



dairynews

ISSUE 21, WINTER 2012

BOVINE JOHNE'S - DISEASE UPDATE -

Dr Graham Bailey - Cattle Health Coordinator NSW
DPI Orange

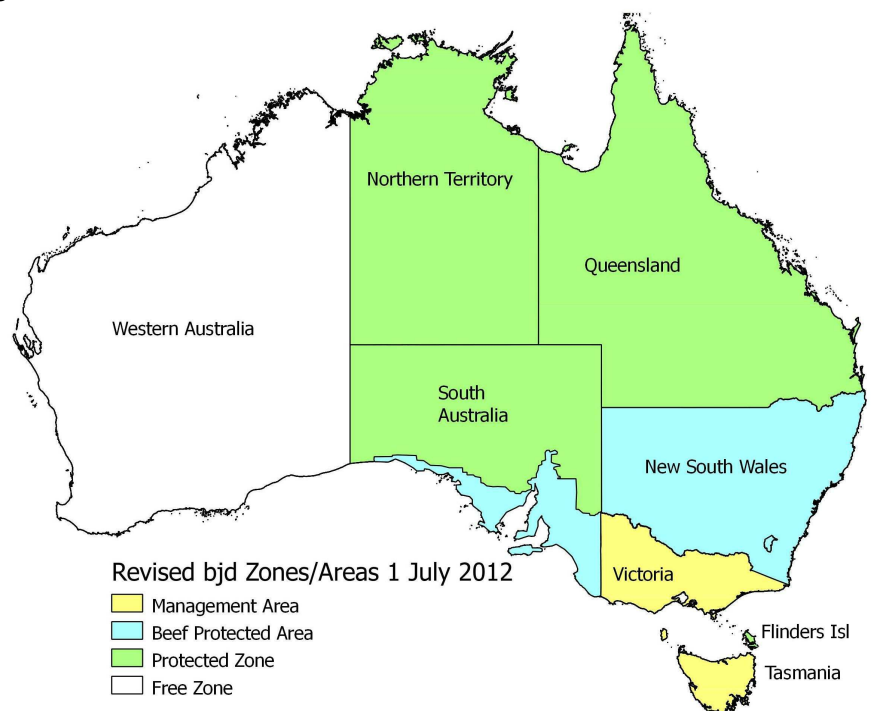
KEY POINTS

- Changes to the management of Bovine Johne's Disease commenced on 1 July 2012. These will see little change for NSW dairy farmers
- Buy only animals with a dairy score of 7 or higher when possible
- When cattle from a dairy holding in NSW are sold it is mandatory that a completed Dairy BJD Assurance Declaration Form accompany the cattle.
- When cattle from a dairy holding are purchased by a NSW dairy holding (vendor from NSW or interstate), it is mandatory the purchaser receive a completed Dairy BJD Assurance Declaration Form within 14 days.
- Exemptions to mandatory declaration of dairy score are in place for steers and bobby calves (entire male calves < 10 days age) - for more detail about movements and exemptions see

<http://www.dpi.nsw.gov.au/agriculture/livestock/health/specific/cattle/bjd>

- Know your dairy score - the higher the Score the lower the risk.
- Have a Biosecurity Plan for your operation (See Dairy Australia's *Dairy Biosecurity: Healthy Farms* booklet <http://www.dairyaustralia.com.au> and be aware of the BJD situation in your local area
- Use the Dairy Assurance Score, hygienic calf rearing and sound biosecurity practices to reduce the level of BJD and stop it spreading between properties.

The Dairy BJD Assurance Declaration Form is available from Animal Health Australia: <http://www.animalhealthaustralia.com.au/wp-content/uploads/2011/04/Dairy-BJD-Assurance-Declaration-form.pdf>



Primary
Industries



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EDITORIAL



Kerry Kempton

Technical Specialist Dairy

Our DPI dairy extension team has been busy over the last couple of months delivering eleven farmer workshops on Transition Cow Management (TCM) right across NSW. We have had nearly 150 farmers come along to the workshops, and a big range in the practices and experiences of managing their springers. For those who have been feeding a specialised transition diet for some time, it was an opportunity to finetune their systems, and troubleshoot some of the issues that occur around calving. For others, it was a lot of new information presented, and a chance to consider getting serious about doing things differently.

