs and South East Queensland Extension Officer 0423 003 638

Regional Investment Corporation (RIC) loans offer alternative finance option for dairy farmers

Despite the difficulties coronavirus and the aftermath of bushfires and floods have imposed on communities, for dairy farmers the challenges of drought remain.

Forecasts of above average summer rainfall for Queensland and northern NSW have restocking and replanting back on the agenda.

That's where the Regional Investment Corporation (RIC) can help with long-term loans for those farmers looking for an alternative finance option.

Whether a farm business is still dealing with the effects of drought or looking at being better prepared for future dry times, the RIC has a Drought loan available to help farm businesses get back on their feet by slashing the interest they have to pay.

The loan, of up to \$2 million, enables farmers to deal with ongoing dry conditions, restock or prepare for future drought events and can be used to pay existing costs or as a source of capital.

Many enterprises are using the loan to free up cash flow over the medium term by refinancing existing debt and create some breathing space. RIC Drought loans can be used to refinance up to 50 per cent of eligible commercial debt.

Drought preparation activities can include upgrading irrigation systems, increasing on-farm water storages, investing in equipment and machinery to diversify fodder production and building additional fodder storage.



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Rumen Specific Yeast



*Saccharomyces cerevisiae CNCM I-1077

For applications received complete by 30 September 2020, the Drought loan offers two years' interest free with no repayments, which gives the enterprise breathing space to undertake recovery activities.

After two years, the loans become interest only for three years before principal and interest repayments begin.

For applications received after 30 September, a five-year interest only period will apply, followed by five years' principal and interest.

The current variable interest rate is a very competitive 1.92 per cent.

RIC Business Development Manager for Queensland and Northern NSW Craig Turner said no repayments for two years provided a significant boost to the bottom line but farmers needed to demonstrate the financial impacts of dry conditions across a two-year period, whether it be two years in the past, last year and this year, this year and next year or into the future.

An operation does not have to be in a state drought-declared area to qualify, however they must meet the RIC's eligibility guidelines - if the property is situated in a normally high rainfall area, it can still qualify as long as the financial impact can be demonstrated.

"Many dairy enterprises I know have reduced cow numbers and have had to buy in water and additional feed, the reduced production and increased costs all demonstrate the financial impact caused by drought," Mr Turner said.

Drought Loans are available to farmers for the purpose of drought preparedness at any time and Mr Turner said natural disasters and changes to market conditions outside the farm business' control could be considered impacts on income.

"As an example, a few years back some northern dairy farmers had to contend with flooding as well as dealing with significant changes to processor contracts, so these in conjunction with current and continuing dry conditions

provide the platform for borrowing for activities related to drought preparedness," he said.

There are no fees and charges and the repayment frequency is tailored to suit the needs of the business.

The RIC works with the farmer and their bank to help find the best solution for the enterprise, with repayments also structured to best support the business.

The RIC recommends applicants talk to their commercial lender for immediate working capital needs.

To apply, visit the RIC website, www.ric.gov.au/drought – applicants are urged to inform their current commercial lender if they intend to make an application and fill out the application in full to ensure it is assessed.

Those applying before 30 September should ensure they complete the checklist to qualify for the interest-free period. ■■



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**Farming Together
Starting Farm and Co-operatives Program**

The Starting Farm and Co-operatives Program Launches

During these uncertain times, the resilience of collaborative farming models, which reduce supply chain risk and improve bargaining power, are more important than ever.

So, it is with great enthusiasm that we launch the next phase of the Farming Together program - The Starting Farm and Co-operatives Program - and offer you some opportunities to get involved.

This program will build further on Southern Cross University's successful collaborative model which reached 28,500 primary producers under the award-winning Farming Together Pilot program.

Designed by farmers for farmers, the two-year program demonstrated the impact of a model that championed ground-up partnerships and worked with farmers to identify business needs. It paired appropriate expertise and funded business expansion projects as well as built a national knowledge network.

Funding for The Starting Farm and Co-Operatives Program

In 2020, the Australian Government, through the Department of Agriculture, Water and the Environment, provided Southern Cross University with funds to continue the work of the Farming Together Program. Officially called the Starting Farm and Co-operative Program, the funds will continue to help farmers, fishers and foresters to establish collaborative business models and co-ops to boost farm gate returns.

