

INSIDE:

PADDOCK IN A CAN

3

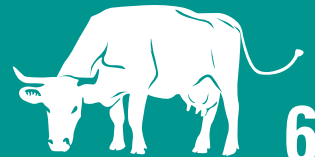


ENJOYING THE FRUITS OF THEIR LABOUR



4

RIRDC RECOGNISING OUR BEST



6

Q&A 7

ENERGY EFFICIENCY TIPS 8



Leatherwood flower

THE LATEST BUZZ: EXPORTING EXCELLENCE

This year has been eventful for Blue Hills Honey with Robbie Charles and his wife Nicola winning an export award and several food awards for their product.

In October, Blue Hills Honey was awarded the TasPorts Agribusiness Award at the prestigious Tasmanian Export Awards. This is an amazing achievement considering Robbie and Nicola only started to seriously explore the company's export potential in 2004, seeking advice from Austrade and the Department of Economic Development and Tourism.

"Winning the award is very satisfying for the Australian Quality Honey (Blue Hills) team. The hard work and dedication from all the staff is rewarded and it provides a very sound marketing platform for future growth," reflects Nicola. "To be voted by industry peers is truly very humbling."

Blue Hills was also the 2008 winner for "best new organic food and non-food product" at the Organic Expo in Sydney, which is the largest organic and green show in Oceania.

The attainment of organic certification (OFC and USDA Organic 0498), which required a strict regime

of environmentally aware management practices including efficient electricity use, was a milestone for the company opening up diverse markets such as Germany, the USA, the UK and Japan.

"The process for accreditation is difficult and each section of the business has to adhere to a rigid range of protocols ranging from harvesting, bee husbandry, apiary maintenance and movement, honey extraction and packing," says Nicola. "The main area for consideration is the environment. Having such beautiful pristine areas like the Tarkine allow us to adhere to the standard."





Robbie and Nicola Charles.

HONEY (continued)

Today 90–95% of their market is international trade, with Germany the biggest buyer.

While a great deal of the business's power use is in transportation, hydro power also plays a vital role. Honey production is seasonal, with the majority of harvesting occurring in January–March. At this time the majority of energy use is tied up in lighting, heat exchangers, compressed air and warming honey.

Honey from the field is warmed to hive temperature (35–38°C) to assist in the extraction processes. This is measured twice daily. Heat exchangers, pumping the honey through pipes into a centrifuge, are then used to separate the wax from the honey.

This process heats the honey to a temperature of 39°C, allowing the raw honey to be separated from the raw wax. The wax is then placed in 1.2 tonne bulk bags before being melted at 70°C and turned into 15kg blocks for domestic and commercial sale.



One aspect of production that sets Blue Hills apart is its cold extraction process. Cold extraction uses temperatures below 45°C to maintain premium flavour and quality.

“Heat can interfere with the colour, taste and medicinal benefits of the honey,” says Nicola. “Many commercial honeys are heated to prolong the liquid state of the honey and although still a good sweetener the end product can be affected.”

Because it is natural for honey (except tupelo and sage) to candy, large water baths are used to melt the honey for packaging. Each bath holds six 300kg drums of honey and the temperature is monitored to ensure the honey is removed when it reaches the optimum temperature. This guarantees that electricity isn't wasted and the honey is not damaged by overheating.

Until now incandescent globes (65–75 watt) have commonly been used in small 50kg honey storage tanks and exhibition stands to provide enough heat to prevent the honey candying. With the replacement of old style bulbs with low-energy bulbs (which don't produce anywhere near the same heat) these tanks are being rendered obsolete. Blue Hills are exploring solutions that hopefully won't increase their energy costs.

Power use at Blue Hills is monitored by reviewing cost trends on a yearly basis and working closely with the electrician to ensure usage is minimised. Daily quality charts, which record temperatures and grouping works, also help keep costs down. As with most businesses, the Charles' are continually on the lookout to improve efficiency in this area.



Harvesting and processing the honey.

When asked why Australian honey is so sought after Nicola comments that it is “consistently very good quality with a diverse range of nectar sources available for the most discerning honey connoisseur. Tasmanian honey, particularly Tasmanian Leatherwood honey is recognised as one of the world's best honeys and because it is only sourced from the pristine Tasmanian wilderness, it truly stands out”.

