

Subtropical Dairy

Annual Report 2002-2003

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Kempsey

Subtropical Dairy Program Ltd

Annual Report 2002-2003



DAIRY RESEARCH
AND DEVELOPMENT
CORPORATION



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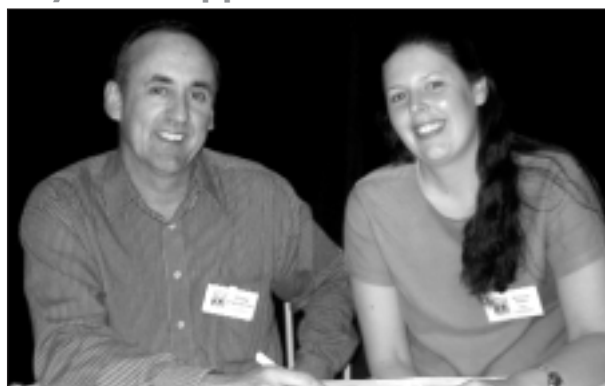
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Annual forum at Coffs Harbour



Deputy chair of the Subtropical Dairy Management Committee Laurie Dunne at the 2003 Annual Forum at Coffs Harbour with Julie-Louise Miller, Dairy Australia, Melbourne.

Key NRM appointment



Subtropical Dairy Program Manager Philip Chamberlain with newly appointed Natural Resource Management Coordinator Bronwyn Fisher.



Challenge to focus on the future

Chairman's Review

Shane Gittins

It would be a nice change to start my annual report with good news on the weather front. Once again the majority of Subtropical Australia has continued with dry conditions. Some relief rain has fallen in a number of regions, but water storage levels are still at an all time low. In the last 12 months subtropical dairy farmers have battled with low rainfall, high feed prices and a reduction in milk price. This has once again led to a reduction in supplier numbers and the total litreage of milk produced. The contraction of the northern industry is not isolated, with all regions across Australia following a similar trend, for the same reasons as ours. All of this poses an interesting challenge for Subtropical Dairy. As I have said in the past we must ensure the needs of our farmers of the future are being met with outcome focused projects. While this is still essential we must

also show all of our current farmers that we do have a future in the Australian dairy industry that will be profitable and sustainable.

The commercial reality is that we now operate in an internationally competitive environment and our milk prices will be linked to the highs and lows of our southern counterparts.

This brings many changes to the way we farm and the way we will run our farming businesses into the future.

Subtropical Dairy is working across many projects and groups ensuring key issues affecting our industry now and into the future are being addressed as shown in this annual report.

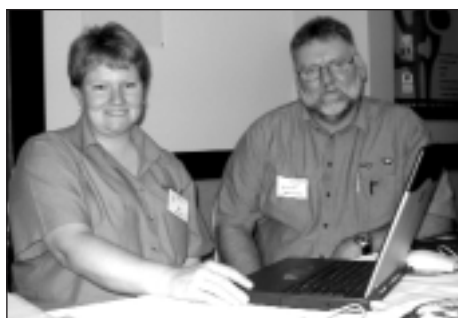
The formation of Dairy Australia on the 1st of July 2003 went smoothly and now Subtropical Dairy is one of the 8 regional development programs working with DA to enhance the economic and environmental well being of the dairy industry through effective research, development, extension and training.

Our role is being seen as essential for the development of Subtropical Australia and an integral part is working with farmers.

Our major link with farmers is through our sub-regional teams and I would like to thank all members for their work and involvement.

I would also like to thank Phil Chamberlain for his help and commitment to the success of Subtropical Dairy.

Dairyinfo.biz website launched



Promoting the industry website dairyinfo.biz at the Annual Forum at Coffs Harbour were the website manager Di Gresham and Geoff Johnston, Queensland Department of Primary Industries.

Subtropical Dairy has supported the launch of an industry website dairyinfo.biz. It has been developed from a collection of ideas into an interactive and dynamic project delivering real value to its farmer audience.

The website is intended to be a shared warehouse of knowledge for the entire Subtropical dairy region.

