

# Tassie Dairy News

[www.utas.edu.au/tia/dairy](http://www.utas.edu.au/tia/dairy)

December 2017



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## Discussion Group Round-up

*Symon Jones and Samantha Flight, TIA*

Fodder crops were the main topic chewed over at the discussion groups in November.

The Central North Discussion Group held their meeting at Dean and Kate Marshman's farm. The Marshmans had sown Pasja and Barkant turnips, which were all growing well. The farm is 100% rain-fed and forage crops fill feed gaps, especially over the summer period when pasture growth rates are very low. David Squibb from PGG Wrightson Seeds provided good advice to the discussion group on how to grow successful stands of fodder crops.

The Yolla/Wynyard Discussion Group was held in Milabena on Adam and Laura Wickham's farm. The group discussed the planning required for growing successful forage crops. Adam and Laura aren't currently growing any fodder crops but are planning to sow winter crops,

most likely kale to feed to their dry cows. Rob Wilson from Roberts attended the discussion group and shared his expertise on fodder crop management.

A big thank you to Roberts for providing a BBQ lunch at both of these discussion group meetings.

### North West Discussion Group at the Huisman's

The North West Discussion Group met on Wayne and Angela Huisman's property at Brittons Swamp and the meeting had a focus on early fodder crop management, with an emphasis on pest detection.

The Huismans are in their second season of ownership after many years of share farming and equity partnership arrangements.

They are milking 340 cows and running all followers on 120 hectares

with 55 hectares fully irrigated. The Huismans have an effective stocking rate of 3.7 cows per hectare year in, year out, so pasture management is a key focus.

The Huisman's farm is currently on a 26-day grazing rotation and achieving average growth rates of around 48 kg DM/ha/day.

At the time of the meeting (26 November) there had been just 14 mm of rainfall in November. This is only 17% of Smithton's average rainfall for the month.

In addition, the average evaporation rate was 4.2 mm per day or 117 mm for the month, and as a result, the dry period had put significant pressure, especially from pests, on early fodder crops.

TIA would like to thank Wayne and Angela for hosting the day, Peta Davies from Serve Ag for providing her advice on early crop management, and Troy Franks from Fonterra for providing lunch.

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## Planning for a fodder crop

Most cost:benefit analyses have shown that fodder crops are only profitable if they are replacing a poorly producing pasture as part of a pasture renovation program. This information helps to identify where on the farm a fodder crop will give the greatest benefit. Of course, thought also needs to be given as to how the crop will be grazed to fit in with cow movement around the farm.

Identify when feed gaps typically occur and work backwards from maturity date to calculate when the crop needs to be sown.

Pre-establishment soil amelioration may be required, depending on current soil fertility. Ensure adequate phosphorus and potassium (macro nutrients) and sufficient boron and molybdenum (micro nutrients) for the crop you intend to grow. Sulphur can be detrimental in forage crops – at excessive levels it can contribute to the animal condition 'Redwater'. It's important to also check the pH. For a brassica crop, a pH of 5.6 to 6 is the ideal range. Ensure good soil to seed contact – conventional (broadcasting), air seeding or direct drill sowing can be used in the establishment.

## Early fodder crop management

A number of pests were identified in the crops visited by the various discussion groups. The main pest pressure was from Diamondback Moth larvae, Cabbage White Butterfly larvae and Springtails.

A very small number of armyworms were observed in the pastures. However, these numbers were not significantly high enough to justify spraying. Perennial pasture can withstand a relatively high population of armyworm without significant damage – the main concern at this time of the year is damage and fouling of standing hay crops.

Talk with your local agronomist about population numbers and whether spraying is economic. An agronomist will also be able to give advice on

when to spray and the type of spray to use.

The presence of so much pest activity highlighted the importance of doing a regular crop inspection. The *Tasmanian Pasture and Forage Pests* book is available free online from the DPIPWE website and has a lot of great photos and descriptions of pests which can help with identification. The book also provides information on pest lifecycles and when and what to look for that indicates you have a pest problem.

Crop monitoring is vital for reducing the potential impacts of insects, unwanted weeds and any nutritional deficiencies affecting the establishment and growth of brassica, particularly in the first 4–6 weeks when the plants are most vulnerable.

As a fodder crop requires considerable investment in time and money, the best protection you have are your own skills of observation.