The work that Apiarists' do is about more than just honey production, providing invaluable pollination benefit

to the community. While Tasmania is currently pest- and disease-free, Nicola hopes that a forward-thinking and supportive government and industry will help it stay that way, or at least be well prepared if this does change.

A busy and exciting year for Blue Hills Honey is reflected in the awards they have won and an ever increasing market: a true testament to the company's professionalism, hard work and commitment to their product, industry and Tasmania.

Contact us

Business enquiries
1300 13 2045

Residential enquiries
1300 13 2003
(7am – 7pm Monday to Friday)

Call these numbers for all natural gas and electricity enquiries. This includes advice and information on:

- natural gas
- electricity
- energy costs
- heating and cooling
- hot water
- lighting
- payment options.

Dial before you dig
1100

Electricity (Aurora) emergencies and faults
(24 hours a day, 7 days a week)
13 2004

Natural gas (Powerco) emergencies and faults
(24 hours a day, 7 days a week)
180 2111

Electricity product sales and services
1300 13 2006

Alterations to our network
1300 13 7008

- easements
- private powerlines
- pole queries
- new supply.

Web address

www.auroraenergy.com.au

Correspondence

GPO Box 191, Hobart Tas 7001

Payments by mail

Locked Bag 4, Hobart Tas 7001

PADDOCK IN A CAN



In the North West region of Tasmania there lies a beef property where the farm's owner, Glenda Wootton, is growing feed supplements for her cattle. What's different about Glenda is she is growing this feed supplement inside her shed.

Glenda's 130m² hydroponics system supplements her cattle's feed with up to a tonne of barley shoots a day.

After the seeds are placed in stacked PVC trays they are fed with calculated doses of water and nutrient mix in order to germinate. The PVC trays are important as they allow recirculation of the water and nutrient mix, which minimises waste and water use.

A pump, sterilisation system and state-of-the-art reverse-cycle air conditioner ensure that the mix remains fresh



High quality nutritious fodder for grazing cattle.

and disease-free. "It's like a paddock in a can really," says Glenda.

Some have been sceptical, believing that the hydroponic process requires more water than conventional farming. However, the inventor of the Commercial Hydroponic Fodder System, Peter Doyle, believes that hydroponic

growers like Glenda who recirculate their water actually make huge water savings. Peter Doyle is also convinced that the value of his product, which starts at \$130,000, is worth the expense. Using his system, 1.2 tonnes of green feed can be produced for just 10 cents a kilo using only 500 litres of water.



Glenda Wootton with fodder grown in the Commercial Hydroponic Fodder System.

As Glenda Wootton has discovered, the cost of implementing this system works out to be cheaper in the long run than purchasing additional quality land. Tasmanian farmers are rapidly adopting and trialling new farming techniques and crops. This will lead to a more diverse marketplace able to meet demands and increased sustainability. More information on Commercial Hydroponic Fodder Systems can be found at www.chfs.net.au

ENJOYING THE FRUITS OF THEIR LABOUR



Heather and Christopher Chong run Qew Orchards, a family owned and operated apricot orchard located near Richmond in the south of the state. They also head up a Managed Investment Scheme (MIS) for Cool Climates.

Qew Orchards is one of Australia's few apricot-only orchards. Between the two properties there are 150,000 trees producing anywhere between 600 and 1200 tonnes of fresh apricots primarily for a mainland domestic market with a small proportion sent to the UK. Instead of diversifying

into multiple crops or other apricot-based products Heather and farm manager Peter Frankham believed it was important to "focus on getting the quality our customers want with good-tasting, good-looking fruit".

Fruit growing is a fickle business requiring good rains in the growing season and stable, dry weather during harvest. Heather expects to harvest around 800 tonnes of fruit this year. "The weather is our major challenge on a day-to-day basis," says Heather. "Careful management

HELP REVERSE THE PICTURE

Photo: John Mair, BoM.

15763 Aurora Energy Pty Ltd. ABN 85 082 464 622

Trees that touch powerlines can cause bushfires. You can prevent bushfire by maintaining trees and cleaning up around powerlines on your property. For help and information about vegetation management contact Aurora. And if you see trees growing too close to powerlines, call Aurora on **13 2004**, because nothing is more important than your safety.

www.auroraenergy.com.au



is required to maximise water efficiency and ensure that no trees are lost.” Fortunately, with only about 1% damage from the late frosts this year the problem was not compounded further.