Webmaster Di Gresham said the aim was to ensure that as many people as possible contribute to the knowledge base so that it further develops and becomes a comprehensive source of valuable information.

Keeping farmers up to date is also the priority from a Subtropical Dairy organisational perspective. There has always been a length of time between research results being finalised and that information getting into journals and research papers.

The site hosts the web extension services of a number of research projects including Dairy Technical Information, Heatload and the Qld Dairy Accounting Scheme. Dairyinfo is also the gateway for the online presence of Subtropical Dairy and the Australian Dairy Conference.

Dairyinfo.biz also provides email communication tools including forums and chat functions. It hosts the popular women in dairy email group which allows women from all over the country to exchange opinions and share knowledge. Dairyinfo.biz has been developed with the assistance of Queensland's Department of Primary Industries and Dairy Australia.

Further information contact Di Gresham

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Helping producers to remain viable

Program Manager

Philip Chamberlain

Subtropical Dairy has traditionally focused mainly on pasture research that will enhance the feed base for the region in an attempt to improve economic viability.

Whilst this focus has not been lost, the past year has seen the implementation and continuation of a number of initiatives that are designed to assist producers in remaining viable and sustainable through better business management skills, information availability and natural resource management awareness.

These initiatives include;

- The Milk Business project that aims to increase the use of advanced business management principles in the dairy farm businesses, and identify gaps in knowledge and implement research programs to address these needs.
- The M5 Farmlet project at Mutdapilly that aims to compare 5 farming systems, from pasture to feedlot, with a minimum return on investment of 10 percent in a situation of limited water availability.
- Dairyinfo.biz – a new dairy industry website that will allow farmers to remain informed of the latest research results, current industry affairs and keep in touch with farm developments around the world.
- The appointment of a natural resource

management coordinator whose role will be to coordinate current and new NRM projects and assist the dairy industry to be proactive and involved with community groups to develop practical NRM targets and initiatives.

- Two projects that focus on non-chemical control of cattle tick. One to develop genetic markers so that resistant and susceptible cattle can be identified, and the second to develop a method to apply fungus spores to control ticks.

It is becoming clear that farmers are being faced with many issues related to the social aspects of farming, particularly in relation to labour management, family relationships and succession planning, compliance with community expectations as well as lack of motivation, especially with unpredictable seasons.

This was highlighted in a recent survey, where over 80 farmers expressed that the biggest issues they will face over the next 5-7 years will be related to natural resource management, animal welfare, QA and local government compliance issues, as well as their ability to adequately manage their growing businesses with less labour.

The new Subtropical Dairy Annual Operating Plan recognises these constraints and will focus the next few years on two main areas;

1. The social and business aspects of farming – by empowering farmers to manage their farming systems better in all seasons to supply a global market, manage the compliance issues through industry involvement and assistance, and ensure an appropriate lifestyle is achievable for farmers and employees.
2. Focusing research resources into areas where large advances can be made, including improving digestibility of tropical forage as well as breeding a cow that is appropriate to the environment.

We are certainly in a time of hardship in the dairy industry, but I firmly believe that a strong industry will emerge as it has done in the past after times of change, and it is the role of Subtropical Dairy to assist in this transition.

R&D projects top \$3million

Subtropical Dairy conducted projects with a total value of \$3,057,600 during 2002-03.

The Dairy Research and Development Corporation, now Dairy Australia, contributed \$570,424 directly and \$357,700 through national funds.

Other sponsors included the Queensland Department of Primary Industries, NSW Agriculture, National Heritage Trust, the University of Queensland, Pauls Ltd, Dairyfarmers Ltd, NORCO, National Foods, Ridley and the Queensland Dairyfarmers Organisation.

Subtropical Dairy has actively fostered R&D

since it was established as an incorporated body in 1995 to succeed the Northern Dairy Group. It is one of eight Regional Development Programs running across Australia dairying areas which provide a mechanism for dairy farmers to have a strong involvement.

Subtropical Dairy covers all Queensland dairying areas and those in NSW north of Kempsey. The region is managed in seven subregional zones.

