Dairying for Tomorrow Newsletter

December 2014

Keeping Cows Cool this Summer

Updated SMS heat alerts for dairy farmers: Now tailored in response to farmer feedback. Taking the best care of dairy farmer’s second most important investment, their cows, becomes even more important in the summer months when heat stress can severely affect production yield and cow health.

Cool Cows provides information for dairy farmers and their advisers to keep cows cool and reduce the effects of heat stress. “Dairy Australia has listened to feedback and Cool Cows has been refreshed and the alert service updated to include more options to personalise where and how often you receive your weather alerts, and can be customised to deliver forecasts for your exact farm location,” said Catherine Phelps, Dairy Australia’s Natural Resource Management Program Manager.

“The effects of heat stress include a drop in milk production, reduced herd fertility and lower milk protein and fat tests. During the 2014 January heat wave the average drop in milk production across Victorian herds was 15% (based on milk tanker volumes) and heat stress can trigger live weight losses and create animal health problems,” she said.

Dairy Australia’s free tailored weather forecast service sends an SMS directly to a farmer’s phone alerting of upcoming hot spells that could impact on the health and well-being of their herd.

About the newsletter

This newsletter is distributed bimonthly, and circulated electronically via email. We aim to include exciting and inspiring works that are being done nationally in the dairy on-farm NRM area. A copy of the newsletter can also be found on the Dairying for Tomorrow website www.dairyingfortomorrow.com.au

We hope you enjoy it, and feel free to circulate to any interested parties. Future contributions are most welcome and can be emailed to us - contact details at end of the newsletter.
“Any dairy farmer in Australia who registers with the service on the Cool Cows website receives site-specific weather forecasts and alerts of hot weather events specifically for their own farm, which they get by inputting longitude and latitude data describing their location,” said Dr Steve Little from Capacity+ Ag Consulting, a company working with Dairy Australia on the system.

Tips to reduce the impact of heat stress on milk production:
- **Anticipate high risk weather conditions.** These are periods of sustained high daytime temperatures, high overnight temperatures. (Make sure everyone on the farm can recognise the signs of heat stress: cows panting more than 60 breaths per minute, drop in milk production) and what action to take
- **Increase access to cool drinking water,** particularly at the exit to the dairy - in hot weather cows will drink 200-250 litres per cow per day
- **Provide access to shade.** The best way to help cows beat heat stress is to shade them from radiant heat
  - **Adjust milking times** to cooler parts of the day
  - If you have a sprinkler system – **use it.** For a sprinkler system to be effective and cost-efficient, without raising the risk of milk quality downgrades, aim to have the sprinklers on for 3 minutes then off for 8 minutes, using a moderate to large water droplet rather than a fine mist
  - **Provide cows with the highest quality pasture** available to graze overnight when they are cooler.

The Cool Cows website has detailed, practical information on cooling infrastructure. This information is also available in a booklet, “Shade, sprinklers and fans on dairy farms”. Free copies are available from Dairy Australia (Ph. 1800 655 441, enquiries@dairyaustralia.com.au) or download as a pdf from the Dairy Australia website.

Recent studies have also shown the negative impacts that hot conditions can also have on dry cows.
“Up until now we haven’t focused on the effects that heat can have on dry cows, but recent studies indicate there is quite an impact on the dry cow’s placenta and her developing udder, leading to reduced calf birth weights and viability, and reduced milk production in the next lactation. Farmers with autumn calvers should consider how much paddock shade is available over the hot summer months when they are dry.”

Dr Little said farmers should take advantage of the resources and tools on the Cool Cows website. “I would urge all farmers to make use of this fantastic resource by registering their farm for site-specific forecasts and alerts,” he said. Sign up here for the alerts it only takes a minute: [http://www.coolcows.com.au/subscribe.htm](http://www.coolcows.com.au/subscribe.htm)
Profitable Dairying in a Carbon Constrained Future

The dairy industry has committed to reducing the intensity of greenhouse gas emissions by 30% by 2020. That is, to reduce by 30% the amount of greenhouse gas that is produced per kg of milk solids.

