FACULTY OF VETERINARY SCIENCE

THE UNIVERSITY OF SYDNEY

DAIRY RESEARCH FOUNDATION

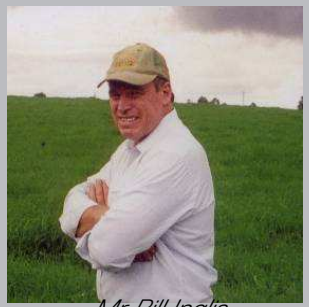
NEWSLETTER

VOLUME 3 ISSUE 1
February 2011

IN THIS ISSUE

DIARY DATES

- DAIRY RESEARCH FOUNDATION ANNUAL GENERAL MEETING is to be held on THURSDAY 14th APRIL 2011 - 11.00am at the VSCC at the Camperdown Campus
- DAIRY RESEARCH FOUNDATION ANNUAL SYMPOSIUM is to be held on 6th and 7th July 2011 after Dairy NSW and NSW Farmers (Dairy Branch) events on 5th July



Mr Bill Inglis
President of the DRF

DIRECTORS' UPDATE

Welcome to the first issue of 2011!

This year promises new challenges ahead. Farmers in parts of QLD and VIC are just starting to recover from the floods, and we are witnessing the beginning of a new issue for the industry with the so called 'supermarket war' and its potential detrimental effects on future farm gate milk price.

Within the Dairy Science group, FutureDairy 2 is in its final 6 month of life. We are working together with key investors in the development of FutureDairy 3, which will focus on key challenges of AMS/AMR systems in the future.

Another exciting news is the DRF symposium on 5,6 and 7 July! this year we will have the annual activities of Dairy NSW and NSW farmers dairy section taking place on 5th. This is a very important step towards a more integrated dairy industry and we are looking forward to it! Read more about it in this newsletter.

Yani Garcia

Foundation Director, Assoc Prof Yani Garcia

From the PRESIDENT

Recently I attended a seminar on amendments to the Universities Foundations Rules.

The University's Vice Chancellor Dr Michael Spence spoke of the importance of the Foundations and the Universities gratitude for their work and for the input of their members.

The rule changes may create some challenges but the recognition of the University and its interest in our work is of even more important.

Look out for further updates in the next newsletter.

Bill Inglis

THURSDAY 14th APRIL
11.00am
at the
Veterinary Science Conference Centre

DAIRY RESEARCH FOUNDATION 2010 AGM and COUNCIL MEETING

THE 2011 SYMPOSIUM

Wednesday 6th and Thursday 7th 2011

Dairy Research Foundation Website

The 2011 Symposium is set to be a major event on the Dairying calendar. This year we have aligned with DairyNSW and NSW Farmers Association - Dairy Section to bring together as many facets of the dairy industry as possible. DairyNSW and NSW Farmers Assoc will be holding their annual meetings on the day prior to the start of the symposium at the same venue.

We also welcome on board Esther Price and her team from Esther Price Promotions who will be coordinating the Symposium component of the event.

This year the focus will be on automatic milking and new technologies, in particular the new Automatic Milking Rotary (AMR).

Amongst Australian and International speakers are Dr Kees De Kooning from The Netherlands. Dr De Kooning will give an update on AMS in Europe.

Dr Santiago Utsumi from the Kellog Biological Station, Michigan University will show how he manages to acheive high milk production per cow in pasture-based AMS in the US Midwest.

As usual we will have the cream of the crop from the Australian farming industry there to talk about their own experiences as well as a selection of Post-grad students from around Australia to give you a glimpse of what our research institutes are currently doing.

FUTUREDAIRY

FUTUREDAIRY UPDATE

FUTUREDAIRY GOOGLE GROUP

People interested in joining the AMS Discussion Group should send a request for registration to Darold Klindworth or Kendra Kerrisk at the following email addresses.

darold.klindworth@dpi.vic.gov.au

kendrad@usyd.edu.au

AMS Leader Dr Kendra Kerrisk in New Zealand recently. Photo courtesy of the Taranaki Daily News. Photographer: Sue

PRECISION FARMING

AMS INDUSTRY UPDATE

The dust has settled since the launch of the Robotic rotary (Automatic Milking Rotary – DeLaval AMR) and everyone has well and truly recovered from the festive season so we are back into operation mode. A number of hardware and software upgrades with the robotic rotary have taken us to the position that on the 7th of February we were able to shut down the single box AMS units and start operating 100% with the rotary. At this stage we are still operating with 24-hour supervision of the system to ensure that we are receiving alarms in all instances when we should be alerted to issues arising – particularly things that would otherwise result in any animal welfare issues. In time as our confidence increases we will start to operate for periods of time (initially only 2-3 hours periods) with only remote supervision (i.e. someone on call with a mobile phone but no people physically on site).