The apricot trees at Qew are planted on mounded soil and Tatura trellises, allowing the land to be left untilled and reducing the risk of overwatering. Much of the property’s water is supplied via emergency pipelines and managed with scheduled targeted irrigation. “We use drip irrigation and two systems of moisture monitors that ensure we only water when it is required,” says Heather.

M-Bug and AquaLink loggers are utilised on the properties. These are fully computerised moisture feedback systems that monitor moisture resistance and determine when irrigation is required, much of which is carried out at night to take advantage of lower energy tariffs and to reduce water evaporation. The systems hold several weeks of readings providing continuous soil content data as well as accurate weather, soil and crop information.

The apricots are hand picked when they are ripe and temperature controlled throughout the entire cool chain to distribution. “The cool rooms are a major area of energy use on the property with the biggest use during harvest when we have to cool down the fruit,” says Heather. The newly picked warm fruit is cooled to below 9°C in large coolrooms before sorting. The sorted fruit is then placed in a second cool store at just above 0°C. To help reduce energy waste they have installed curtains on the coolroom doors to allow traffic without continual loss of cold air.

Qew’s efficiency is reliant on a tight Integrated Fruit Production Program that includes monitoring electrical use and irrigation. This is an area that Qew is actively pursuing in order



to deal with current and future environmental and economic demands. “We are trying to mitigate our carbon footprint as much as possible, including reducing energy consumption. At the moment we are collecting data to enable us to make comparisons and determine what we are doing well and what needs to be improved.”

As the orchard nears maturity Heather and manager Peter are looking at expanding the shed. This presents a timely opportunity to investigate alternative energy sources that may benefit the property as well as the local community. “The reality of the power we use is that when we need it, it has to be on. We want to look at putting in solar or wind power and feeding back in to the grid. Solar is most likely due to our expansive roof and long sunshine hours.”

Another way that Qew is keeping on top of best practice is through membership to organisations such as Family Business Australia (FBA). FBA is a national, member-based, not-for-profit organisation primarily for family business owners. As well as representing family businesses FBA strive to promote the contribution these businesses make to society.

Aurora Energy is a sponsor of the Tasmanian chapter

assisting FBA in the provision of workshops and social functions for its members. Heather, while only a relatively new member, sees the value professionally and personally in joining the organisation.

“We got to know other people that were members and decided to join. The organisation provides a place to find like-minded people to talk to and access to some very interesting speakers,” reflects Heather.



Support renewable energy and switch to



Residential: 1300 13 2003

Business: 1300 13 2045

RIRDC RECOGNISING OUR BEST

Each October, to coincide with Rural Women's Day on the 15th, the Rural Industries Research and Development Corporation (RIRDC) offer a Rural Women's Award to all women in Australia involved in the primary industries. A winner and a runner-up are selected from each state and territory as well as an overall national winner.

RIRDC's state and territory agencies are responsible for primary industries and resource development and they view this award as a way to celebrate women's contribution to rural industries. It also provides training to enable women to take up positions of leadership.

The 2008 Tasmanian winner is Jeanette Fisher. Jeanette is currently the President of the Professional Calf Rearers' Association of Australia and runs HEIFERMAX, an on-farm advisory service that assists dairy farmers to improve the management of their heifers from birth to first calving. The consultancy also aims to encourage the modernisation of management systems providing farmers with the tools needed to adopt up-to-date practices.

The RIRDC Award allowed Jeanette to attend the US Dairy Calf and Heifer Association's Annual Conference, held in April. As well as opportunity to increase her knowledge, Jeanette found the conference a fantastic chance to network and meet some of the world's top calf rearing specialists.

Jeanette also spent time touring and working on several properties in the US and hopes these insights will benefit local calf rearers. "Many of the small properties in the US, just like here, are still operating like they always have and it is time their management techniques or lack thereof, were brought into the 21st century."

Another highlight for Jeanette was attending the RIRDC conference in Canberra. "Meeting all those other like-minded women was surprisingly great – they are all so dynamic and interested in what they are doing."

Before moving to Tasmania with her husband David, Jeanette was involved in trials for an intensive cell grazing system known as TechnoGrazing™. This project, first designed by New Zealander Harry Weir, was run by the South Australian Research and Development Institute (SARDI) at Struan near Naracoote in the south-east of South Australia.

