



DAF C4Milk team lead northern Australian dairy R&D for 2018-2022



Late last year, Dairy Australia funded the C4 Milk project (<http://dairyinfo.biz/>) for its third funding term. This time the project term is for five years (until mid-2022), as opposed to three years for each of the preceding project agreements. This longer term investment by Dairy Australia reflects the national benefit of C4Milk project R&D in farming systems outside of Queensland and northern NSW. Our northern farming methods and systems (especially in regards to partial mixed rations) (PMR) now have greater relevance to other regions such as New South Wales, South Australia, northern Victoria and Western Australia. Much of this transition is due to dairy businesses having to accommodate ongoing milk production growth with reduced water allocations and meeting pricing incentives for flatter milk profiles. Queensland and northern NSW are considered as the innovation leaders in Partial Mixed Ration (PMR) systems and we should be proud of our achievements in this area.

DAF has a reputation for conducting applied, contemporary R&D that can be readily adopted by industry. Over the last seven years, there has been considerable knowledge generated from the C4 Milk project refining the quality of crops we ensile like

maize, forage sorghum, grain sorghums, soybeans, lablab etc. The purpose of this research has always been about improving the quality of both pastures and crops with the dual benefits of increasing milk production while reducing diet costs, significantly

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improving margin over feed costs (MOFC) will enhance the future viability of dairy farms in the subtropical region.

In 2018, DAF will conduct two grazing trials and one development forage trial. The first grazing trial will start in mid-April with the aim of defining the ideal pre-grazing height of lucerne for milking herds. We anticipate the knowledge we gain from this research will have application to other pastures as well. The second grazing trial will use the optimal pre-grazing height range results from trial 1 as the basis to establish an optimal post grazing height range, to achieve the maximum intake. Both these trials are extremely important in being able to guide farmers on how to optimise pasture intake in milkers, not only in lucerne, but kikuyu, ryegrass and other tropical like setaria. On many farms, it is unlikely that cows are achieving pasture intakes of 6 – 8 kg dry matter per cow per day. We are confident that these new findings will allow us to recommend a new approach to the allocation of pasture, likely leading to intakes of 10 to 12 kg DM/cow/day from pasture. The increase in pasture intake, being the lowest cost feed in a diet will reduce the cost of the diet by potentially 30 to 40%.

DAF is currently ground-truthing the

new grazing management strategy called PUP grazing on a dairy farm in the Lockyer Valley. We initially started with annual ryegrass, and now are currently monitoring PUP grazing versus the current recommendations (traditional) grazing strategy on kikuyu. We are alternating rotations of PUP and traditional to assess the financial, pasture and milk production differences between the strategies. The Moreton and Lockyer-Brisbane Valley discussion groups visited the ground-truth demonstration in November 2017. DAF will create several other on-farm demonstrations of PUP grazing this winter using annual ryegrass in other regions. Ross Warren and Ray Murphy will run a series of grazing and irrigation management workshops across Queensland and northern NSW in late February and early March. They will introduce farmers to the PUP grazing concepts as part of this presentation.

There will be two open days planned at Gatton Research Dairy this year. The first in mid-May, during the first grazing trial, and the second in mid-September during the second grazing trial. These open days give producers a great opportunity to see the trials being conducted and discuss provisional trial results. DAF appreciate the

interest shown and comments received at these events.

The DAF C4Milk team are looking to get as many farmers involved in C4Milk activities this year as possible. It's an opportunity for producers to adapt results of trials or demonstrations to their businesses with the outcome of improved profitability. Ross Warren, Senior DAF Dairy Extension Officer, commented "If we convert producers to the new grazing strategy of PUP grazing this year, they will then be well positioned to benefit from the next series of trials to be held in 2019 and 2020."

The research Ross is referring to is aiming to show that when high quality silages are combined with high quality pastures, we can achieve an additive effect in total diet intake of a cow, rather than what is commonly expected, a substitutive effect, meaning the silage fed reduces the pasture intake. We think we are close to understanding and resolving this issue for both pasture and PMR systems. The DAF C4Milk team would encourage all farmers to join in and follow the trials, demonstrations and workshops as it's a fairly exciting time in terms of the development of "new farming strategies" for the northern Australian dairy industry.