There are so many benefits from feeding a well designed and balanced transition diet, that it is one of the most effective strategies to boost productivity and profit. Not only will you minimise the risk of cow health issues at calving, such as milk fever, retained foetal membranes, difficult births, calving paralysis, ketosis and mastitis; but you will have cows with well developed rumens to cope with grain feeding when they enter the milking herd. This will reduce acidosis, help with minimising weight loss, and eventually mean cows get back in calf more easily.

In this issue you will find out how Mike Jenny and Ben Hurrell from Comboyne manage their

springers, and what they learned by attending a TCM workshop.

Delivering these days was a really good demonstration of how good information gets from Dairy Australia funded research down to farm level. In this case, a technical review of TCM knowledge and practices and research was done; the workshop and resources were developed by the Incalf and Feed2 Milk project teams; and NSW DPI extension team organised and delivered the workshops in conjunction with specialist vets and nutritionists. A great example of how your levies come back to you through collaboration across service providers.

Talking with farmers about TCM reminded me that most of the managerial challenges on a dairy farm are multi – faceted, that is there are many things to consider to achieve a good outcome. You are working with a complex soil and plant biological system, which interacts with a large ruminant animal biological system, being managed by complex human beings, all in a variable climate that regularly throws up extreme weather events. The dairy farm manager nearly has to have superhero powers to keep it all running!

The role of extension people is to bring new ideas and innovations to farmers, but also to refresh and reinforce the basic principles and practices that can sometimes be forgotten.

On another matter, are you a little confused about “Dairy Connect” and what it is?

As reported several times in Dairy News, the Dairy Connect website was set up in July 2011 [www.dairyconnect.com.au] to be a calendar of dairy events for our industry. It was established by DPI and has been managed by us, with Gaylene Marquet as the Coordinator. The website is going strongly, with an average of 35 or 40 events posted each month, and over 165 members receiving regular fortnightly emails with a list of coming events. If you haven't been to the website, I recommend you do and keep in touch with what's coming up.

Dairy Connect Ltd is the newly formed representative body for the dairy industry value chain in NSW. The goal is for Dairy Connect Ltd to become the single point of contact for government and industry in NSW. Their website is www.dairyconnectnsw.com.au . See the box on page 5 of Dairy News for more information from the consultant CEO Mike Logan.

I hope you enjoy the winter edition.

BJD UPDATE.....continued.

Bovine Johne's Disease (BJD) is a chronic bacterial disease that causes wasting and ultimately death of affected cattle. On 1 July 2012, changes in BJD control came into effect. Following a long period of consultation between the cattle industries and state and territory governments, Australia has reaffirmed its commitment to protect the north and west of the country and the beef and alpaca sectors from BJD, while allowing dairy and goat producers greater control over how they manage the infection in their herds.

Management Areas

Recognising that BJD is endemic in the south-eastern dairy population, Victoria and Tasmania will be reclassified as Management Areas. In these areas, the dairy industry will continue to encourage dairy producers to voluntarily prevent and control BJD through calf-rearing to reduce the incidence of new infections within herds and using the National Dairy BJD Score to source high-score, low risk replacements.

In all areas, the JD Market Assurance Programs will continue to be supported for breeders who want to assure themselves of their herd status and provide a high level of assurance to their clients.

Beef Protected Areas – NSW and South Australia

For dairy farmers in NSW, the changes will have little impact- the significant changes occurred in 2008. However for beef producers this will see:

- **Removal of zones**- Currently 2 zones are in operation-
 - Control zones- southern SA and parts of NSW (north and south coast and Riverina).
 - Protected Zone- remainder of NSW
- **Replaced by the Beef Protected Area (BPA)**-within the BPA there will be a separate dairy compartment (farms that supply milk to a dairy factory including any land the cattle run on). Unlike zones which

are lines on maps drawn to reflect state, local Government or other boundaries, the dairy compartment will be a patchwork of dairies scattered throughout the BPA. For movement (intra and interstate) and other purposes where BJD is considered, the removal of zones from NSW will mean that location within NSW will be irrelevant. Quarantines will continue on infected and suspect beef farms.

Control Zones were described a decade ago, reflecting the high number of dairy farms in those districts. However trading patterns indicate that as a general rule, dairy and beef farms are separate enterprises. The BPA has been established because beef herds in the former control zones generally have a very low prevalence of infection, whilst there is a low prevalence of infected dairy herds in the dairy population.