Jeanette believes that there is great application for this system in Tasmania, especially considering climatic changes and the recent drought situation. Friesian bulls are already being run in this system, with purportedly pleasing results, at Woolnorth in the north-west of the State.

"You can definitely supplementary feed silage, potato, cereal, etc, with this system but it works on the principle that you won't need to," says Jeanette.



Jeanette Fisher, Tasmanian RIRDC Award Winner.

The system works on improving pasture growth and grazing management rather than concentrating primarily on pasture improvement and irrigation.

"Once the top is taken off a plant the root growth withers up unless it is given time to put up a couple of leaves and start to regain the root system. Because pastures are only grazed for two days pasture springs back really quickly."

There are several models but the principle works on dividing paddocks into equal area lanes using three-wire electric fencing. These are then divided into smaller cells using moveable electric tape that runs across the lanes. "Struan used 6 systems of 32 hectares fenced into 8 lanes and then divided further into 60 cells of 0.067 hectares. Sixteen bulls were placed in each cell (a total of 128 bulls per system)," comments Jeanette. (See diagram on page 7.)

"The six system dryland fencing system works out to be around 80 kilometres of electric fencing powered by two energisers about one kilometre away from the beginning of the system."

Harry Weir from Kiwitech suggests that one energiser is generally required for every 50–100 hectares. With one energiser's power use comparable to a single small light bulb the electricity costs of the system are negligible. Real long-term energy savings can be seen when you compare this system to the energy costs in terms of transport and production tied up in traditional fencing systems.

A lessened need for irrigation is another place where power use is definitely reduced.

Every two days cattle are shifted by simply dropping the electric fence in front of them. In late winter and spring as pasture growth increases the cattle are given more area to graze. "The more the grass is growing the more space you give them and the faster they move through the system."

Water for the bulls is managed in such a way to reduce power use, and potential waste, contamination and evaporation. Small micro troughs are shared between two cells and they fill when the cattle press their nose to the base. "They [the bulls] quickly learn if they want a





Six-system dryland fencing system.

drink they have to line up or they will get zapped.”

In Jeanette’s experience in Australia, the system is most suited to bulls rather than heifers as you can restrict them in winter and crank it up to get maximum weight gain in spring. Sheep can also be run using the system but are more awkward and require three wires to be run out rather than the cattle system of one.

Jeanette said that the South Australian system aimed to produce 1000kg of live weight gain per hectare, which is considerably higher than the 100–350kg gain often seen in the area. While Jeanette acknowledges that this system involves greater set-up costs and is a little more time consuming than traditional farming methods she believes that in the current economic climate the 2–3 hours spent every couple of days is well and truly returned in dollar per hectare returns.

Jeanette considers it important for farmers to embrace modern farming techniques and tools such as this management system, and start actively measuring outcomes in order to improve management of bulls and heifers. She also hopes that Tasmanian women and the cattle industry generally will benefit from the experience and knowledge she has gained from winning this award.

The 2009 RIRDC winners will be announced before the end of the year.

Q&A

More of your Q&As from our Customer Service Centre files

Q: Does Aurora Energy offer a green product?

A: Yes, we have introduced the AuroraGreen product, available to our tariff customers. To find out more information call our Customer Service Centre on **1300 13 2045** or go to www.auroraenergy.com.au where you will be able to download the application form and read the terms and conditions that apply to this product.

Q: Where does the private power line begin?

A: The private power line begins where the Aurora power line connects with the first pole on your property. This first pole and all the poles lines and fittings and attachments beyond it are the customer’s responsibility.

Q: How much does it cost to become a combined account customer, and where can I find out more information?

A: Combined accounts are a free service and payment terms are 14 days, the same as a standard account. For more information call our Customer Service Centre on **1300 13 2045** between 7am and 7pm Monday to Friday.

Q: When I turn the taps on I sometimes get a tingle, is this something I should report to Aurora?

A: Tingles from taps must never be ignored, nor should any shocks from power tools and appliances. You should immediately report this to the Aurora Fault Centre on **13 2004** and we will organise for an urgent on-site inspection. You should also call your electrical contractor without delay if power points or light fittings are damaged, fuses are constantly blowing or circuit breakers are constantly tripping.

