

Dairy HIGH is jointly funded by Dairy Australia and the Tasmanian Institute of Agriculture (TIA).



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Making tracks

Lesley Irvine, TIA

If you have been working in the Tasmanian dairy industry over the past 25 years, you have most likely met, or at least heard of, Mark Freeman. Mark is probably best known for his role as the manager of the TIA Dairy Research Facility (then called Elliott Research and Demonstration Station) which he held for 11 years.

In the middle of this year, Mark Freeman retired from his research position in the TIA Dairy, Grains and Grazing Centre. Mark has made a significant contribution to the Tasmanian dairy industry, in part because of the practical problem-solving skills he developed throughout his life.

Mark grew-up on a dairy farm on the north-west coast. He studied Zoology at University and then worked in mineral exploration on Tasmania's west coast for nearly 10 years. He then took a job as a truck driver tour guide in Africa. This involved driving

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a truck with groups of tourists as they explored many different African countries. After doing this for three years, Mark returned to Tasmania where he again cut tracks through the Tasmanian bush to enable mineral exploration. It was while he was doing this job he saw an advertisement for a dairy researcher at Elliott Research Station. He applied and was successful in getting the position and began working for the Department of Primary Industries in July 1991.

Mark's first research project involved investigating the role heifer liveweight made to life-time milk production. He worked with farmers around the state to weigh their heifers and monitor their milk production once they had calved and joined the milking herd.

This work determined the importance of achieving target heifer liveweights in obtaining good per cow milk production. The research alarmingly also highlighted the high percentage of heifers that were culled prior to their second lactation. The information from this research has been used to assist



both local and national dairy farmers improve heifer growth and is still being used today in extension programs such as *Rearing Healthy Calves* and *Heifers on Target*.

Mark became an expert on irrigation management through his research into irrigation scheduling. This research highlighted the significant cost of starting irrigation too late. An extension program was developed based on the research which included field days, a booklet called "Getting it Right" and a video – high tech for those days!

Mark believes this research had the biggest impact of all the research he was involved in, as it showed farmers how to save a lot of money through monitoring soil moisture.

A long-term lime trial had also been established across the state. Mark worked on this project to help determine the appropriate rate of lime to apply, whether there was a long-lasting effect of lime and did it boost pasture growth. The research determined lime needed to be applied at a rate of 2.5 to 7.5 tonne per hectare if soil pH was below 6 and one tonne would increase by pH by 0.1 units (does vary a bit by soil type).

Following the departure of several dairy researchers, for a few years Mark was the only dairy researcher in Tasmania. Then the Tasmanian Institute of Agricultural Research was formed and undertook the role of conducting agricultural research in Tasmania.

Mark continued working for the Department of Primary Industries and was involved in conducting farmlet studies at the research farm. These farmlet studies divided the dairy herd typically into four to five herds to undertake farm system level comparison studies such as the impact of different levels of grain feeding on pasture consumption, milk production and farm profit.

Mark started managing the research facility in 1998 with the retirement of Allan Dickens. This was a role he really enjoyed. At the time, managing the research facility involved not only managing the dairy farm and staff but also developing and conducting farmlet and other research studies as well as being involved in extension activities.

One of the things Mark is most proud of achieving is the continuation of the dairy research facility to support the local industry. Dairy research facilities



were closed in many other states but due to the work of the research, development and extension team and strong industry advocates – the Tasmanian dairy research facility has been operating for close to forty years.

In 2007, the state government merged their dairy development and extension team with the Tasmanian Institute of Agricultural Research to become the now Tasmanian Institute of Agriculture (TIA). Following this change, Mark joined the dairy research team within TIA and managed the project he says he enjoyed the most from his dairy research career – red wheat vs white wheat. This project aimed to determine if there were milk production differences due to feeding red wheat or white wheat.

After working a quarter of a century in the dairy industry, Mark says he has seen some significant changes – particularly around herd size. When he first started working as a researcher, a large herd was 200 cows where now herds of 1000 cows are not unusual. This has had a flow on effect of more farms employing staff. He has also noted more irrigation is now used, there is a much greater awareness of animal welfare and in recent years



there has been an increase in the number of boutique dairy products as well as corporate farms in the state. One thing stays the same though “farmers still work hard.”

“A highlight of my career in the dairy industry has been working with a team of people who genuinely care about the industry. Over the years it has been

my privilege to work with committed people who work many more hours than they are paid for because they care about ‘our’ dairy farmers and want to make a difference in our dairy farming community. It has also been a pleasure working with so many positive dairy farmers over the years. Thank you all for your support.”