The key roles of Subtropical Dairy are to work closely with the dairy community to identify priorities, commission and manage relevant projects for research, development, extension and educational activities.

The goals, issues, priorities and project areas have been developed with strong emphasis on industry consultation. In the past year the Subregional Teams conducted a survey, in which over 100 industry stakeholders were asked to identify the most important issues facing the industry for the near future. This feedback helped shape the Strategic Plan and Annual Operating Plans.



NSW Mid North Coast

Chairman

Jim Desmond

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Secretary

Ross Coomber

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Regional team reports

Youth forum a highlight

Another dry year tested the resolve of farmers on the mid north coast and limited the activities of the Subregional Team. However interest has picked up again with the staging of more frequent meetings, now planned at least bi-monthly. A highlight of the year was the staging of the very successful youth forum coordinated by Ross Coomber and held to coincide with the Subtropical Dairy annual forum in Coffs Harbour in October.

Addressing a wide range of issues relevant to the next generation of dairy farmers, the youth forum was extremely well supported throughout the northern NSW dairying regions with a number of Queensland delegates attending from as far as the Atherton Tableland.

The Subregional Team is looking at running a number of workshops next year in TopFodder and Milk Business as well as trials focused on ryegrass, sunflower silage and triticale as an alternative to oats.

Combined NSW shed tour a big success

A three-day dairy shed tour for farmers from the Mid North Coast and Far North Coast in September proved very successful. It was organised and conducted by NSW Agriculture extension officers Col Griffiths at Kyogle and Ross Coomber, Coffs Harbour.

Following CowTime clinics run in both districts, the group visited a selection of dairies to highlight innovations from yard wash down facilities to effluent collection, separation, storage and re-use systems.

NSW Far North Coast

Chairman

John Sykes

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Secretary

Col Griffith

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Regional team reports

NZ study trip a highlight

A 14 day study trip to New Zealand which enjoyed good support from far north coast dairy farmers was a highlight during the year.

The subregional team funded part of the trip which proved a valuable learning experience for participants.

The SRT has enjoyed increased membership and held five meetings during the year.

Further funding was provided for the publication of successful farming enterprises in the region.

Field trials

A variety of pasture and crop production trials have been conducted showing the benefits of having farmers actively

involved, particularly with trials on local properties.

A maize trial with 3 farms involved aims to increase yield and quality of maize silage.

A brassica trial at Wollongbar Agricultural Institute is seeking to determine the best variety for dairy production from palatability and dry matter yield.

Three trials are being conducted to assess the performance of Amarillo peanut as a summer legume, at Wollongbar and Lower and Upper Richmond. A 3 day bus trip looked at established peanuts around the Gympie area in early November.

A comparison of rolled barley and hammer mill sorghum as a supplement for high producing dairy cows has so far shown sorghum is the better feed.



Darling Downs

Chairman

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Secretary

Mal Maroske

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Regional team reports

Fodder testing project launched

One of the highlights for the Downs group during the year was having a new fodder testing project approved.

The aim of this project is to add to existing data bases on feed analyses so that ration formulation becomes more accurate.

The launch of the dairyinfo.biz website by Geoff Johnson and Di Gresham was well received. Members were enthusiastic about this program and offered good feedback on extra features that could be included on the site.

Updates were provided on some important national projects including Milk Business, Top Fodder Silage and the Milk Protein Project.

Applications are being prepared for two further projects – a labour management and recruitment workshop and a homeopathic remedies booklet.

One of the Downs team members, Paul Anderson, has offered to have a buffalo fly trap placed on his property for a trial period.

Lessons learned

- Last year was a very difficult year for dairy farming because of the drought. It is difficult for farmers in these circumstances to focus on research priorities when they are in survival mode on their properties.
- Members have requested more meetings in the future

Objectives

- Improve productivity and profitability of farmers
- Improved animal health and performance
- Better knowledge to make more informed decisions
- Improved labour management

Burnett

Chair

Gina DeChant Temple

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Secretary

John Miller

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Regional team reports

Farmers leave in a difficult year

The past year for dairy farming in the Burnett region has again been a difficult one. Decreasing returns for milk, extreme high prices especially for feed grain and fodder, along with continuing drought conditions have seen producer returns and any remaining confidence in the industry rapidly evaporate.