From the cows point of view, having the predictability that every time they come to the dairy they will receive a milking in the robotic rotary is likely to be very beneficial. Over the past 18 months cows have been milked only intermittently on the rotary with most days resulting in some milkings being conducted in the single box units and others on the rotary. This created a level of unpredictability that has potentially had a negative impact on voluntary cow traffic. In addition we have historically spent a lot of time encouraging cows to enter the rotary platform rather than waiting for them to volunteer to assist in reducing the impact on staff when trying to gather data and conduct observations. Of course, now we are having to train the cows to volunteer without waiting for human encouragement which has been more difficult than we had anticipated.

PRECISION FARMING

AMS INDUSTRY UPDATE (cont)

Over the past 8 days (since full voluntary cow traffic started) we have seen some very encouraging cow traffic and an impressive willingness on the cows' behalf. With a herd of 170 cows we have been achieving a milking frequency between 1.65 and 2.07 cows over the past 5 days. Our target milking frequency is 1.8 milkings/cow/day across the herd considering that we have year-round calving – we target milking frequencies above 2 for early lactation cows and lower frequencies for late lactation cows. Of course the robotic rotary has the potential to milk many more cows or even to milk our 170 cows with a higher milking frequency but the current level of throughput is impressive given that we are only 8 days into full voluntary cow traffic with the prototype robotic rotary.

A parameter of particular interest to us whilst the cows are adjusting to voluntary traffic on the rotary is the time it takes cows to volunteer from the waiting/holding yard onto the rotary platform ('waiting time'). The waiting time is a reflection of the cows motivation and willingness to move onto the rotary but is also an indication of the number of cows waiting to access the rotary as well. Regardless, we would expect the waiting time to improve as time progresses. We will be closely monitoring this data to see if cows improve over the coming weeks as their experience and exposure to the rotary increases. At this early stage the average waiting time over the past 7 days has been 1 hour and 16 minutes. Over the past two days this has reduced to an average of 1 hour over the most recent 2 days.

Over the coming weeks and months our focus is on ensuring we develop good working routines that allow us to have confidence in the whole system operation. In time we will increase the size of the milking herd to 240 cows which is the capacity of the farm resources (e.g. paddocks, milk storage, effluent storage). There are undoubtedly challenges that we will face but the current rate of progress has been extremely encouraging to the team. We look forward to reporting our progress with regular updates in coming issues of the newsletter.

For further information contact
Dr Kendra Kerrisk at
kendra.kerrisk@sydney.edu.au

FUTUREDAIRY

INVESTIGATION INTO MILK INTERVALS AND IMPACT ON MILK PRODUCTION

By Nicolas Lyon

A trial was conducted at the AMS farm in Camden, in late November – early December 2010, to evaluate the impact of 2 different grazing management options on the overall cow and system performance. Grazing management can have a big impact on cow traffic so the idea was to minimize the occurrence and negative impact of extended milking intervals on milk yield. For this purpose, two treatments (2 [2WG] vs. 3 [3WG] allocations of feed per day - 24hs), were compared as a pilot trial. The trial involved the entire milking herd of 142 cows (average days in milk was 120 ± 89 days, doing 1.52 ± 0.41 milkings/day with an average last 7-day milk production level of 21.4 ± 7.6 Kgs/c/d). Cows were milked using 2 DeLaval VMS milking units.

Preliminary results indicate that under a system in which cows could be offered more allocations of feed per day (3 vs 2 way grazing in this particular case), cows move more around the system, thereby creating more opportunity for cows to be drafted for milking. This in turn reduced the frequency of extended milking intervals (Figure 1), producing a 28% lower average milking interval. As a consequence of a shorter milking interval, milking frequency increased by 36% which translated into a 20% increase in milk production (Figure 2). As cows increase milking frequency, there is a decrease on average milk production per milking, therefore reducing the average duration of each individual milking.