Get involved in some exciting new projects

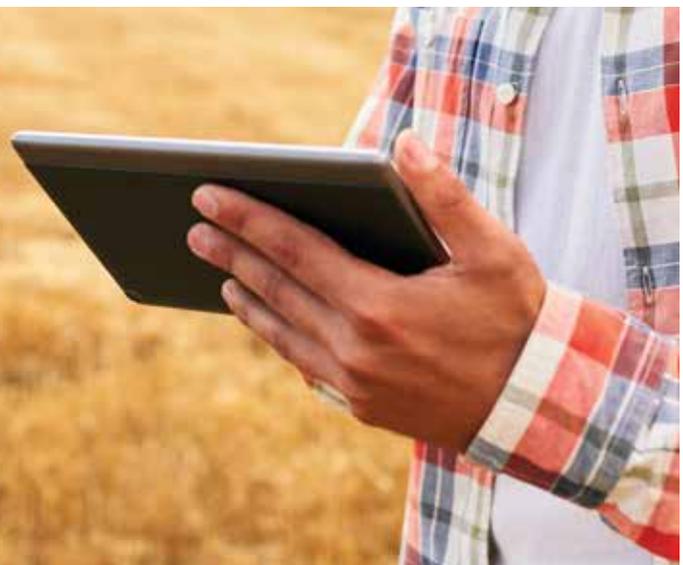
As well as building on our collaborative model and resources through Farming Together, we have some exciting projects that we look forward to working with you on. These include:

- Regenerative Agriculture: soil research initiatives which include potential research partnerships
- Restore Australia: a massive co-ordinated restoration project that supports land managers to increase productivity and resilience to fire and drought.

Co-operative Farming Hotline is now open

The Business Council of Co-operatives and Mutual (BCCM) has launched the Co-operative Farming Hotline, to support Australian farmers, fishers and foresters to work together to establish and grow farm co-operatives.

The hotline service will operate Monday to Friday (9am to 5pm) on 1300 665 174.



2020 Event Calendar

DATE	EVENT	REGION	LOCATION	CONTACT PERSON		
September						
1	Farm Safety Discussion Group – NSW and Qld – online	All SDP	N/A	Alicia Richters	0427 916 650	alicia@subtropicaldairy.com.au
2	You: The Key Stakeholder. Employer of Choice final of series with Nollaig Heffernan	All SDP	N/A	Bernie Baxter	0417 572 853	bernard.baxter@dairyaustralia.com.au
	www.dairyaustralia.com.au/events-calendar/event?sfid=7016F000002Xfye					REGISTER HERE
3	Healthy Hooves Webinar	All SDP	N/A	Belinda Haddow	0423 003 638	belinda@subtropicaldairy.com.au
	dairyaustralia.zoom.us/join/joinMeeting/joinMeeting/register/tJEudOyurzMuGtGB0X5RQa52t0jXndw12g8L					REGISTER HERE
9	Far North Coast NSW Discussion Group	FNC NSW	The Risk	Alicia Richters	0427 916 650	alicia@subtropicaldairy.com.au
10	South East Qld Regional Group meeting	SEQ	Beaudesert	Belinda Haddow	0423 003 638	belinda@subtropicaldairy.com.au
11	Combined Farm Safety Discussion Group (DD and SEQ)	DD and SEQ	N/A	Belinda Haddow	0423 003 638	belinda@subtropicaldairy.com.au
22	Cool Cows	FNC NSW	TBC	Alicia Richters	0427 916 650	alicia@subtropicaldairy.com.au
October						
14	Far North Coast NSW Discussion Group	FNC NSW	TBC	Alicia Richters	0427 916 650	alicia@subtropicaldairy.com.au
27	Downer Cow' Discussion Day	FNC NSW	Casino	Alicia Richters	0427 916 650	alicia@subtropicaldairy.com.au
28	Downer Cow' Discussion Day	MNC NSW	Bellingen	Alicia Richters	0427 916 650	alicia@subtropicaldairy.com.au
TBC	Cool Cows	DD	TBC	Belinda Haddow	0423 003 638	belinda@subtropicaldairy.com.au
TBC	Cool Cows	SEQ	TBC	Belinda Haddow	0423 003 638	belinda@subtropicaldairy.com.au
TBC	Cool Cows	SC	TBC	Kylie Dennis	0456 191 965	kylie@subtropicaldairy.com.au
TBC	Cool Cows	FNQ	TBC	Jo Shroj	0458 065 695	jo@subtropicaldairy.com.au
November						
3	Biosecurity Tool Workshop	MNC NSW	TBC	Alicia Richters	0427 916 650	alicia@subtropicaldairy.com.au
4	Biosecurity Tool Workshop	FNC NSW	TBC	Alicia Richters	0427 916 650	alicia@subtropicaldairy.com.au
23	Subtropical Dairy AGM	SC	TBC	Kylie Dennis	0456 191 965	kylie@subtropicaldairy.com.au