The project Profitable Dairying in a Carbon Constrained Future has been designed to assist the dairy industry meet this target and over the past six months, the project has moved into full delivery mode.

The dairy industry is fortunate with respect to greenhouse gas emissions because good business management will reduce the amount of greenhouse gas emissions per kg of milk solids. Improvements in cow productivity, herd management, feed quality, reproductive efficiency, fertiliser management or energy use will all reduce the intensity of greenhouse gas emissions on a dairy farm; and take out references to the number of activities etc to date.

The project is focussing on 4 major areas:

1. Building the key message (ie that good management across all areas of the dairy business produces the best greenhouse gas outcome) into existing dairy industry programs and delivery channels.

2. Establishing a series of carbon/resource efficiency focus farms to help directly demonstrate the links between good dairy farm management and reduced intensity of greenhouse gas emissions. These resource efficiency focus farms have been (or are being) set up in NSW (Northern Rivers and potentially in the SE of NSW), the Murray Region (at Kyabram, Blighty and Gundowring), in Gippsland (Leongatha South), in WestVic (Mepunga East) and in South Australia (Blyth, Mt Compass, Meningie and Allendale East).

3. Delivering Fert$mart to dairy farmers. This program focuses on improving paddock by paddock fertiliser management on dairy farms. Nitrogen fertiliser is strongly linked to greenhouse gas emissions so any improvement in the efficiency of nitrogen use saves money & reduces emissions intensity on a dairy farm.

4. Developing specific information products to assist dairy farmers and the dairy industry more broadly to understand the strong links between improving dairy farm management (and dairy farm profits) and reducing the intensity of greenhouse gas emissions on dairy farms. The current products include:
   - A postcard that highlights the 6 main management actions on a dairy farm that improve productivity and profit while reducing greenhouse gases.
• A set of fact sheets (with scientist and farmer versions) covering an overview of greenhouse gases on dairy farms, diet management, herd and breeding management, and nitrogen fertiliser management. These are available at http://www.dairyingfortomorrow.com/index.php?id=30
• DairySAT, the dairy industry NRM self assessment process has been upgraded to include greenhouse gas challenges on dairy farms (available at http://www.dairysat.com.au/)
• DGAS (the dairy industry farm based greenhouse gas calculator) has been significantly upgraded to include not only as assessment of an individual farm’s GHG emissions, but also to allow the exploration of mitigation options in terms of costs, returns and reductions in GHG emissions (available at http://www.dairyingfortomorrow.com/index.php?id=47)

This project is funded by The Australian Government & Dairy Australia. For more information contact Amy Fay at Dairy Australia.

Fert$mart - a conduit for much more in the Manning Region, NSW

The newly developed NSW Fert$mart Advisor Program is hitting the mark with advisors who provide nutrient advice to dairy farmers of NSW. The Program has commenced in the Manning region, encompassing personnel from as far north as Kempsey and west to Gloucester, comprising nutrient advisors from Hunter LLS, North Coast LLS, private consultants and sales agronomists for Elders, CRT and Norco. The group of 12 gathered for two workshops provided by NSW NRM Technical Specialist, Marguerite White. The workshops assisted each advisor through the Fert$mart Planning Cycle to develop a Fert$mart “Tick” approved plan, each advisor then went on to work closely with two dairy farmers.
"It has been a great way to bring these people together for our region," provided Peter Beale, Senior Land Services Officer for Hunter LLS in Taree. “The Group has gelled instantly and are extremely keen to work together.”

Following the initial workshop, the Group organised to visit the Dairy Research Group at the University of Sydney and the Future Dairy Project, Camden. The Group were exposed to the nature of pasture trials and research, whilst others were able to compare the work of the research undertaken at Camden with the trial work conducted by their commercial companies.