- Inspect the crop at least twice a week.
- Familiarise yourself with the common pests and particularly look for the juvenile larvae or wrigglers on the leaves.
- The juvenile larvae are very hard to see so a magnifying glass is a useful glovebox tool.
- If you are concerned about numbers of pests, call your agronomist to advise you of when and what you need to spray.

Strategic nitrogen applications are also important for increasing crop yield.

Application rates of 100–125 kg of urea per ha are recommended at around 2–4 weeks after emergence. Following this guideline, you will apply around 40–60 kg N/ha.

A second application can be applied between 6–8 weeks after emergence. Care must be taken not to apply nitrogen too close to grazing, as the uptake of nitrogen by the plant during the period just prior to grazing may cause nitrate poisoning in livestock.

## Late spring/early summer pasture quality

With not many fodder crops being grown on farms in the Devonport Discussion Group network, the focus for the November meeting was on pasture quality and the potential impact on milk production. The group met on the farm of Paul and Nadine Lambert at Merseylea.

To facilitate the discussion on feed quality, pasture samples were collected from four farms prior to the meeting. The results highlighted the relationship between metabolisable energy (ME) and neutral detergent fibre (NDF). Generally speaking, the lower the feed quality as measured by ME, the higher the NDF or fibre level of the feed. From the results, a relationship between ME and crude protein (CP) was also observed – generally the higher the ME the higher the CP, however this relationship wasn't linear.

Crude protein can be affected by N application – higher levels of nitrogen in the soil will increase CP levels in plants. The stage of development that pasture is grazed also affects the amount of CP consumed by cows. Ryegrass pasture will typically have higher protein levels at the one-leaf stage compared to the three-leaf stage. Unlike ME, where the higher the energy content the better it is, CP needs to be balanced in the cow diet. Too much can be just as detrimental as too little. Too much CP in the diet can lead to the cow using ME (that could have been used for milk production) to excrete the excess CP.

A key learning from the day was the importance of monitoring pasture residuals. If target residuals can be achieved during spring, it has a positive flow-on effect over the rest of the season. Not grazing down hard enough can lead to poor quality, stemmy pasture that cows do not like to eat, resulting in milk production losses. If pasture becomes too stemmy, pre or post-grazing topping can be used to help achieve target residuals and improve regrowth quality. Topping will also help prevent aerial tillering and promote daughter

tiller survival by making sure light reaches the base of the pasture. Aim to leave residuals of 1500–1600 kg/DM/ha or 5–6cm length.

Monitoring feed quality helps us make sound decisions on feeding and grazing management. A feed test can't help improve what we are feeding now, but it can help us make better decisions around supplementation.

## North East discussion Group at the Bush's

The North East Discussion Group held its November meeting in the West Scottsdale area on the property of Stuart, Bob and Chris Bush. The focus of the day was on once a day milking (OADM).

The meeting was well attended by farmers and supported by Fonterra, with the attendance of Deb Morice, Kristy Evans and Matt Watt. Fonterra also provided lunch for the day.

The Bush family have recently transitioned the business from a twice day milking system to an OADM system, with the aims to:

- Grow the farming business.
- Increase herd numbers (to offset production loss of OADM).
- Increase production.
- Further develop grazing area through irrigation.
- Utilise more of the farm grazing area.
- Increase equity/wealth through an increase in livestock and irrigation development.
- Maintain a healthy, balanced lifestyle.

OADM started at calving this season to allow the Bush family to sustainably expand the dairy business by increasing cow numbers on their 350 hectare grazing platform.

As the grazing area has continued to expand, OADM has allowed the growing dairy herd to:

- Access a larger area of the property without compromising their grazing time.
- Utilise the existing dairy infrastructure and labour resource without further significant investment.
- Increase production in subsequent years.
- Swap to OADM when production is at least 14–16 litres/cow or 1.2 kg MS/cow.
- Milking will take 25% longer as cows take longer to milk out – but they are only being milked once rather than twice per day so overall milking time is reduced.
- Cell count can double in the first 24–48 hours – BMCC should be below 150,000 cells/ml before swapping.
- Savings in labour should be an outcome.
- Not all cows will be suitable to OADM, as their individual cell counts will be too high. Some may need to be dried-off before swapping.
- Cows will gain around ¼ of body condition score, depending on the time of year.

Production increases are likely to come from:

- A reduction in production losses as the dairy herd adjust to the new system (30% reduction in year 1 down to 10% by year 3).
- A further investment in irrigation development as water from the new Scottsdale irrigation scheme becomes available, allowing for a higher stocking rate and greater pasture production.
- An increase in herd numbers.