The new BPA aims to separate beef and dairy enterprises so that the different levels of risk can be managed, so it is critical that separation of dairy and beef herds continues. There will be increased advisory and extension messages targeted at beef producers. This message was developed in 2008 with the commencement of risk based trading in the dairy industry. This will tell beef producers what they should be doing to protect against the introduction of BJD from dairy farms (roughly 10% of dairy farms in NSW are known to be infected whereas only 0.06% of beef farms are infected). If you have a dairy and sell females that are purchased as vealer mothers, you should expect more questions about the health status of your herd.

Farmers have responsibility for on farm Biosecurity and the last decade has seen regulation being replaced with education as farmers assume greater responsibility for managing the risks of BJD and other diseases. Most disease arrives on farm with the purchase of one or more infected animals that may look healthy and normal.

Johne's disease is a slowly developing infection that demands a long term perspective and very careful and sustained management. By the time it is detected on farm, it is likely to have already caused income loss. To stay in business a farmer may have to focus on short term and

day-to-day farm operations. However taking time to assess the risk of introducing John's disease can save problems in the future. Farmers need to use the Dairy BJD Assurance Declaration Form and ask questions of agents and vendors to ensure they manage the risk of introducing a disease that could affect the health and production of animals on their farm. In relation to BJD, introducing cattle with a dairy assurance score of less 7 is the critical

factor. Farmers should be aware that dairy score 0 does not mean nil risk- it simply means there has been no assessment of the risk of infection. As roughly 1 in 4 Victorian dairy farms and 1 in 10 NSW dairy farms are known to be infected, buying Dairy Score 0 cattle means you could be introducing a problem.

TEAM EFFORT AT COMBOYNE FOR MANAGING TRANSITION COWS

Kerry Kempton

Technical Specialist Dairy Total

When DPI dairy officer Ray Johnston delivered a Transition Cow Management workshop in Comboyne, one farm brought ten people along to the day. They were all part of the team from the property of Michael and Jenny Hurrell which they run with their son Ben.

"We thought it was really important for everyone on the farm to understand the importance of feeding the springers, to make sure they get it right. Plus they all were keen to come along, so we made it a team event", said Ben. "We used to feed the lead feed out manually by the bag, but it was hard work and a chore that no one liked doing much each day. So we devised a new system and now it works really well."

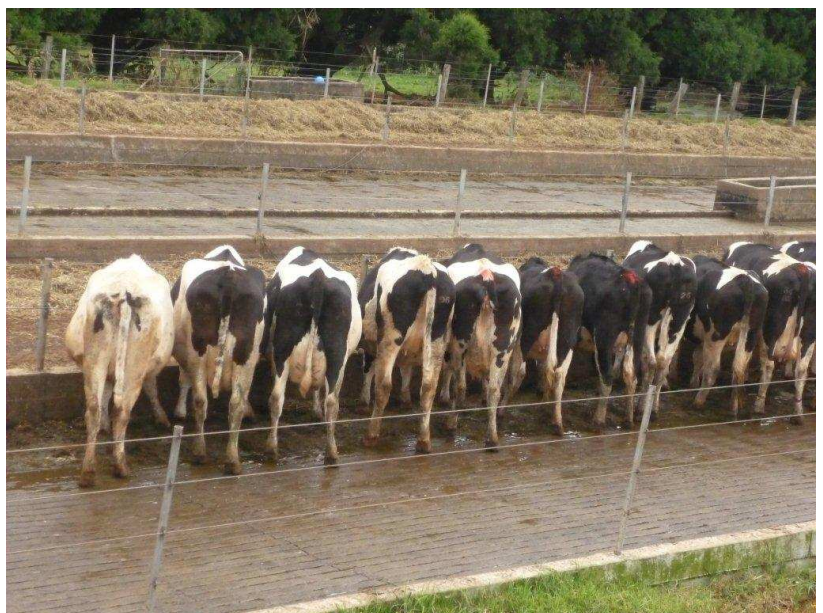
Managing the springers now involves four paddocks and the concrete feedpad. The cows are brought in from the dry paddock at least three weeks before they are due to calve.

They have access to a strip of fresh pasture each night, and during the day they walk down a gravelled laneway to the feedpad where they receive oaten hay and a custom mix of 3-4 kgs per cow of grain and minerals.

The Hurrell's made a grain bin for the springer mix that can be towed by a quad bike. The bin is filled up by augur from a silo, driven to the feed pad and fed out with the pull of a lever. "It has made the job so much easier," said Mike Hurrell, pictured next page with the feed bin.