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A personal note from Lesley: I have worked with Mark for the past 20 years and he has been an awesome mentor and friend. When I was first employed as a dairy extension officer, I was based at the research farm and Mark taught me much of what I know about dairy farming. As my team leader, Mark gave me a lot of opportunities and support which I am extremely grateful for. I particularly enjoyed working with him on calf rearing projects. This is something we both loved doing and it was fun working together developing and conducting the projects. I learnt a huge amount about calf rearing from Mark over the years.

Mark always led by example. The motto of "don't ask your team to do anything you won't do yourself" is something he lives by. From cleaning out blocked calf shed drains (in my opinion THE WORST THING EVER) to dealing with difficult people/situations, Mark always took on the most challenging jobs himself. He was also a great example of strong work ethic. From tractor work at silage time, irrigation issues that

needed to be dealt with, through to taking blood samples from cows seven days a week for research projects, Mark worked hundreds of unpaid hours because he cared about what he was doing. He continues to do this in retirement, helping with proofing and editing articles for this newsletter and continuing to provide support to students in their research projects. His knowledge, problem-solving ability and skills will be greatly missed from our team.



THANK YOU MARK!

Clever, simple, ingenious...

Lesley Irvine, TIA

Large or small farms – there are a lot of interesting ‘things’ that happen on dairy farms at calving time. Here is a snapshot of some of the ‘things’ seen or heard by the TIA dairy extension team this calving season.

No more lifting

Rob Frampton manages his family’s dairy farm at Gawler (near Ulverstone). He has designed and built a calf trailer which can be lowered to ground level. This means calves can be pushed on and off the trailer rather than needing to be lifted. To see the calf trailer in action – check out the video in our TIA Dairy Discussions Facebook group.

Keeping it simple

The Fielding family at South Riana believe keeping calf rearing simple is key to rearing excellent calves. Michael, with his parents Robbie and Denise, rear 100 to 120 calves each season (split between spring and autumn calving). They have a consistent routine that hasn’t changed much in the past 20 years. This involves:

- Ensuring all calves are fed colostrum.
- Navel spraying the calves and feeding them a probiotic paste when they enter the shed.
- Feeding them twice-a-day, until the pen is full and they are all drinking well.
- Feeding them five litres for the first five weeks, reduce to 4 litres for the next week and then reduce to 2.5 litres for a week before they are weaned.
- Feeding ad lib pellets in the shed and continuing to offer 1 kg/calf/day once they are weaned and on pasture.



- The bull calves are managed the same way up until they are sold.

Michael believes factors contributing to their success are:

- Keep the system simple
- Having small group sizes – typically six calves to a pen
- Making sure the bedding is deep and clean for each batch of calves (woodchips are used)
- Effective navel spraying

Most important ‘thing’ in your calf rearing system

Recently, the TIA dairy extension team conducted a competition in the TIA Dairy Discussions Facebook group.

Farmers were asked to share the item or process they found most useful in their calf shed. Some of the ‘things’ shared were:

- Stomach tube feeders and calf feeders
- Music
- ICE (In Case of Emergency) kit – this included chocolates and lollies for people working in the calf shed so they don’t get ‘hangry’
- Tail paint or other colour markers to identify calves
- Hand sanitiser

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- A swear jar!
- Boards for writing calf details (such as how much colostrum they have had, any health concerns etc)
- A calf warming room
- Fridge with tested colostrum ready to use
- ICU small animal calf rugs
- Signage on pens
- Milk tanker
- Additives

And overall, the importance of the people responsible for calf rearing was emphasised. To see the full discussion, go to our TIA Dairy Discussions Facebook group.

Every animal actively managed

Sometimes there might be a perception that cows are 'just another number' on dairy farms – particularly on large dairy farms, but the team at Clovelly Dairy endeavour to actively manage each animal on the property.

Shani Cresser, calf rearing manager at Clovelly Dairy (located near Bridport), spoke to a group of farmers in Scottsdale at the DairyTas/TIA animal

health workshop about their calf rearing system. Shani is responsible for overseeing the 2600 calves reared from the two dairies on the property. Shani highlighted the factors she considers important in achieving calf rearing success:

- Cleanliness – six weeks before start of calving, the calf sheds and all equipment are washed. Clean bedding is put in the pens. Keeping everything clean through the calf rearing season is a priority. Training sessions are scheduled with the calf rearing team to ensure everyone knows how to efficiently and effectively clean equipment from colostrum buckets to feeders.
- Colostrum – colostrum is collected, tested using a refractometer and graded as either 'A grade' or 'B grade'. It is pasteurised and stored in labelled (date and grade) buckets in a refrigerated container. Potassium sorbate is added to help preserve the colostrum until use. Calves are stomach tubed 2-3 litres of colostrum twice (the amount depends on the quality).