**Table 1. Table comparing current season's OAD milking to last season's TAD milking**

Farm Details	Current season OADM 17/18	Last season TADM 16/17	Variance
Cows	566	400	+30%
Daily Production Litres	16.0	23.0	-30%
Fat / Protein %	Fat 4.9 / Protein 3.5	Fat 4.3/ Protein 3.3	+16%
Daily Production kg MS /day	1.35 kg MS	1.75 kg MS	-23%

## OADM Milking

OADM can be used for the whole season or as a strategy in later lactation to help manage a feed shortage and/or cow condition. If used for the whole season, 10–30% reduction in production will impact on income over the remainder of the season unless offset by an increase in cow numbers. While there will be an increase in fat and protein content in the milk, this alone won't make up for the decrease in milk production.

OADM can help improve in-calf rates. There can also be a huge benefit for first calvers in the herd, as these animals are always under the most pressure in a mixed herd situation.

If using OADM as a seasonal strategy (rather than a system change), there are a few things to keep in mind:

- A larger plate cooler may be necessary as the volume of milk to be cooled at one milking increases.

## 3 in 2 milking (three milkings in two days)

Another option to consider when looking at milking frequency is 3-in-2 milking. There is minimal production loss when the milking interval is under 18 hours.

Therefore, milking three times in two days can save labour, energy of cows (walking to and from the dairy), and dairy shed power and supplies. However, you need to be prepared to spend one evening milking every second day, for example: 5.30 am, 7.30 pm and 11.00 am.

# Feeding trial at TDRF: Update

The concentrate response trial at TDRF has now been in place for 100 days and it is already throwing up some interesting findings. The trial began in August and cows were allocated to treatments of either 6 or 2 kg DM of concentrate (pellets) based on either their liveweight (large or small framed cows), production (high or low) or genetics (Friesian or Crossbred). Table 1 has more details on the trial design.

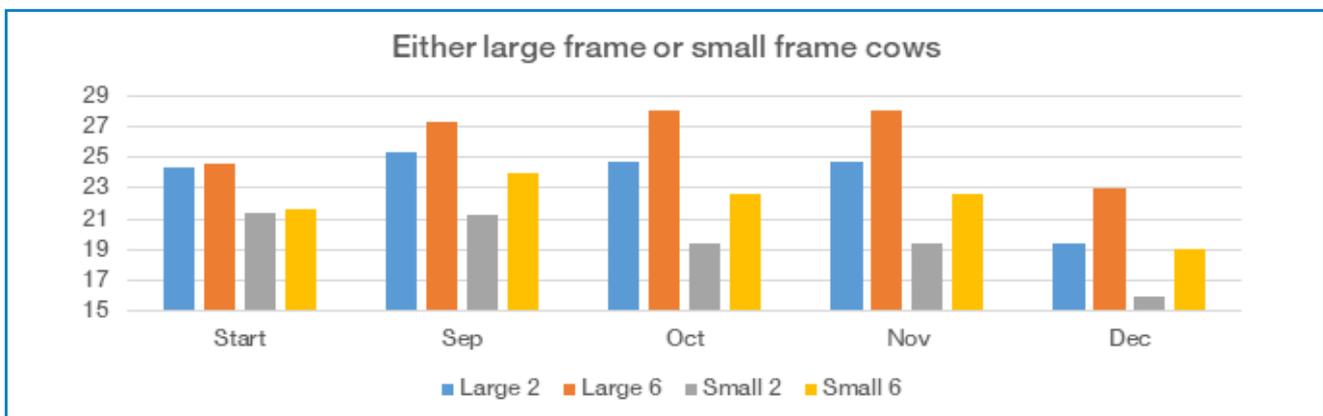
## IMPORTANT TO NOTE

This article aims to give an appreciation of the trials in progress. The figures provided are solely snapshots of production obtained each month of the TDRF feeding trial to date. The data provided has been measured in litres, not milk solids, and only represents a 7-day average obtained from each month's production. The trial is a whole of lactation trial and is only halfway through.