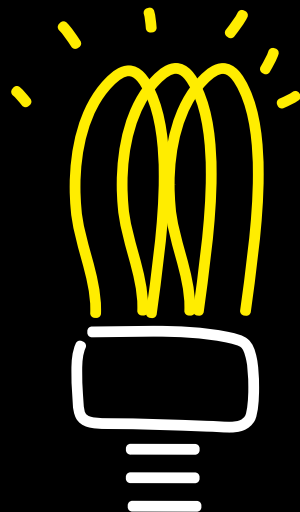
Q: What should we do when the power goes out? Should we call Aurora or are you able to detect a fault automatically?

A: The most important thing is not to assume that we know about the outage. Call the Aurora fault number **13 2004** and let us know. It is a good idea to check if your neighbour’s power is out before making the call as you may have just blown a fuse or tripped a circuit breaker.



Q: When I call the fault number on my mobile there is a lot of information that is not relevant to my area. How can I avoid these messages?

A: When you call the Aurora fault line use your landline instead of your mobile, you will then avoid a lot of the pre-recorded message for other areas.



Visit our site and see the light!

When you visit www.auroraenergy.com.au you will learn that energy efficient light globes are five times more efficient than conventional incandescent globes.

To learn more about saving energy and saving money visit www.auroraenergy.com.au and follow the links.

SAVE ENERGY, SAVE MONEY.



Energy Efficiency Tips



Electric Farm has compiled the following energy savings tips for our rural business customers:

- Irrigate at night.
- Look at installing a variable speed drive vacuum pump.
- Where possible reduce bulb wattage.
- Use fluorescent, halogen or high pressure sodium bulbs.
- Reduce artificial light use during light periods, such as during Daylight Saving, when ordinary production levels can be maintained
- while energy used for lighting is considerably reduced.
- Ensure insulation and weather stripping is properly installed.
- Consider heat reclamation from ventilation in animal housing.
- Install a pre-cooler or thermal heat recovery system.
- Match tractors to the weight of the load. The typical optimum pull is 40% of the tractor weight.
- Keep machinery tyres inflated to manufacturer's recommendations.
- Perform multiple tasks on each pass through the field where possible.
- Practice routine and timely maintenance on all farm equipment and implements.
- Routine maintenance of pumps should include inspection of nozzles, impellers and checking for water leaks.
- Ensure pumps are operating at their highest efficiency by properly matching pump size to irrigation system.
- For high temperature grain drying, consider a continuous flow dryer.

YOUR FREE SAFETY SIGN

At Aurora, we're serious about saving lives which is why we are giving away these highly visible A3 warning signs. For your FREE Look Up Look Out safety sign, call Aurora's Business Line on **1300 13 2045**, or fax the form below to 6237 3444.



To:

Edition:

Please fill in your details below (please print clearly):

Contact name: Date sent:

Business name:

Postal address:

Email: Phone:

Business type: Dairy Beef Wool Crop Vineyard Other:

This is our 14th edition of *Electric Farm* – a publication specifically designed to help agricultural businesses manage their energy requirements. We would welcome your feedback so we can continue to improve future editions. Phone 1300 13 2045 or email business@auroraenergy.com.au

DISCLAIMER
Information published in this newsletter does not represent the policies of Aurora Energy Pty Ltd ("Aurora"). The information is not intended to be advice and is general information only. Whilst every endeavour is made to ensure the information contained in this newsletter is accurate and up-to-date, Aurora assumes no responsibility in relation to accuracy of the information or the consequences of any person relying upon the information. Much of the information is provided to Aurora by third parties. The information in this newsletter is not adapted to any particular person's circumstances and therefore cannot be relied upon to be of assistance in any particular case. Unless specific provisions of legislation are quoted, Aurora does not make statements of law in relation to any matter. If you wish to know the law you should either go to the relevant legislation or obtain advice from a qualified professional such as a solicitor. Incorporated into this newsletter are references to other organisations or businesses. These references should not be taken as implying any endorsement or approval of those organisations and businesses.

The information in *Electric Farm* is for guidance only.

FOR PROFESSIONAL ADVICE ON ENERGY EFFICIENCY, PLEASE CALL 1300 13 2045 OR VISIT www.auroraenergy.com.au