Blood samples are taken twice a week from a sample group of fresh calves to test the level of antibodies in the calves – this checks the effectiveness of the colostrum management.

- Communication – whiteboards along the walls of the calf sheds display individual records for each calf. Written on the boards is the amount of colostrum each calf has been fed, what time it was fed and who fed it. The board also records how much milk the calves have drunk each day and any issues with the calf. With up to 15 people working in the calf sheds during the peak calving period, it is critical everyone is aware of what is happening. Communication is further assisted with a calf rearer's 'WhatsApp' group for the team.

With many farms finished (or nearly finished) calving, now is a good time to review the calf rearing system and think about any changes you want to make for next season. Maybe some of the above practices will spark an idea for your farm!



Get involved

Lesley Irvine, TIA

There are several exciting groups starting very soon that offer a great opportunity to improve practical dairy farming skills. No matter how experienced you are, there is always something new to learn and groups are also great at providing motivation.

Beyond Water Smart Irrigation Discussion Groups

These groups are conducted over the irrigation season. The focus is on improving irrigation management to increase the amount of pasture grown per mm of water applied. There was a pilot group in Meander last year and the participants loved it! The group discussed pump performance, uniformity of water application, reducing pivot wheel ruts, scheduling tools plus a lot more.

Based on the success of this group, the project has been expanded to four other regions. Each discussion group involves an optimised irrigation farm and satellite farms. The optimised irrigation farm has a weather station and soil moisture meters – this is used to generate a weekly irrigation report for group members.

As the name suggests, the aim on the optimised irrigation farm in each region is to make sure irrigation water is applied to keep soil moisture at the optimum level to maximise pasture growth.

The optimised farm measures pasture growth and all group members are strongly encouraged to measure pasture growth on an irrigated part of their own farm to benchmark with the optimised irrigation farm.

If you are interested in joining a discussion group focussed around one of these optimised irrigation farms,

The optimised irrigation farms for the Beyond Water Smart project are:

Region	Farm	Location	Extension officer	Contact
North West	Matthew & Susan Lester	Lileah	Symon Jones	0418 876 089
Central North West	Simon & Sonia Badcock	Thirlstane	Sam Flight	0409 801 341
Central North	Tim & Fiona Salter (Clear Springs)	Meander	Lesley Irvine	0428 880 287
Central North/ Midlands	Troy & Toni Ainslie (Woodrising)	Cressy	Sam Flight	0409 801 341
North East	Jarrold King (Forester Lodge)	Waterhouse	Symon Jones	0418 876 089

please contact the appropriate dairy extension officer.

Pasture coaching

Pasture coaching groups are forming in different regions based on expressed interest. Currently there is a north east group, a southern and midlands group and a King Island group. Pasture coaching aims to develop pasture management skills. It involves 10 meetings over a 12-month period. The meetings are all held on-farm and have a practical focus.

Topics discussed in the pasture coaching program include: determining leaf stage, setting rotation length, determining cow requirements, correct allocation, measuring pasture, fodder conservation, irrigation start-up and scheduling, and understanding soil nutrients.

If you would like to be involved in one of the groups just formed or express interest from another region, please contact Lesley Irvine on 0428 880 287 or email Lesley.Irvine@utas.edu.au. We are also happy to run pasture coaching programs with farm teams.

Measuring and Monitoring Boot Camp

The *Measuring and Monitoring Boot Camp* is a new program with a focus

on how to use pasture measurement data to make decisions. It is an intensive program – weekly meetings for twelve weeks. While this might sound a bit daunting, most of the meetings are held online and only take an hour.

To participate in a *Measuring and Monitoring Boot Camp* participants must commit to take weekly pasture measurements on their farm and be willing to share their average pasture cover and pasture growth rates with other members.

Discussion focuses on decisions that can be made with this data such as feeding cows, nitrogen application, rotation length, fodder conservation and irrigation management.

There was a pilot *Measuring and Monitoring Boot Camp* last year and participants said it really helped them learn more what the data means and how it can be used as well. It also helped increase their focus on their pasture management and provided motivation to improve.