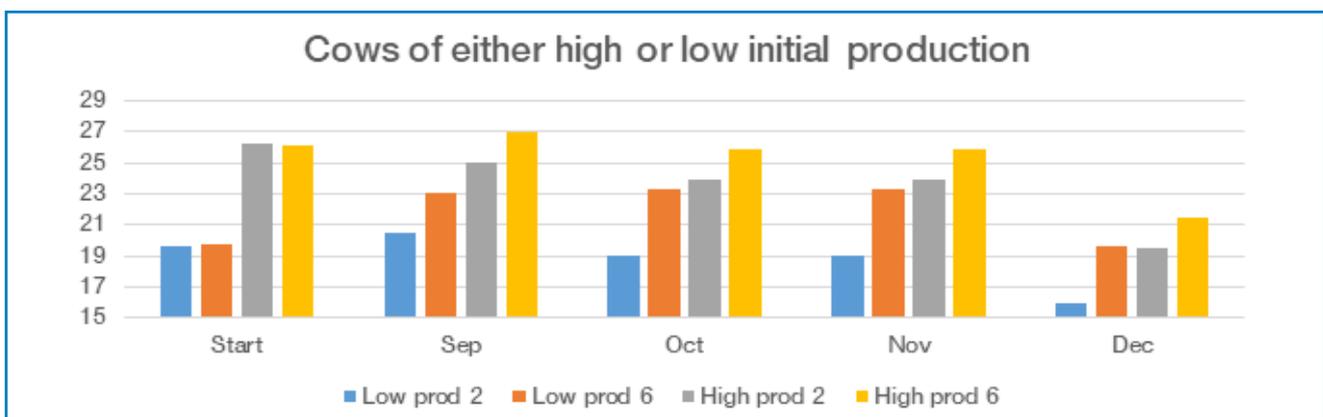
**Table 1: Design of feeding trial**

Parameter to be tested	No of cows required	Parameters similar across all cows	Parameter difference	No of cows	Grain levels	No of cows
Liveweight	60	Production Genetics	Liveweight Heavy cows	30	2	15
			Liveweight Heavy cows	30	6	15
			Liveweight Small cows	30	2	15
			Liveweight Small cows	30	6	15
Production	60	Liveweight Genetics	High current production	30	2	15
			High current production	30	6	15
			Low current production	30	2	15
			Low current production	30	6	15
Genetics	60	Liveweight production	Friesian	30	2	15
			Friesian	30	6	15
			Crossbred	30	2	15
			Crossbred	30	6	15

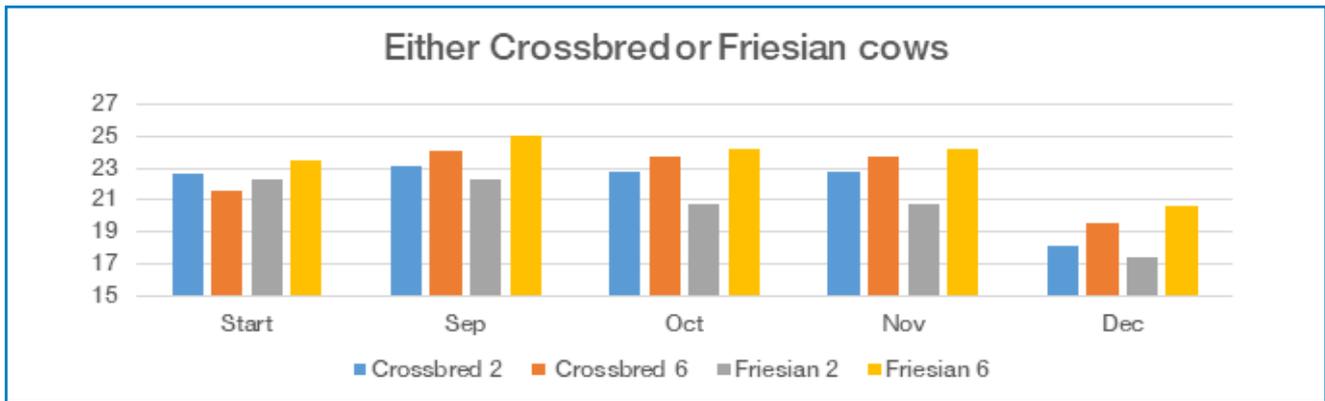
The figures shown below and at right indicate how the cows have responded to the treatments so far this season.