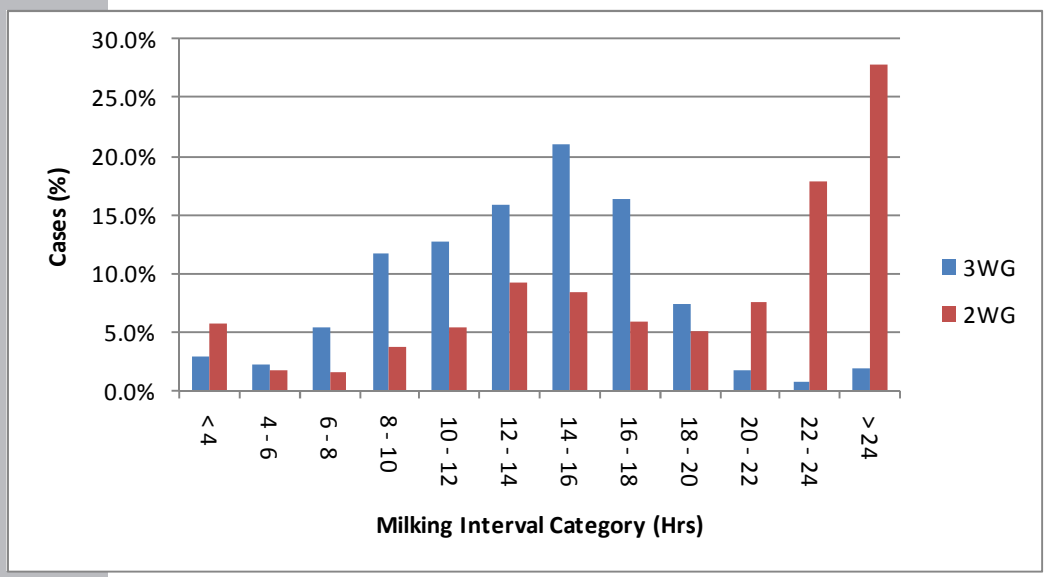


Figure 1: Histogram reflecting the distribution of average intervals between milkings recorded with the 2WG vs 3WG treatments

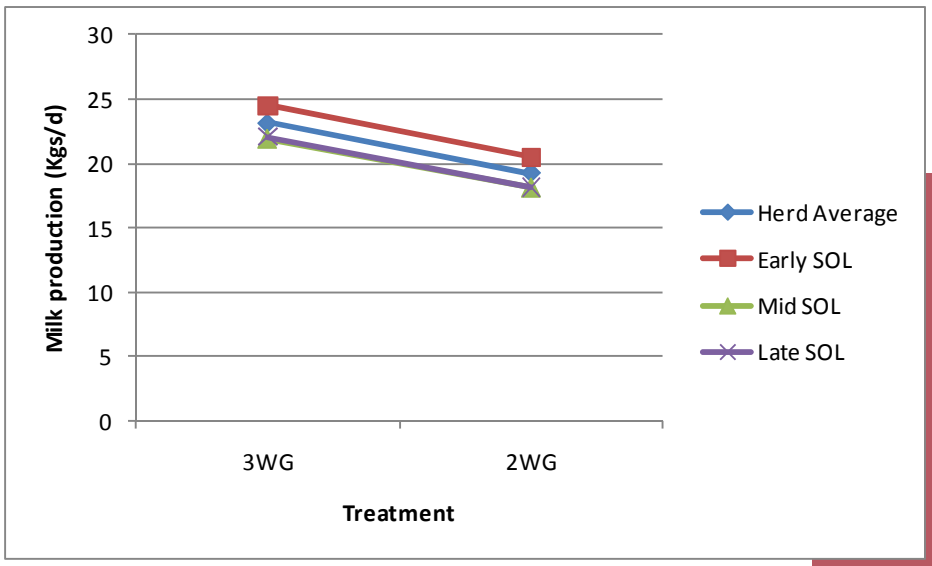


Figure 2: Milk production (Kgs/day) under 3WG and 2WG, at different stages of lactation (SOL), where Early SOL = 0-100 days in milk, Mid SOL = 100 – 200 days in milk, and Late SOL > 200 days in milk

When data are analysed by stage of lactation it appears that late lactation cows had the greatest decrease in average milking interval and the greatest increase (%) in milk production. The same effect occurred with the higher producing cows (24 cows which produced one standard deviation above the 7-day average milk production at the start of the trial).

Overalll the increase in milking frequency and milk production for 3WG was reflected in a high level of utilisation of the milking units during the day. Under 3WG there was an increase in milkings/AMS/h due to the fact that milking duration of each individual milking was reduced. Milking units were better utilised during the day (21% increase in operating time and 20% in milk harvested, in comparison with 2WG), with a total utilisation of 83% of its capacity.

For further information please contact Nicolas Lyon (pictured right) at nlyo4990@uni.sydney.edu.au .

FEEDBASE

SIMULATION OF AN ANNUAL TRIPLE CROP COMPLEMENTARY FORAGE ROTATION USING APSIM

By Dr Rafiq Islam

FutrureDairy is investigating several plant based, reflectance based (e.g., NDVI) and model based approaches to predict yield and nutrient use efficiency of different forage crops.

Previously, we showed that improved technology such as Greenseeker and Chlorophyll Meter can be used to estimate yield and nutrient use efficiency of hybrid forage maize. FutureDairy also showed that plant based indicators such as N content of maize plant may also be used as an alternative to Greenseeker to diagnose N deficiency and yield of maize.

Recently, we investigated the potentials of APSIM (Agriculture Production System Simulator Modelling) to predict yield and nutrient (water and nitrogen) use efficiency of an annual triple crop complementary forage rotation (CFR). The annual CFR cycle consisted of maize in summer, forage rape in autumn-winter and field peas in spring.