The group plan to provide support to another project being conducted in the Manning region as a part of the NSW NRM Program. The Manning Nitrogen Feedback Farm is a two year project investigating the potential to grow more home grown feed during the traditional Autumn feed gap through more strategic use of Nitrogen. A trial has been designed, following the findings of a literature review, and will be established on the Oxley Island dairy farm of James Neal. As a way of providing ongoing input and feedback into the trial, a project support group comprised of local farmers and members of the Fert$mart Advisor Group, will meet at key points in the project to discuss results and debate approach. Having gained support from leading researchers in Nitrogen Use Efficiency (NUE) from across Australia, the Manning Nitrogen Feedback Farm Project will expose the local Fert$mart Advisor Group to the latest nutrient management science and research. The ongoing communication of new information and resources out to local dairy farms through these advisors will be a great outcome for the region.

Local CRT agronomist, Aaron Kemp believes there are some great opportunities ahead. “I’m really looking forward to all the advantages that bringing a group such as this together will create. We all know the local industry, but having the ability to discuss local issues with external experts and have the trial site to bring us all together more often to share technical information will be great.”

The NSW Fert$mart Advisor Program and the Manning Nitrogen Feedback Farm Project is being financially supported by the Australian Government’s Department of Agriculture, through the Profitable Dairying in a Carbon Constrained Future Project, Dairy Australia and Hunter LLS.

For any further information on either of these projects, please contact Marguerite White, NRM Technical Specialist for the state of NSW, on 0447 500 415.

Gippsland Giant Earthworm Field Day

The rolling hills of South and West Gippsland are not alive with the sound of music but rather the sound of gurgles made by giant earthworms going about their business underground. Most farmers are aware of these creatures on their land as they have heard them while working their farms or have seen the bloody entrails left when worm and excavator sometimes meet. They are treated with a good deal of reverence and pride by most landowners who know they are lucky to have them working away underground to help keep their soils fertile.

Two such landowners are Alan and Bev Gregg and Glenn and Wendy Duncan who have volunteered their properties at Poowong and Hallora as demonstration sites for the “Building Capacity to Manage Earthworm Habitat on Farms project”. This 18 month project, supported by the South Gippsland Landcare Network, DEPI, Dairy Australia and Melbourne Water, culminated in a field day held on 20th October 2014, showcasing two sites that demonstrate how to sensitively revegetate Giant Gippsland Earthworm (GGE) habitat.
Over 20 people attended the day with speakers including Dr. Beverley Van Praagh (GGE expert Invert-Eco), Nick Dudley (DEPI), Rob Waddell (Grand Ridge Nursery) and Nicole Walsh (SGLN). Eager participants learnt about the importance of soil moisture for the survival of GGE and how landowners are encouraged to modify their revegetation techniques around GGE colonies to help protect the soil moisture. The two demonstration sites were chosen to represent the most common types of habitat occupied by these worms; a wet, south facing hill slope and a creek bank.

After the presentations, the group boarded a bus and headed out into the sunshine to visit the first site on Mr Duncan’s (right) property which provided us with some hearty exercise and views of the surrounding landscape. This property has been in Mr Duncan’s family since 1939 but nothing prepared Glenn for events of 2011. After a wet winter and spring, followed by more rain in summer, an enormous crack appeared in a steep, south facing slope which preceded a major landslip described by Glenn as akin to a glacier moving down slope. Nick Dudley spoke of the mechanics of landslips that are a common occurrence in Gippsland and the challenges the group faced trying to stabilise the landslip with vegetation while protecting the soil moisture conditions around the three GGE colonies found at the site. Rob Waddell prepared the site by spot spraying and planted 8,500 plants, a major accomplishment given the topography of the site! Following the trial planting design, Rob explained how the areas occupied by the GGE colonies were left unplanted, while grasses and sedges were planted outside a 30 m buffer around the colonies, followed by standard EVC planting, including a larger number of trees to help with slip stabilisation. Good plant growth is already obvious after two months.

Alan and Bev Gregg’s family have farmed the district for almost 100 years and are proud to share their farm with GGEs. They have protected 1.1 ha of creek which provides a showcase for how to plant along creek banks that are home to GGEs. While no gurgles were heard, plenty of burrows were observed in the grey clay soil along the creek embankment.