**Figure 1: Average daily production (Litres) of small and large frame cows, fed either 2 or 6 kg DM of concentrates**



**Figure 2: Average daily production (Litres) of cows with low or high initial production levels, fed either 2 or 6 kg DM of concentrates**



**Figure 3: Average daily production (Litres) of cows fed either 2 or 6 kg DM of concentrates when in herds of Crossbred or Friesian cows**

### Cow size (see Figure 1)

At the beginning of the trial in mid-August (when the cows were placed on their differing diets) the two herds of large frame cows had similar production (Litres), as did the two herds of small frame cows. Once the different feeding regimes were imposed, there was a difference in production for both small and large frame cows. The difference in production has been greater in the smaller frame cows at an average of 3.19 litres, compared to a 3-litre difference in the larger cows. Both large and small cows showed a big decline in production between November and December (probably a result of pastures becoming drier, reproductive and armyworm-damaged). The difference in milk production between the larger cows

fed 2 or 6 kg of concentrate has widened. The increasing difference in production could indicate a shortage of fresh forage, and therefore a greater reliance on the energy provided by the concentrates.

### Cows of high or low initial production (see Figure 2)

The second group of cows were placed in their respective herds based on their production levels during the first 15 days of lactation. Cows with high production were randomly allocated to either 2 or 6 kg DM concentrate feeding regime, as were the cows with low initial production. Figure 2 indicates the progress of these herds to date.

This group has provided interesting results, with low production

cows showing a 3.7 litre average difference between 2 and 6 kg of supplementation. However, the high production cows are indicating an average difference of only 1.8 litres over the same experimental period. This is a surprising result, especially as many feeding systems advocate feeding higher producing cows more. It will be interesting to see if this difference increases as the season progresses.

### Crossbred versus Friesian cows (see Figure 3)

Production differences between the two genetic types are indicating that Friesians respond better to higher levels of concentrate and conversely have the lowest production when restricted, when compared to the Crossbred cows.

## Dairy Business of the Year Award and benchmarking

The closing date for the 2018 Dairy Business of the Year Award and Share Dairy Farmer of the Year Award is 15 January, 2018. If you wish to participate in either of these awards and have not yet provided your information to TIA, please contact a TIA dairy extension officer on 6430 4953 to organise for your data to be collected.

You can also participate in the benchmarking without entering any

Awards. If you are interested in learning more about benchmarking, please contact a TIA dairy extension officer.

### All benchmarking participants

For anyone that participates in dairy benchmarking, now is a good time to make a record of how many bales of silage and hay you made from your

milking area and from your support area this season.

And if you haven't already done so, make a list of how many bales of silage and hay you had on hand on the 1<sup>st</sup> July 2017 along with the number of cows, bulls, rising 1 year olds and rising 2 year olds. This makes it easier when it comes to collecting the data at the end of the season.

# Stop the spread of *Mycoplasma mastitis*

Lesley Irvine, TIA

After the first detection of *Mycoplasma mastitis* in New Zealand this year, it is a timely reminder for Tasmanian dairy farmers about the importance of on-farm biosecurity. We can also learn from New Zealand's efforts to limit the spread of the disease, and potentially eradicate it.

*Mycoplasma mastitis* is caused by the bacteria *Mycoplasma bovis* (*M. bovis*). It was first detected in Tasmania over twenty years ago but had only been identified on a small number of farms. Since then there has been an increase in the number of farms on which this disease is present.

The major concern with *Mycoplasma mastitis* is that there is no known effective treatment or cure. It is highly contagious and causes a severe reduction in milk production. The bacteria can also cause joint infections, reproductive disease (resulting in abortions), ear and eye infections and respiratory disease. Calves that are in contact with infected cows or equipment, or that are fed milk containing the bacteria (i.e. mastitic milk) can also become infected.

*Mycoplasma mastitis* can be spread from herd to herd through contact with introduced cattle, over/through neighbours' fences, and use of equipment that has come into contact with infected body fluids including milk, mucus and vaginal secretions. The risk of bulls spreading the disease is considered low, but possible.

Once an infected cow is in the herd, the disease can spread quickly from cow to cow through the above mechanisms, particularly cow-to-cow transfer during milk harvesting. Mastitis and Dry Cow Treatment are other high risk activities that can transfer *Mycoplasma mastitis* (and other forms of mastitis) from cow to cow if good hygiene procedures are not followed.