To simulate CFR using APSIM, a field test site was established at our May Farm research site, Camden. A triple crop CFR cycle of maize, forage rape and field pea was grown from October, 2008 to October, 2009.

Maize (Pioneer 31H50) was grown with pre- (0 and 135 kg N/ha) and post-sown fertiliser N (0, 79, 158 kg N/ha). Forage rape (Goliath) was grown without or with 230 kg fertiliser N applied at three splits. Field pea (Morgan) was grown without fertiliser N.

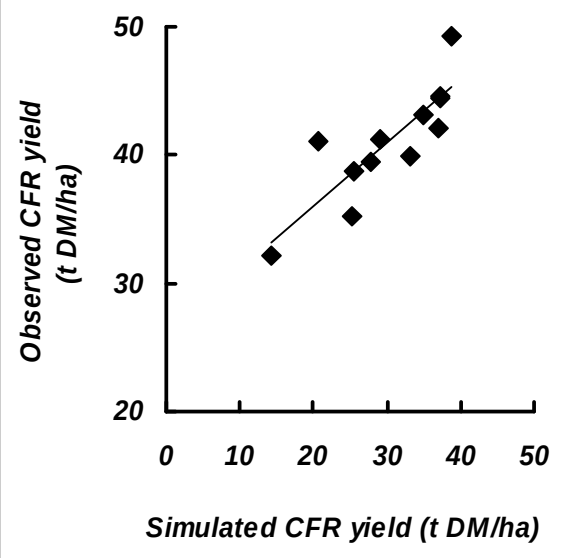


Figure 1. Simulated vs. observed yield (t DM/ha) of complementary forages at Camden (R^2 = 0.71)

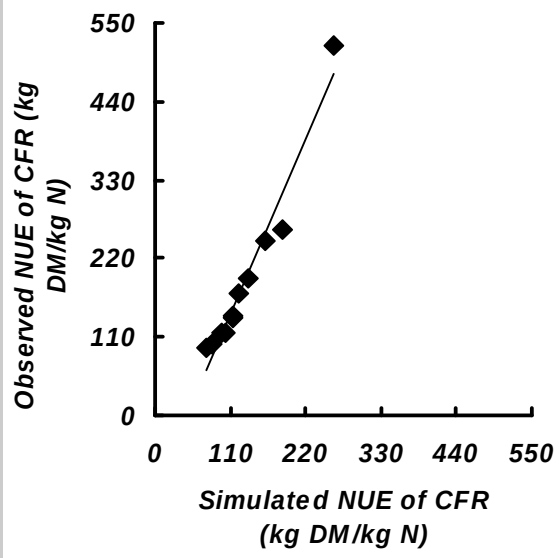


Figure 2. Simulated vs. observed nitrogen use efficiency (NUE, kg DM/kg N) of complementary forages at Camden (R^2 = 0.96)

FEEDBASE (cont)

SIMULATION OF AN ANNUAL TRIPLE CROP COMPLEMENTARY FORAGE ROTATION USING APSIM (CONT)

Sowing and harvesting dates for maize were 20 October and 16 February, respectively; for forage rape dates were 20 February and 10 August (3 cuts were made); and for maple pea dates were 12 August and 13 October, respectively.

Seeding rates of maize, forage rape and maple pea were 100000 seed, 5kg and 210 kg per ha, respectively. Water was non-limiting.

Yield, nitrogen use efficiency (NUE) and water used efficiency (WUE) of whole CFR data obtained from this trial were simulated using APSIM using the same agronomic and management rules described above.

It was found that APSIM can effectively simulate total dry matter yield (R^2 = 0.71; Figure 1), nitrogen use efficiency (R^2 = 0.96; Figure 2) and water use efficiency (R^2 = 0.72; Figure 3) of the test site Camden. Based on these results, we used APSIM to simulate CFR in 3 key regions. APSIM simulated the 40t DM/ha (Figure 4) at Camden with accuracy. Results show that similar yields are possible in the Hunter Valley and North Coast of NSW. In Northern Victoria however, it appears that latitude and temperature have a toll on yield, as only 30t DM/ha were 'grown' by APSIM.

Overall, this work indicates that APSIM has the potential to simulate yield and nutrient use efficiency of an annual triple crop CFR with relatively high accuracy. This will help to develop better forage planning methods for farmers.