While most people may never see a GGE, landowners like the Duncan’s and Gregg’s will still be able to hear the echoes underground on quiet meanders and know that they have protected a little piece of worm real estate.

Contributed by Dr Beverley Van Praagh, Invert-Eco.
Fert$mart Ticks Off In Tassie

Tasmania now has three agronomists with the Fert$mart tick – they have demonstrated they have the knowledge and skills to help dairy farmers with a 4R fertiliser program – right product, right rate, right time and right place. A clear program of what to put on when and where, based on the latest pasture, fertiliser and soil science research from around Australia. [http://fertsmart.dairyingfortomorrow.com.au/](http://fertsmart.dairyingfortomorrow.com.au/)

Seona Findlay from TasAgronomyPlus, Bill Cotching (independent soil scientist) and Luke Taylor (fertiliser agronomist) now have the Fert$mart tick. Dairy Australia is encouraging other agronomists to consider becoming Fert$mart advisors.

Dairying for Tomorrow Technical Specialist Rachel Brown says “Fertiliser is a big spend for dairy farmers and there is a lot involved in getting it right. Sometimes the easiest thing to do is same rate across all areas, every year….but that is not always the smartest thing. Chances are that you are missing out on production in some paddocks and simply wasting money on other paddocks. Fert$mart is aiming to provide farmers with practical recommendations for a targeted approach to optimise production in every paddock. Fert$mart also makes farms more environmentally sustainable, minimising leaching and volatilisation of fertilisers.”

Fert$mart involves regular soil testing of farm management zones, nutrient budgeting and strategic capital and maintenance fertiliser programs to achieve optimal soil fertility across the whole farm. Effluent is an important Fert$mart nutrient and is factored into the fertiliser plan. Fert$mart considers all site factors such as drainage, pH, soil structure, irrigation and pasture observations in the fertiliser plan.

Dairy Australia, with support from the Department of Agriculture Extension and Outreach program, is supporting a pilot of Fert$mart in Tasmania. Farmers must cover all soil testing costs and it is hoped that farmers using their Fert$mart plans this season will see the benefits and look to fully cover Fert$mart plan costs into the future. “Soil testing and having a good fertiliser plan is a small investment compared to the very significant dollars most dairy farmers spend on fertiliser.”
More dairy farmers will be getting the opportunity to become involved in Fert$mart. Fert$mart plans are completed for six farms in the Central North and underway for farms on King Island and in the Derwent Valley. More Fert$mart opportunities in other areas of the state are in planning. Contact Rachel Brown for further information 0409333381.

2014 International Year of the Farming Family

Twelve farming families from the South Australian Murray-Darling Basin including one dairy family, the Connors (right) from Mt Compass have been recognised for their hard work with the launch of the booklet “Celebrating farming families” and accompanying website and you-tube clips.

The booklet, a project of Natural Resources South Australian Murray-Darling Basin (SAMDB), features the stories of 12 farming families from the region.

SAMDB Natural Resources Management (NRM) Board presiding member Sharon Starick said "The board asked industry groups, our NRM Groups and local farmers to nominate families they thought stood out in their field—families who continually learn and improve their practices, produce high-quality food and fibre, lead the way in managing their land sustainably, and support their communities however they can." More than 80% of the land in the SA Murray-Darling Basin region is used for primary production from lamb, beef, pork and chicken to grain, fruits and vegies, wool, milk, wine and fish. "The vast majority of farms are family-run, with some farms being passed on to the fifth or sixth generation," Mrs Starick said.

The Connor family own and operate “Nangkita Hills” The farm has been in the family for about 80 years. Michael Jodie, and children Chelsea, Jake Teagan and Brad and Michaels mum Glenda all contribute to the farm.

The family were recognised for both the way that they encourage family members to explore and develop their skills across the farm enterprise as well as their efforts to improve the farm landscape. The Connors have partnered with the “Goolwa to wellington Local Action Planning Group to fence off swamp land that is part of the endangered Fleurieu Peninsula Swamps ecosystem. They have also been involved in Dairy Australia and DairySA programs including DairySAT, silage and twine recycling, and dairy shed energy audits.