## Clinical signs of *Mycoplasma mastitis*

The Biosecurity Fact Sheet *Mycoplasma bovis mastitis*<sup>1</sup> produced by the Tasmanian Department of

Primary Industries, Parks, Water and Environment (DPIPWE) outlines the following clinical signs of the disease:

- Increased incidence of mastitis cases that are resistant to therapy;
- Clinical cases that involve all four quarters/multiple quarters at the same time;
- Often the mastitis is not painful;
- Cows with fever and reduced appetite;
- Rapid decline in milk production;
- In some instances, the mycoplasma outbreak may occur at the same time as abortion, arthritis or pneumonia;
- Abnormal milk that is often brown to tan with flaky sediment in a watery or serous fluid.
- Some milk samples when allowed to settle may appear to have a sandy, granular appearance; and
- Sub-clinical mastitis cases are characterised by very high cell counts with normal appearing milk.

*Please note: In either of the last two signs above, these observations are not unique to mycoplasma.*

Signs<sup>2</sup> in calves include:

- Severe pneumonia, starting as a hacking cough;
- Ear infections, the first sign typically being one droopy ear, progressing to ear discharges and in some cases a head tilt;
- Conjunctivitis.

## Biosecurity measures for your farm

New Zealand Ministry for Primary Industries and DairyNZ recommend the following biosecurity measures to minimise the introduction of *Mycoplasma mastitis* onto your farm<sup>2</sup>:

- Avoid nose-to-nose contact with neighbours' cattle by creating a boundary fence buffer zone, either with an outrigger fitted or a secondary electric fence. Maintenance of the boundary fence is important.
- Where practical, limit cattle movements onto your farm.

*M. bovis* can be present in apparently healthy cattle.

- Have good farm hygiene practices. Make sure that footwear, protective clothing, and equipment that has been in contact with animals on other farms is not used on your farm, or is properly cleaned and disinfected before use. Disinfection is a two-step process. Disinfectant won't work through dirt, so equipment needs to be thoroughly cleaned first. Once it is clean it can be disinfected. Disinfectant works most effectively when it has contact time – follow the manufacturer's directions (or if these aren't available, leave for at least ten minutes).
- Restrict vehicles coming onto your farm via the tanker track or main access track. Use your own vehicle to transport visitors around your farm.

*Mycoplasma bovis* mastitis is not a notifiable disease in Tasmania which means it falls under 'buyer beware' when a cattle purchase is made. Take responsibility for making sure this disease does not enter your herd by testing any cattle (cows, bulls, or young stock) before you bring them onto your farm.

For more information about *Mycoplasma bovis* mastitis or testing for this disease, talk to your local vet or contact DPIPWE Veterinarian Dr Debbie Grull on 6421 7641 or email [Debra.Grull@dpipwe.tas.gov.au](mailto:Debra.Grull@dpipwe.tas.gov.au).



<sup>1</sup> Biosecurity Fact Sheet: *Mycoplasma bovis mastitis*, Tasmanian Department of Primary Industries, Parks, Water and Environment, December 2014

<sup>2</sup> Protect your farm from *Mycoplasma bovis*, New Zealand Ministry for Primary Industries, August 2017

# DairyTas update

For more information contact DairyTas Executive Officer Jonathan Price, phone 6432 2233, email [admin@dairytas.net.au](mailto:admin@dairytas.net.au), or go to the DairyTas website: [www.dairytas.com.au](http://www.dairytas.com.au).



Your Levy at Work

## What is happening at DairyTas?

### DairyTas Board Update

The Board met on 13 December in Burnie. Current Board members are Richard Rawnsley (TIA representative), Joshua Taylor (Company Secretary of The Van Diemen's Land Company), Andrew Aldridge (TFGA representative), and farmer members David Risbey-Pearn, Symon Jones, Wolfie Wagner, Angelique Korpershoek, Duncan Macdonald (Deputy Chair) and Simon Elphinstone (Chair).

### Young Dairy Network

The Young Dairy Network has been busy in the past months with social evenings including Pizza and Laser Tag fun nights held in Burnie and Launceston. More recently the Network has held dinner events, featuring a planning session and a presentation of the New Zealand Study Tour. Meetings were held in Scottsdale (19 attendees) and Rocky Cape (over 35 attendees). An event was also held at Hamilton.

### Dairy Sage: New mentoring program

Dairy Sage is a dairy mentoring program designed specifically for Young Dairy Industry people. It will begin with a workshop in Launceston on 19 and 20 February. Following this event, the aim is that each pair of mentors and mentees have at least 15 hours contact time throughout the next six months. The program will conclude with a one day workshop and

presentations. There is no cost for the course but participants must be committed and places are limited. In order for the course to go ahead we need applications for both mentors and mentees. Applications are available online: <http://www.thepeopleindairy.org.au/projects/dairysage-mentoring.htm>

Remember to 'Like' and follow our Facebook page to stay up-to-date with events: <https://www.facebook.com/ydntas/>

### Australian Dairy Conference – Free registration and travel for one Young Dairy Farmer

Sponsorship opportunities have been announced for the Australian Dairy Conference (ADC), 13–15 February 2018.