If you are interested in being involved in a *Measuring and Monitoring Boot Camp*, please contact Lesley Irvine on 0428 880 287 or Lesley.Irvine@utas.edu.au.

DAIRY DIARY

OCTOBER

1 Oct	Financial Literacy for Dairy Farmers (Day 1 of 9) (TasTAFE)
1 Oct	MaxCare Rearing Calves Workshop, etc bakery, Elizabeth Town. 10:30 a.m. to 1:30 p.m.
1 Oct	MaxCare Rearing Calves Workshop, Circular Head Community and Recreation Centre, Smithton. 6:30 p.m. to 9:30 p.m.
15 Oct	Making Quality Silage Field Day (TIA)
16 Oct	Lunch with the DairyTas Board for southern farmers, Curringa Farm, 5831 Lyell Highway, Hamilton. 12 noon to 1:00 p.m. (DairyTas)
16 Oct	Quad Bike Training, Kyeema Dairy, King Island. 9:00 a.m. to 5:00 p.m. (DPIPWE & TasTAFE)
16 & 17 Oct	ChemCert, Burnie (TasTAFE)
17 Oct	Quad Bike Training, Kyeema Dairy, King Island 9:00 a.m. to 5:00 p.m. (DPIPWE & TasTAFE)
17 Oct	North East Pasture Coaching Group, 791 New River Road. 11am-1pm. Lunch provided. (TIA)
18 Oct	Young Dairy Network Laser Tag, Rock Climbing and Pizza Night, Big Big House, Devonport. 7-9pm (DairyTas)

22 Oct	Southern and Midlands Pasture Coaching Group. 11am-1pm. Lunch provided. (TIA)
23 Oct	Beyond Water Smart Meander Irrigation Discussion Group. 11am-1pm. Lunch provided. (TIA)
24 Oct	"Milking Your Future" Careers Expo, Burnie (DairyTas)
29 Oct	Immigration and Visa Discussion Phone Hook-Up. 11am-1pm. (DairyTas)
29 & 30 Oct	ChemCert, Launceston (TasTAFE)
30 Oct	Farm Business Management Training for Service Providers (DairyTas)
30 Oct	Biosecurity and Livestock Workshop, Longford Bowls Club. 4pm-6pm. (TFGA)
30 & 31 Oct	Farm Water and Irrigation (TasTAFE)
31 Oct	Biosecurity and Livestock Workshop, Devonport Bowls & Croquet Club. 4pm-6pm. (TFGA)

NOVEMBER

14 Nov	DairyTas AGM (DairyTas)
27 Nov	ChemCert, Burnie (TasTAFE)
25 & 26 Sept:	Tractor Training, Burnie (TasTAFE)

The Animal Welfare Science Centre



Scale of production, attitudes of dairy farmers and stockpeople and the welfare of dairy cows

The size of the average Australian dairy herd has grown quickly over the last decade, leading to new challenges and management practices. Our current research aims to investigate some of these challenges as well as the benefits of managing larger dairy herds. It will also examine the relationships between herd size, the attitudes of farmers and stockpeople towards working with cows, their job satisfaction, and several cow welfare indicators.

Should you agree to participate we would like to ask you a number of questions about working with dairy cattle. We are especially interested in your views on the behaviour of dairy cows in your herd, how they respond to handling, and some of the difficulties you face in managing these cows, regardless of your herd size. This survey will take about 17 minutes. All answers are anonymous and participation is completely voluntary, and we would really appreciate your help.

The long-term impact of this research is to understand the changing face of Australian dairy, and to inform revised training programs and management practices appropriate to different herd sizes for improved animal welfare.

If you would like to participate in this research, please visit the survey link at:

https://melbourneuni.au1.qualtrics.com/jfe/form/SV_6EeeKtGloe39iT3

To learn more about this research, please contact Lauren Hemsworth at lauren.hemsworth@unimelb.edu.au



Contact us

Dairy HIGH is provided free to all Tasmanian dairy farmers and is funded by Dairy Australia and the Tasmanian Institute of Agriculture (TIA).

For more information, please contact a TIA Dairy extension officer, phone 6430 4953 or email tas.dairynews@utas.edu.au.

Electronic copies of this newsletter are available at www.utas.edu.au/tia/dairy.

DairyTas (03) 6432 2233 | TIA (03) 6430 4953
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TIA Dairy Discussions



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