The Connors understand that managing their natural resources benefits the environment and saves them money “It’s a business and environmental thing” said Michael “We all do training and go to conferences courses, and seminars to keep up with the latest information. We try to do the right thing for the environment” says Jodie.

Photo courtesy of the Natural Resources South Australian Murray-Darling Basin (SAMDB).
NSW Resource Efficiency Focus Farm

A new workshop model for delivering the key fundamentals and foundational understandings behind being a Resource Efficiency Focus Farm Support Group member was held in the Northern Rivers region in November. The focus farm for the project, owned and managed by Andrew Wilson and his partner Kelly Boyd, milk 250 predominantly Holstein cows at “Torokina” at Woodlawn, near Lismore. The Support Group comprises of 8 local farmers, Bill Fulkerson of Norco Milk, Local Land Services Officer, Nathan Jennings, and Andrew’s vet, banker and accountant.

The 2 day workshop was delivered by Marguerite White (Dairy Australia NRM Technical Specialist NSW) and Facilitator Phil Shannon (Shannon Farm Consulting). The workshop provided the background to encourage open group discussion about regionally appropriate farming systems and opportunities for the Wilson business to improve performance into the future. Participants were provided with a draft annual cash budget and business analysis for the Wilson business based on a preliminary analysis for the 2013/14 season using Taking Stock. Andrew has undertaken the DairySAT and has developed an Action Plan to be used in further discussion and consideration.

A 3rd meeting on farm in January 2015 will see the Support Group assess the physical aspects of the focus farm and undertake a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) to set priorities for the Support Group to focus on over the two year project life.

The Support Group instigated rigorous discussion from the outset, establishing a good foundation on which to move forward and consider the Wilson’s current asset and operating businesses, together with their future aspirations. Participants identified the following potential topics for the focus group to discuss:

1. Is it worth investing in individual feeding of cows to increase feeding efficiency (and profit?)
2. Can the business increase use of purchased feed and increase production and profit?
3. Can production per cow be increased profitably? (based on the 2013/14 draft business analysis).
4. Can the business improve profit by focusing on a better balanced diet to improve milk components?
5. Is there opportunity to improve Home Grown Feed production and consumption? This might involve trying alternative crops that provide a flatter feed supply, alternative crops that could increase HGF quality). It might also involve increasing the area of irrigation, or use of the available irrigation system.
6. Is there opportunity to improve the management of summer grass through more strategic use of urea in summer to conserve cheap good quality summer grass to reduce bought in feed?
7. Will the business be more sustainable if it does increase its exposure to purchased feeds?
8. Can the business benefit from a focus on managing cash flow and scrutinizing spending?
9. What is the ‘right’ herd size for the business?
10. Can profit be increased by a more strategic approach to nutrient use (this includes traditional fertilisers and the use of the farms effluent).
11. Is the farm layout OK?
12. Can we tighten up the 2013/14 annual business analysis so that we have a robust starting point for assessing the business position?
The Support Group members, together with both Andrew and facilitator Phil Shannon, were excited by the opportunities that will come for the wider industry in conducting the Project in the region. Farm open days and local reporting of Support Group meetings will provide ongoing insight into the decision making processes used by Andrew, together with his Support Group.

**ABOVE:** Left: Phil Shannon conducts a lively discussion on farming systems (Background: Charles Hope (Rabobank), Andrew Wilson (Focus Farmer), Andrew Jennings (LLS), Shane Smith (Dairy Farmer) & Bill Fulkerson (Norco Milk)). Right: Charles Hope (Rabobank), Andrew Wilson (Focus Farmer) and Glen Lees (Accountant)

The Northern Rivers Focus Farm is supported by funding from Dairy Australia, the Australian Government’s Department of Agriculture and the North Coast Local Land Services. Important stakeholders of the Project include the Sub-tropical Dairy Programme, Young Dairy Network, Far North Coast Dairy Industry Group and Norco.

*For further information please contact Marguerite White, NRM Technical Specialist- NSW on 0447 500 415*

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