For further information contact Dr Rafiq Islam at md.islam@sydney.edu.au

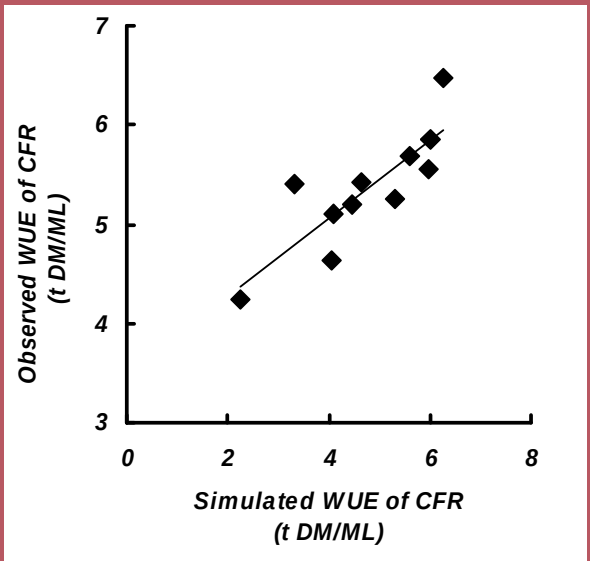


Figure 3. Simulated vs. observed irrigation water use efficiency (WUE, t DM/ML water) of complementary forages at Camden (R^2 = 0.72)

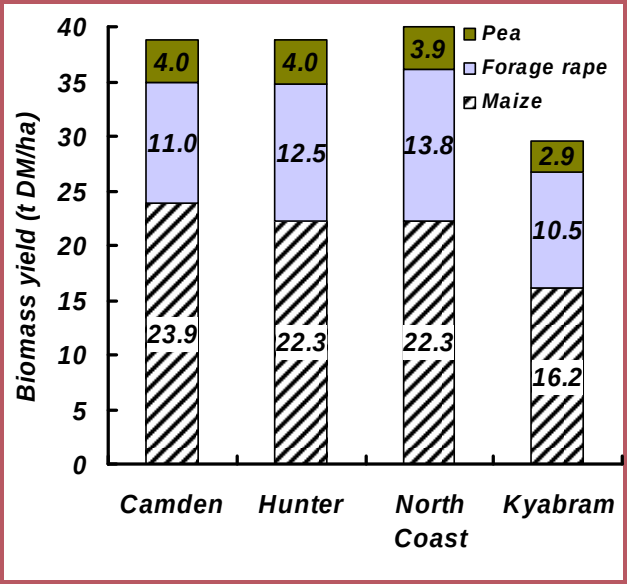


Figure 4. Simulated biomass yield (t DM/ha) of complementary forages in different regional sites with non-limiting fertiliser N (523 kg/ha) and irrigation water (5.7 – 6.9 ML)

FUTUREDAIRY

FEEDBASE (cont)

NORTHERN VICTORIA PROJECT UPDATE

By Michael Campbell

The Northern Victoria project has established 4 case study farms that have been monitored on a fortnightly basis since last October. Initial base line information has been captured for each of the farms and a forage planning exercise has been carried out by PhD student Michael Campbell with the farmers.

This forage planning was undertaken to coincide with pastures and crops sowing this autumn.

The farmers have been actively involved in the monitoring with feed samples being taken each fortnight and analysed at the laboratory in Wagga Wagga.

This feed quality data will be used to describe the feed year on each of the farms and enable a more accurate assessment of the diet composition against milk production.

The next stage of the project is to finalise the forage planning and continue with the monitoring on-farm.

For more information contact Michael Campbell at michael.campbell@sydney.edu.au

FURTHER INFORMATION

If you'd like further details on any item in this newsletter please contact us on

+61 2 9351 1631

or at

vetscience.dairyresearch@sydney.edu.au

FEEDBASE (cont)

HUNTER VALLEY PROJECT UPDATE

By Yani Garcia

Progress continues with the 6 farms involved in the Hunter Valley project. After a successful first year in which all farms improved the amount of home grown feed by using Complementary Feeding Systems (CFS) principles developed by FutureDairy, farmers are well on track to push productivity even higher this year.

The project is a collaborative effort between FutureDairy, the extension department of I&I NSW and the 6 farmers in the Hunter.

Anthea Lisle and Kerry Kempton looking at brassica-sorghum intercropping

A key outcome of the 1st year evaluation was the need to improve irrigation management of summer crops. Livestock officer (dairy) Anthea Lisle helped the farmers to install different simple soil moisture monitoring systems to assist with the decision making of when to irrigate. Farmers found these monitoring tools really practical and it appears that the benefits will be seen into higher yields of maize and sorghum crops this summer. Farmers Ian Simpson, George Allen, Ross McDarmont and manager Tim Freeman who achieved ~15 -18 t maize silage DM/ha last year are expecting to harvest over 20 t DM/ha this year, despite the very hot summer.

Forage rape intersown with sorghum

A very important outcome of this project is the increased understanding of how farmers make eedbase decisions on farm.

FEEDBASE (cont)

HUNTER VALLEY PROJECT UPDATE (cont)

For instance, while achieving highest possible yields was a priority for farmer Rodney Richardson in the 2009-2010 summer, the good spring season meant that he has a lot of extra feed conserved. Therefore he opted to follow up quality more than quantity in the CFS area this year.