The TCM workshop reinforced a lot of the knowledge and practices that the Hurrells were already using, especially the importance of knowing what's in the feeds used for the springers.

Below: Springers eating their ration on the feedpad.





"We get a feed test on all our hay, and only buy low Potassium (K) hay with a low DCAD value. I learnt that I can balance out the whole diet and use the Diet Calculator to assess the risk of the ration for milk fever, so I don't need to worry so much if one component of the diet is not quite right." Ben Hurrell

The workshop was really valuable for the other farm employees to understand why it is so important to calibrate the amount of grain going into the bin each day; and to change the amount as numbers change in the springer paddocks, so that each cow receives the right amount.

At present, Mike is feeding 110 springers, so having the feedpad available has cut down on wastage of feed, and ensures all animals receive their share. Heifers are run with the cows, which helps them socialise with the herd and get used to walking on concrete before they enter the milking herd.

According to Ben, by strip grazing the springer herd around four paddocks with ryegrass pasture, the cows are calving onto clean grass pasture rather than an overworked and muddy area. The other advantage is that the springers are eating a pretty similar diet to the milkers, with green grass, grain and hay.

"So we are finding we are getting rumen development and adaptation more quickly. After calving the cows reach a higher peak milk production in a shorter time than before. Auto-feeding in the dairy also allows the grain ration to start lower and be ramped up over 4-6 weeks."

So, our farm team got a lot out of the workshop, and we are really confident now that we can manage that transition period well and keep the risks of

health problems low.

For more information about Transition Cow Management, contact your nearest DPI dairy officer.

NSW DAIRY CONNECT
Our industry. Our team.

Mike Logan Consultant CEO for Dairy Connect Ltd.

Dairy Connect Ltd is the new representative body for the dairy industry value chain in NSW. The goal is for Dairy Connect Ltd to become the single point of contact for government and industry in NSW. The steering committee has been travelling up and down the State having meetings with as many people as possible to explain the idea. We have been getting an overwhelmingly positive response.

We are currently developing a website that has some information on it already. Have a look at it at www.dairyconnectnsw.com.au or contact us by email on mike@opco.com.au. We are also going to be at the Dairy Symposium at Camden on July 4th to give an update.

RAIN AFFECTED MAIZE CROPS

Brett Davidson

Livestock Officer Dairy, Deniliquin



Water laying in a maize paddock in Blighty.

A number of southern Riverina dairy farmers grew maize crops this year, to capitalise on the good water availability, and to build up reserves of good quality silage. Little did they know that the region would cop up to 350 mm of rain in late February and early March, causing significant flooding.

The maize crops were mostly close to maturity and nearly ready to harvest; some paddocks had been harvested and were covered in a stack, some were still to be covered. There were some crops that sat in water for up to three weeks waiting for conditions to dry out enough to harvest. With all the water laying on the paddocks farmers were really concerned that the crops could be completely lost due to the effects of such a period of inundation

Getting the moisture content right for making silage caused problems at harvest, with the crop at the top on the irrigation bay drying out quicker than the crop at the bottom. This made the decision to harvest a challenge.

Too early and machinery would get bogged or make a mess of the paddocks. Too late could mean moisture contents too low for the stack to compact and ensile properly. Some farmers had to lift the cutting height of the crop at harvest to avoid mouldy and rotten bases of crops.

In order to better understand how these wet conditions affected the finished product, we took ten samples from silage stacks and sent them off for feed tests. The results were actually better than expected, with silage quality coming in at levels you would see in a normal season. Energy levels ranged from ME of 10.2 up to 11.3 MJ/Kg DM; Crude Protein was 5.0 to 7.2 %; and NDF levels were 40 – 46 %. All stacks tested except one have ensiled properly with pH below 5, indicating good fermentation has occurred.

Yields were down in most cases, and there may be more wastage around the edges of the stacks due to moisture seepage; but most crops came through the wet and very few crops were lost altogether.

Those poorly compacted stacks that may not have ensiled adequately, or stacks that were not covered before it rained, are best fed out first and quickly, to minimise the potential losses.

The cost of the flooding will be ongoing, but at least the maize crops have made good quality silage, albeit with some having higher losses at harvest.

Topfodder Silage and Hay workshops

Farmers are urged to look out for the Top fodder refresher days that are being run around the state, starting in July. Neil Griffiths from DPI NSW will deliver the days, covering:

10 step silage checklist; hot hay; health and safety issues; inoculants; wrap recycling; feed quality; and much more.