\$1000 per region is on offer towards travel and accommodation of a young farmer to attend the conference. In addition, the ADC board provides a free registration for a young farmer from each region to attend the conference.

Next year's conference program has a 'meet and greet' session for ADC first-timers and the YDN before the welcome function on the Tuesday evening.

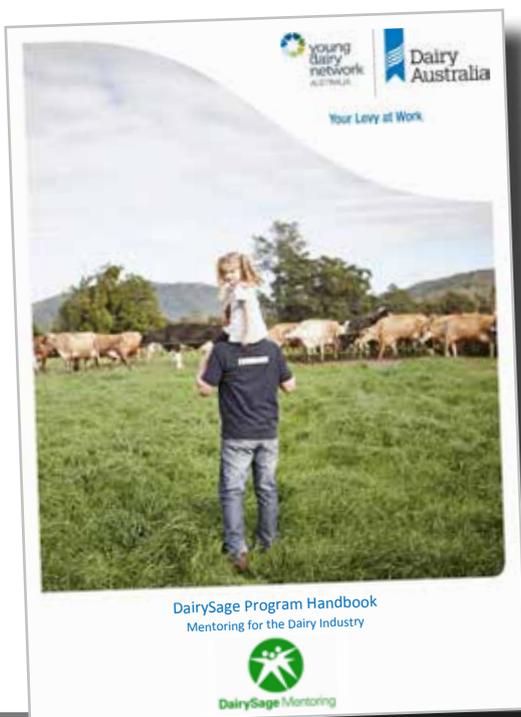
To register your interest please contact Jacki on 0429698168 or email [jhine@dairyaustralia.com.au](mailto:jhine@dairyaustralia.com.au) by 12 January.

### Focus Farm Update

The Focus Farm support group met on 13 December. The group looked over the property, grass and cattle and discussed business matters. The next open day is 7 March 2018. The current farm data can be found on the DairyTas website <http://www.dairytas.com.au/projects/focus-farm/>. Follow us on Facebook for current information and posts about the events on farm: <https://www.facebook.com/TasFocusFarm/>

### Workforce Planning Sessions

In November, three Workforce and Industrial Relations seminars were held by Penny Williams in conjunction with Andrew Cameron from PET. They attracted an excellent attendance and spurred discussion. Since these events, there has been follow-up with over 20 dairy farmers that were both attendees and non-attendees at the events. The seminars covered the Pastoral Award, managing excessive leave, independent contractors vs employees, labour agreements and termination/dismissal.



# DAIRY DIARY 2018

## February

**13–15 Feb:** Australian Dairy Conference, Melbourne

**19 & 20 Feb:** Dairy Mentoring Program (Dairy Sage) workshop (DairyTas)

## March

**7 Mar:** Focus Farm Open Day (DairyTas)

**14 Mar:** Tasmanian Pre-Conference Tour, North East Region

**15 Mar:** Tasmanian Dairy Conference and Dinner, Launceston Country Club Casino

## April

**19 Apr:** Annual Precision Agriculture Expo, Deloraine (TAPG)



Merry  
Christmas

*The TIA dairy team would like to wish everyone a safe and happy Christmas. Thank you to everyone who has supported and participated in our research and extension activities in 2017. We look forward to continuing to work with you in 2018.*

## Contact us

Tassie Dairy News is provided free to all Tasmanian dairy farmers and is funded by TIA and Dairy Australia.

For more information, please contact a TIA Dairy Centre adviser, phone 6430 4953 or email [tas.dairynews@utas.edu.au](mailto:tas.dairynews@utas.edu.au).

Electronic copies of this newsletter are available at [www.utas.edu.au/tia/dairy](http://www.utas.edu.au/tia/dairy).

**Correction:** in the November issue of Tassie Dairy News, new DairyTas Board Member Josh Taylor was listed as working for VDL Farms. This was incorrect. Josh Taylor is the Chief Financial Officer and Company Secretary for VDL Company. We apologise for any inconvenience or confusion caused by this mistake.



Your Levy at Work



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