Other farmers are showing very innovative options to increase both quantity and quality over summer.

This is the case of Dave Butler (Denman), who sowed sorghum in November with 2 kg of brassica (forage rape). Dave was very happy with this combination (see photo) and plans to repeat it this spring.

David Williams in the lower Hunter is the most pasture-based of all 6 farms and continues with his perennial ryegrass-based pastures. The least productive pastures are selected for renewal each year; drilled with sorghum (BMR) first and then short rotation ryegrass before going back to perennial again.

Livestock officer (Dairy) Kerry Kempton is helping the Lower Hunter farmers.

For more information please contact Yani Garcia (sergio.garcia@sydney.edu.au) or Anthea/Kerry at anthea.lisle@industry.nsw.gov.au / kerry.kempton@industry.nsw.gov.au.

Lower Hunter Valley farmer George Allen inspecting the brassica-sorghum intercrop at Dave Butler's farm near Denman, NSW

FEEDBASE (cont)

NITROGEN ON DAIRY FARMS

FutureDairy's research has found that a complementary forage system (CFS) achieved the most efficient use of nitrogen at the 'whole farm level,' compared with other dairying systems used around the world.

A CFS involves allocating a portion of the farm to intensive forage production to increase productivity from home-grown feed. It usually involves growing forage crops, sometimes double or triple cropping. Crops are selected to complement each other. For example they may include a legume for nitrogen fixation, a bulk crop such as a cereal or maize for silage, and a brassica (forage rape) to break pest and disease cycles.

FutureDairy project leader, Associate Professor Yani Garcia, said the research – conducted by postgraduate student, Santiago Farina – measured the nitrogen efficiency for FutureDairy's CFS farmlet study and compared the results with other dairy systems studied throughout Australia and internationally.

The CFS in FutureDairy's trial at Camden near Sydney involved allocating 35% of the farm for double or triple cropping, with the rest of the farm used for intensively managed pasture.

Under this CFS, 45% of all nitrogen entering the farm was converted into milk. This compares with an average of about 26% for Australian dairy farms and about 16% overseas.

"At 45% nitrogen efficiency, FutureDairy's complementary forage system converted more than one and a half times the amount of nitrogen into milk than the average for Australian dairy farms," said Assoc Professor Garcia.

The key to the nitrogen efficiency of the CFS is the higher amount of milk produced from home-grown feed. This came from the combination of the bulk crop (eg maize) and a legume crop and the fact that the pasture area in the CFS had high yields (20 t DM/ha) given the leven of nitrogen fertiliser applied (250kg/ha).

Overall the CFS utilised 24.8 t DM/ha/year which meant that the nitrogen entering the farm as bought-in feed was minimised with cows receiving about 1t DM concentrates/cow/lactation.

Santiago Farina has completed his PhD with FutureDairy

NITROGEN ON DAIRY FARMS (cont)

Compared with other intensification systems such as relying heavily on purchased feed, the CFS has a lower potential environmental impact, in terms of producing more milk per unit of nitrogen entering the farm.

“The CFS gives dairy farmers another option for increasing their farm productivity in a sustainable way,” Assoc Professor Garcia said.

For further information contact Assoc. Prof. Yani Garcia at sergio.garcia@sydney.edu.au

ANTIOXIDANT SUPPLEMENTATION CAN IMPROVE THE PRODUCTIVE AND REPRODUCTIVE PERFORMANCE OF YOUR COWS

Though fresh forages are typically considered capable of supplying adequate levels of antioxidants for dairy cattle, the availability of these compounds for lactating grazing cows is diminished when pasture availability is not adequate to meet their energy requirements.

In this situation the gap between energy required for milk production and energy intake is often met by supplementing cows with conserved forages like silage. Silage is known for its poor antioxidant content and thus this might expose cows to oxidative stress. This in turn can result in disease and reproductive problems.

The use of herbs as additives in livestock nutrition, as an alternative to other chemical compounds, is a new goal in livestock production.

Yerba Mate tea (*Ilex paraguariensis*) has antioxidant activity due to its content of several compounds such as polyphenols. In a recent study we have demonstrated that the supplementation of dairy cows’ diet with Yerba Mate during mid lactation improves milk yield when cows are fed with maize silage.

In a subsequent trial we fed Yerba Mate during the dry period. Preliminary results suggest that Yerba Mate supplemented cows produced on average an extra 2 litres of milk, although more detailed analyses are still pending.

Interestingly, pregnancy rate appeared to be higher in the Yerba Mate supplemented group.

This seems to indicate that nutritional manipulation during the dry period with Yerba Mate has the potential to improve production, reproduction and health. This offers novel strategies to improve farmers’ profitability and have their product branded as having been produced with clean, green and ethical practices.

For further information please contact Dr Pietro Celi at pietro.celi@sydney.edu.au.