Visit www.dairyconnect.com.au for details.

Funded by Dairy NSW.

WHEN MILK FEVER REALLY ISN'T!

Julie Dart

Dairy Livestock Officer, Coffs Harbour

At the Transition Cow Management workshops held on the North Coast in May, some farmers reported problems with late lactation Milk Fever.

Milk Fever (hypocalcaemia) is a metabolic disorder that occurs when there is a rapid fall in blood calcium levels, usually within 72 hours of calving.

One of the key messages in the Transition Cow Management workshops is that milk fever can be significantly reduced by feeding cows a specially formulated diet in the 21 days prior to calving.

"Late lactation milk fever" is a completely different beast and can be one or more disorders. In most cases it's Grass Tetany (hypomagnesaemia) - low blood magnesium (Mg). In some cases acute low blood calcium can be caused by oxalates in some tropical pastures (oxalate induced hypocalcaemia).

Grass Tetany

In the simple form it is a deficiency of magnesium in the diet.

The more complex form is caused by excessive levels of other minerals such as Potassium (K) in the diet that interfere with the uptake of magnesium and subsequently calcium. We usually see the complex form on the North Coast

Other factors that can be involved include:

- Age of the cow- older, lactating cows are more vulnerable
- Feeding grass dominant pastures or cereal crops at an immature growth stage
- Acid soils in south western NSW with limited Mg availability
- High K soils and pastures
- A cold snap or overcast weather followed by good weather.
- Heavy Nitrogen or Potassium fertiliser use

- Anything that reduces feed intake (stress, feed shortages, advanced pregnancy, yarding & transport)

Often the first sign of a problem is finding dead or down cows in the morning. Scrape marks may also be found near the dead animals feet as a result of leg paddling movements.

In the early stages of the disorder cows are excitable, "crazy", may have a stiff walk, are twitchy and have muscle spasms (tetany). They are difficult to treat at this stage as they are hard to restrain and may have seizures when handled.

As the problem progresses cows go down. It's at this point where the confusion with milk fever often comes in. Blood plasma testing results often show low calcium levels in combination with low magnesium. In these cases some typical milk fever signs may be present.

Initial veterinary treatment is with IV Calcium/Magnesium packs and subcutaneous injections of magnesium sulphate solution. Prompt treatment is critical and extreme care must be taken when IV calcium therapy is used. Treated animals must not be disturbed until recovery as excitement can cause further seizures and death. Affected animals should also have dietary magnesium supplementation to prevent relapse.

Magnesium supplements in the diet can help prevent grass tetany. The addition of Magnesium Oxide (Causmag) into the diet is an important management tool on farms where high K pastures can not be avoided. Magnesium oxide is not palatable and cows will sort it out of their feed if they can. It is best incorporated into a partial mixed ration or can be added to a manufactured dairy pellet with a flavouring agent.

Use of magnesium sulphate (epsom salts) in stock water may be effective when water access is controlled in troughs. Any supplementation programme should ensure that all cattle consume the recommended dose of Magnesium. Consult your vet or nutritionist.

Some tropical pastures such as *Kikuyu* are naturally high in potassium. The potassium

levels increase further when grown on high potassium soils. Grass tetany has been seen when cattle graze kikuyu pastures growing on an effluent re-use area, or on the site of an old laneway, often in combination with recent use of nitrogen fertilizers.

The addition of legumes to the pasture mix can help reduce the risk of grass tetany by providing an alternative magnesium source.

Paddocks with acidic soil and low Magnesium levels can be treated with dolomite (calcium magnesium carbonate), but the response time is slow.

Cows in their transition period prior to calving should not graze high potassium forages.

Oxalates and hypocalcaemia

Other pastures such as *Setaria*, *Sorghum* and *Kikuyu* are also naturally high in oxalates that can interfere with calcium availability. Oxalate induced hypocalcaemia most frequently occurs on *Setaria* pastures. It often occurs when cattle that have not grazed *Setaria* for some time are re-introduced to it, and the regrowth is short and lush. These animals show classical milk fever symptoms, but at the wrong end of the lactation.

Rumen microbes can adapt to process the oxalates, but it takes time. If high oxalate pastures are part of the feedbase, then ideally cattle should eat a small portion each day to retain the microbial population in the rumen. Treatment is the same as for milk fever.