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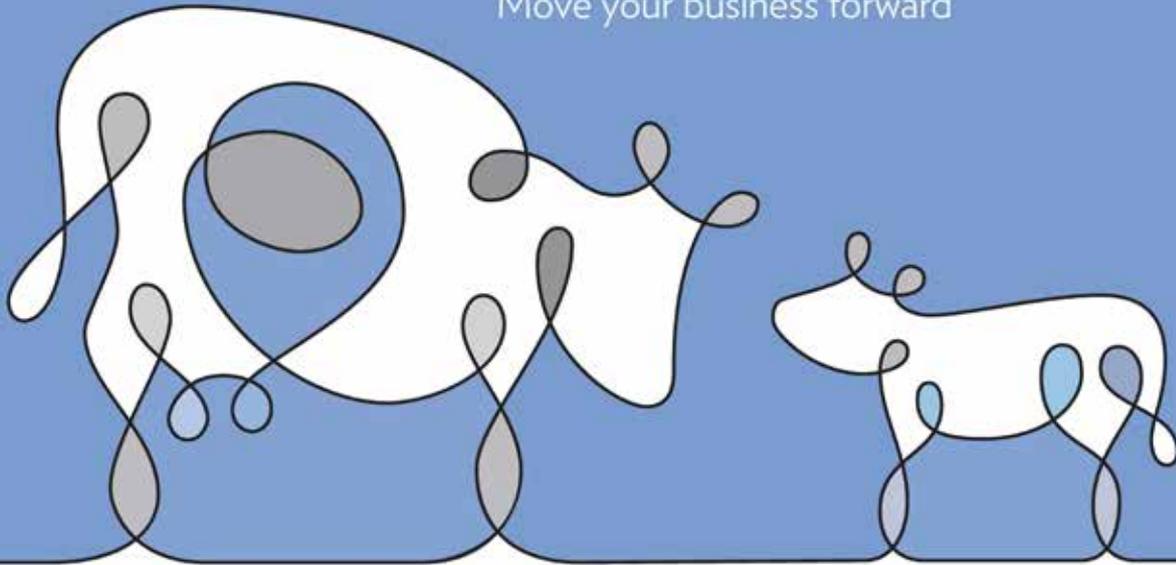
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<p>✓ CVD on Every Lot</p>	<p>✓ Simple Web Platform</p> <p>Offering delivered pricing (\$/tonne), comprehensive quality info & backed by personal support</p>	<p>✓ Account Management by our Expert Team</p> <p>Saves you time, expense worry & inconvenience</p>	<p>✓ Simple, Secure Written Contracts</p>

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Wandilla Holsteins, 450 Holstein cows
Leongatha North, Vic



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Ben & Melissa Holloway, 500 Cows.
Allansford; Western Vic



"We have been using the Jefo Solutions for Dairy for over 12 months and have seen some great results. Cows are Transitioning really well and Fertility is Fantastic. We will keep using these solutions."

Mark Dee, 430 cows
Clydevale Holsteins, Northern Vic



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Dalton Henriquez: 0475 301 123

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YOUNG DAIRY NETWORK PROJECT SUPERVISOR

Alicia Richters
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REGIONAL EXTENSION OFFICERS

SEQ/DD/ Burnett/CQ/SC

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Northern NSW

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Far North QLD

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