CAMDEN FARMS

Work has recently started on a new irrigation system at **Corstorphine Dairy** Farm through a grant from the Nepean-Hawksbury Catchment Management Authority via the IINSW Smart Farms Project that also upgraded the irrigation system at Westwood late last year.

Corstorphine is being fitted with a fully automated fixed irrigation system involving 104 big gun water cannons. This will allow us to water the enitre farm except the areas already covered by the exsisitng pivot system.

An automated system allows for a cut in labour requirements from about 4-5 hours to 20 minutes daily.

We now have the ability to water 24/7 if required but importantly, the water is applied when and where needed resulting in a great reduction in the amounts of water being removed from the river.

After some operational teething problems, Westwood Farm's new system is working and is allowing us to put 30mm on the 40 hectares of land in just 4 days.

Once again our sincere thanks must go to Industry and Investment NSW and the Nepean-Hawksbury Catchment Management Authority for their support in accomplishing this.

For further information please contact Farms Manager Kim McKean at kim.mckean@sydney.edu.au

Above, below and left: Ongoing works to complete the new irrigation system at Corstorphine.

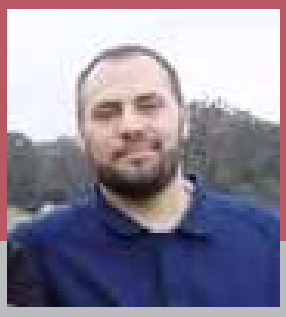
POST-GRADUATE STUDENTS

Masters student
Helen Golder

Helen Golder

This year I successfully upgraded my Masters project, which is investigating if the sugar and histidine (amino acid) content of pasture is increasing the risk of subclinical acidosis, to a PhD. We have seen large increases in lactic acid production in the rumen of heifers fed sugar in comparison to those fed grain. I am currently finialising the statistical analysis on these results and am submitting a summary of my work and findings to be presented in America later this year. I have also been investigating oxidative stress levels in plasma samples taken from my heifers fed grain, sugar and histidine.

PhD student
Anas Al-Makhzoomi



Anas Al-Makhzoomi

I am now in the final stage of writing a comprehensive review of literature for my PhD project. The core idea of my project is to assess reproductive wastage in high-producing dairy cows.

There is a perception in the Australian dairy industry that heifer fertility is not adversely affected by selection for high milk production, with difficulties only arising once cows are lactating. I am currently reassessing the effect of genetic merit per se on heifer fertility and to see if this effect is disentangled or not from of the effects of metabolic load of lactation. If the low genetic merit heifers have better fertility than high genetic merit heifers, it may be suggested to consider a wider inclusion of functional traits (such as fertility, health and longevity, calving ease, udder health) in breeding programs in order to secure an acceptable fertility, sustained milk production and the best welfare of dairy cows.

POST-GRADUATE STUDENTS (cont)

Masters student Rene Kolbach

Rene Kolbach

Time is passing by at a high speed. I have already been in Australia for one year while working on my Masters project around the new Automatic Milking Rotary (AMR™, DeLaval).

We are now at the stage of 24/7 operation, which will give us the opportunity to do more trials around a voluntary AMR system. We will face some challenges along the way, but I'm already looking forward to showing you results of our studies in future newsletters.

My studies will focus around the operational routines and capabilities of the AMR, whilst also investigating the accuracy and reliability of the technology.

New Post Grad student Tori Scott

Tori Scott

In 2010 I graduated from the Veterinary Faculty, University of Sydney, with a Bachelor of Animal and Veterinary Bioscience. I have returned to student life, having commenced a PhD at the beginning of Feb 2011 with the University of Sydney and will be working within the FutureDairy3 research team. My research area will be within AMS, and will be closely linked to research investigating AMS in a whole-farm system.

Santiago Farina

Santiago (far right) with the rest of the harvest team in 2010

I have received the corrections from the 3 reviewers in January, and happy because they have been mainly minor ones. I'm working on them now (on the weekends) and hopefully will be able to send them in the next couple of weeks.

Work is going very well. I'm based in Seaford, East of Melbourne and my time is split between consultancy of Gippsland dairy farms and the development of factsheets for top-farmers and advisors based on the 3030 Project research and on-farm experiences in the past 5 years. It's quite enjoyable being able to apply on-farm what I've learnt during my work with FutureDairy and at the same time learning lots too!

PhD student
Michael Campbell

Masters student
Nicolas Lyons

POST-GRADUATE STUDENTS (cont)

Michael Campbell

Michael is now in the swing of his research down in Northern Victoria and things are going very well. For a full update please read his update on page 9

Nicolas Lyons

Nicolas is involved in the research out at our AMR farm in Camden.