If your herd experiences Milk Fever type symptoms in late lactation, a team approach is best used to correct it. Your vet is the first point of call. Follow up with an agronomy check. Use both soil and feed testing to identify high risk paddocks and feeds. Follow with a nutrition advisor to correct any dietary issues.

For more information on Grass tetany and other metabolic diseases, there are some Primefacts on the DPI website.

<http://www.dpi.nsw.gov.au/> then search for Grass tetany in cattle

Know your duty of care

Workers and others at the workplace have a duty to take care of their own safety and to ensure that their activities do not affect the health and safety of others, under new, nationally uniform legislation being introduced from this year. The duty of care also applies to contractors and volunteers such as LandCare groups working on the farm.

The duty of care involves providing and maintaining a safe work environment, safe systems of work, safe plant and structures and the provision of health and safety information and instruction.

In practice this means that duty holders must identify potential hazards at the workplace and take positive steps to eliminate them or, if this is not possible, to minimise risk.

Dr Pauline Brightling who manages Dairy Australia's The People in Dairy program said dairy farmers need not feel daunted by their work health and safety obligations.

"Most dairy farmers want to provide a safe workplace. Sometimes the challenge can be working out where to start. It's actually easier for dairy farmers than many other workplaces because there are a range of checklists and tools available on the web that have been custom-developed for dairy farms," Dr Brightling said.

Checklists, tools and more information are available from www.thepeopleindairy.org.au.

Click on live library; farm policies & systems; health and safety risk.

For more information contact The People in Dairy ph (03) 9620-7283

NSW DAIRY FARMERS EMBRACE ENERGY EFFICIENCY PROJECT

Kerry Kempton

The Dairy NSW Energy Efficiency Project (DEEP) has been running for 3 years now, and a large number of NSW dairy farmers become involved. To date over 600 farms have had an energy audit performed on their milk harvesting and storage processes, which is well above the expectations of the project.

By completing an audit and identifying opportunities to save energy and water, save money and become more efficient, farmers then become eligible to apply for grants of up to \$5000 from the NSW Government under the Energy Efficiency for Small Business Project.

The table below is a summary provided by Project Coordinator Dr Jess Jennings, on savings made through the project by dairy farmers.

EESB – Dairy Statistics		
	Total	Per business
Total registrations	634	
Total subsidy applications	192	
Total complete applications	152	
Retrofit rate	24%	
Total subsidies paid	\$594,079	\$3,908
Savings from subsidy actions		
\$ Cost savings	\$253,098	\$1,665
energy savings (MWh)	1205	7.9
GHG savings (tCO2-e)	1277	8.4
Savings from low & no cost items		
\$ savings from low & no cost actions	\$301,277	\$475
energy savings (MWh)	1369	2.2
GHG savings (tCO2-e)	1452	2.3
Total Savings / annum		
Cost \$	\$554,375	\$874
Energy MWh	2574	4.1
GHG tCO2-e	2729	4.3

The data shows that the 634 dairy businesses that have joined the project, have made more than \$554,000 worth of energy savings over a year, and reduced Greenhouse Gas emissions by 2729 tonnes of CO₂ equivalents.

This is great news for the bottom line for farmers, as well as a positive move for the environment. With energy prices set to continue to rise, there is increased incentive to invest in energy saving technologies.

On the next page you will find a case study of one couple who have reviewed their energy consumption and made decisions to modify their machinery to save power. The Frasers were part of the Efficient Use of Energy Water and Nutrients (EWEN) project run by the Midcoast Dairy Advancement group.

The majority of the energy audits in NSW have been performed by Nick Bullock and Associates. You can find more information about other farm case studies on their website: www.nickbullock.com.au

If you have not yet had an energy audit done on your farm, it is not too late. The project has been extended until the end of 2012. So contact Jess Jennings for more information: Ph 0423 224750.

Dairy Technology and Innovation Day

Total Agricultural Centre

Thursday 19th July 2012

9.30 am until 3.30 pm.

Exhibitors include:

- ❖ DeLaval Voluntary Milking System – robotic milker
- ❖ Dairy Futures CRC – latest research
- ❖ Energy Guys – Nick Bullock
- ❖ Solar power, Refrigeration, Pumps
- ❖ ADHIS, Dairy Express, Genomics
- ❖ Much more.....20 exhibitors.