For a full update please read the article on page 5

ANNUAL GENERAL MEETING
and
COUNCIL MEETING
of the
DAIRY RESEARCH FOUNDATION

Thursday 14th April 2011

Please contact us on 02 4655 0631
for further details

VISITORS TO CAMDEN

Eline Spalink

Visiting student
Eline Spalink

Hello, I am Eline Spalink and I am visiting from the Netherlands.

Since arriving in December last year Lamberth van der Steege and I have been doing our final project of the Bachelor Agricultural Entrepreneurship. We are studying at Van Hall Larenstein, University of Applied Science.

The graduate project we are completing is a feasibility study on increasing the herd size of the Camden farms under the new milk pricing system.

My parents have a dairy farm on which I often work. It is great to have the chance to experience the way of dairy farming in Australia. Drawing comparisons on how things are dealt with here and back home gives you great opportunities to get a broader knowledge on dairy farming in general.

University of Applied Sciences
VAN HALL LARENSTEIN
PART OF WAGENINGEN UR

Lamberth van der Steege

Visiting student
Lamberth van der Steege

Hello, my name is Lamberth van der Steege. I am from the North-East of the Netherlands where I grew up on a dairy farm. At the moment our dairy farm is combined with biogas production and broad acre farming.

During my study I have gained some experience in the field by working on a dairy farm in Canada and doing a traineeship with a company that sells milk replacers directly to farmers.

As Eline already stated, we are doing our final graduation project of the Bachelor Agricultural Entrepreneurship on Camden farms. Our study is on 'Increasing the herd size under the new two tiered milk pricing system'.

It is very interesting to see all the operating facets of Camden farms and in particular the pasture management. Also getting more insight into how the dairy market works over here is a great learning opportunity for me.

I think it is good to gain more knowledge about the practices farmers are undertaking in different climates.

The project will be finished by the end of March and we hope to come up with strong recommendations on future strategies for the Camden Farms.

Many thanks

VISITORS TO CAMDEN (cont)

Klaas-Willem Nieuwland

I am studying dairy farming at the University of Applied Science 'Van Hall Larenstein' Leeuwarden, The Netherlands. The subjects we treat on this course vary from Human Resource management to Animal Health. The is a 4 year course. In the first year of the course I went to New Zealand to work on a dairy farm for four months.

After I finish school I am planning to go into a business partnership with my parents on their 150 cow dairy farm..

I am currently in the last year of the course, in which we have to do our graduation project. In this project we have to conduct a research as a final part of our study. I will be part of a research project concerning the impact of growth stage of Kikuyu on the potential intake, rumen function and milk production.

Dr Sanata Kumar Mahanta will visit under the Australian Governments Endeavour Research Fellowship Program.

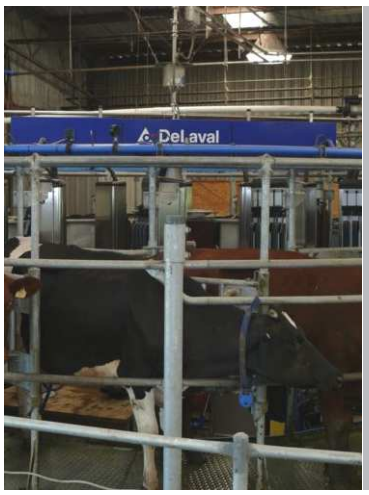
Dr. Sanat Kumar Mahanta will be joining the FutureDairy team from India in the middle of March under the Endeavour Research Fellowship Program, Department of Education, Employment and Workplace Relations, Australian Goverrnment.

He has been honoured and presented with an Endeavour Award by the Australian High Commissioner to India, Mr. Peter Varghese AO on February 16, 2011 in New Delhi.

Dr Mahanta will carry out a 4 month program on 'Development of forage based feeding systems for high yielding dairy animals' under the Supervision of Yani Garcia, the Foundations Director.

In fact, sustainable dairy production systems are facing the dual challenge of producing more milk with less use of grain (due to increased competition with human needs and fuel), while at the same time decreasing their environmental footprint. This means that future dairy feeding practices will have to change towards the use of diets more based on forages than grains.

Dr. Mahanta has been a Senior Scientist in Animal Nutrition at Indian Grassland and Fodder Research Institute, Jhansi, India for the last 15 years with ample experience on nutritional evaluation of tropical forages and development of forage based feeding systems for ruminant animals. We are certain that he will add greatly to our research capability on FutureDairy programs.



The

DAIRY RESEARCH FOUNDATION

presents its

2011 ANNUAL SYMPOSIUM

July 6-7

July 2011

Sun	Mon	Tues	Wed	Thu	Fri	Sat
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3	4	5	6	7	8	9
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31						

Notes:

July 5 - Dairy NSW and NSW Farmers (Dairy) events

July 6-7 - Camden DRF Symposium

Both at Sydney Uni Camden Campus

THE UNIVERSITY OF SYDNEY

DAIRY RESEARCH FOUNDATION

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