Contact Kerry Kempton for more information. 02 49398945

Case Study: Michael & Wendy Fraser

At a Glance

Michael and Wendy Fraser took part in the EWEN program and were able to make substantial energy and costs savings in their new dairy. These included a new hot water system that heats on the cheapest overnight tariff and a valve in the milk line that improves the efficiency of the plate cooler.

The major savings were made by installing a variable speed drive (VSD) on the milk vacuum pump. Energy consumption on the vacuum pump has been reduced by 65% with a saving of more than \$1,700 off the power bill each year. With a DECCW grant the VSD will pay for itself in less than two years.



Michael & Wendy Fraser

Background

In April 2009, Michael and Wendy Fraser were milking 140 cows in an 8-stand walkthrough dairy near Gloucester. Plans were in place to build a new 20-aside swing-over herringbone shed and expand the herd to 180 cows. Michael and Wendy were keen to reduce costs and greenhouse emissions in the new dairy and wanted to know more about energy efficient equipment that would reduce electricity consumption.

Michael and Wendy took part in the EWEN energy audit which monitored electricity use and identified ways of reducing kilowatt hours (kWh) in the dairy. The audit also made them eligible for a maximum rebate of \$5,000 through the NSW DECCW Energy Efficiency for Small Business Program.

Energy - Savings in the Dairy

Benefits

The audit identified three opportunities for saving energy in the new dairy with the water heater, the milk plate cooler and the vacuum pump.

1. **Water heater** – Michael installed a new Wilson “rapid flow” hot water heater. This heater has the capacity to heat the full daily requirement of hot water for the plant wash on the cheapest overnight Controlled Load 1 tariff.
2. **Plate cooler** – A butterfly restriction valve was installed in the milk line. This saved on milk vat cooling costs by better maintaining the required 3:1 water to milk ratio across the plate cooler.
3. **Vacuum pump** – A variable speed drive (VSD) was installed on the new lobe (blower type) vacuum



Michael & his Variable Speed Drive



CARING FOR OUR COUNTRY



Industry & Investment



Australian Government
Department of Agriculture,
Fisheries and Forestry

Continued from previous page

pump with an estimation that it would reduce power consumption by 50%.

Without the VSD the 9 kW motor on the pump would be running at full load and draw 37 kWh/day. This would add up to 13,500 kWh each year at a cost of \$2,650.

The VSD replaces the regulator as it adjusts the speed of the motor to maintain a constant vacuum pressure. As part of the EWEN monitoring program, the electricity usage of the vacuum pump with the VSD was measured for 11 milking sessions over 6 days. The average usage was 12.9 kWh/day, a 65% reduction in energy compared with the vacuum pump without the VSD.



The bottom line

The 65% reduction in energy costs on the vacuum pump will save Michael and Wendy approximately \$1,720 each year.

The purchase and installation costs of the VSD totalled \$5,000 which will be paid back in 2.9 years in energy savings alone or less than 1.5 years with the DECCW rebate.

Facts and Figures

Comparative figures for the milk vacuum pump with and without the VSD.		
<i>Monitoring took place during 11 milkings over 6 days. Without the VSD the vacuum pump is rated at 9 kW with a 90% efficiency factor.</i>		
	Without VSD <i>(Estimated)</i>	With VSD <i>(Monitored)</i>
Total running time (hours)	25.12	25.12
Power usage (kW/h)	8.1	Variable depending on load
Total power used (kWh)	203.4	71.0
Power usage / milking (kWh)	18.5	6.5
Power usage / day (kWh)	37.0	13.0
Power usage / year (kWh)	13,505	4,745
Power cost / year (@ \$0.1962/kWh)	\$2,650	\$931
Costs saved / year	Nil	\$1,719

For a full list of coming events across the NSW dairy industry, visit the Dairy Connect website and register to receive fortnightly updates.

Or call the Coordinator to arrange to have the coming events faxed to you.

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NSW DEPARTMENT OF PRIMARY INDUSTRIES – CONTACT DETAILS -

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		Peter Beale – District Agronomist	0427 007 468
BERRY	Ph: (02) 4464 6000	SCONE	Ph: (02) 6544 4900
Vicki Timbs – Livestock Officer Dairy	0427 107 058	Sheena Carter – Livestock Officer Dairy	0427 102 798
Amanda Britton – District Agronomist	0427 102 793		
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Bede Clarke – District Agronomist	0427 102 314	Kerry Kempton – Technical Specialist Dairy	0427 114 602
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