One positive for the year was that Exceptional Circumstances drought provisions were granted to the area, although there is debate as to the real value of this to producers.

The year for the Burnett SRT has been a quiet and somewhat disjointed one. All the group members were largely preoccupied in their own businesses managing drought conditions and poor returns. About one third of dairy farmers have left the industry in the Burnett since deregulation. This trend continued during the past year and included 3 members of the Burnett SRT.

Farmer information days

Despite the problems the region did see, and have access to, some activities associated with Subtropical dairy. These included national projects such as the M5 Farmlets trial, Countdown Downunder and CowTime. Two cooperating farms for the M5 trials are in the Burnett and farmer information days were conducted on these farms during the year.

Future challenge

Looking to the future the Burnett SRT will once again need to reinvent itself after the recent departures from the industry of what were some of our younger, long-term, group members.



South East Qld

Chairman

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Secretary

Narelle Kleinschmidt

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Regional team reports

Crowsfoot in pastures

Some work has been completed on the use of chemicals for control of crowsfoot but still more work is needed in the management of pasture to limit its effect on pasture growth. The drought has not been conducive to this work but it is continuing. The next phase relates to the management of pastures along with planting methods to help reduce the crowsfoot dominance.

Mastitis in heifers

Though lessened by the dry weather, the occurrence of mastitis in heifers remains a concern. It has been decided to proceed with a literature review with the aim of collating the current research in other countries to access the future direction for this project.

Byproducts investigation

It became apparent that there was a need to gather information on a range of products being fed to dairy cattle. The hope was to produce a guide to help farmers balance rations by giving a range and average nutritional values. This has now been completed and the final report is awaited.

Pasture grazing rotation

The concept of good grazing rotation has been challenged. While the principal of lighter grazing more often, has its detractors, the committee felt there was sufficient merit to start some basic trials. It may turn out unsuited to the Subtropics as predicted. While the early results of the trial are in, further cutting as well as testing for quality will complete the picture.

Dairying Better N Better 2

There is a need to get together with other players in this region such as Landcare and river catchment groups to begin working with farmers towards reasonably achievable goals for the good of all. The plan to bring this together in the upper Albert catchment has promise and should be starting in the near future.

Length of lactation

The idea of looking at optimum lactation time has been around for a while. The aim is to gather data on the length of existing lactation's in northern cows with a view to further research.

Central Qld

Chairman

Gordon Falls

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Secretary

Charlie Ernst

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Regional team reports

Protein Plu\$ a major achievement

A highlight achievement during the year was getting the extension project Protein Plu\$ off the ground.

This is a major issue in CQ and the regional team played a big role in initiating and developing the project which is now being taken up nationally involving Queensland and Western Australia.

Research on factors affecting milk composition started at the local level in the mid 1990s in a bid to help farmers realise their income potential. With a number of factors interacting, from nutrition and animal condition to farm management strategies, improving protein levels poses a challenge. Upgrading of the research effort to come up with recommendations for farmers is welcomed.

CQ has a leadership role in this important research. The Protein Plu\$ project will consume a major part of the regional team resources and will be an important focus for some team members over the next two to three years.

Water Use Efficiency

A successful forum was held to highlight the major project findings from the Rural Water Use Efficiency Initiative. This practical program to identify best practice use of water and help producers introduce improvements has been well received.

Pasture Nitrate testing

A quick method of field testing ryegrass to determine nitrogen levels has been trialed in the region. Three farms have been involved with testing sap crushed from grass samples collected every fortnight over the ryegrass season. Results to date have not shown a good correlation with conventional testing.

The future

There is a need for a regional development program focusing on young farmer development and producer motivation.



North Qld

Chairman

Des O'Connor

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Secretary

Ian Stewart

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Regional team reports

Controlling paspalum in pastures

In spite of the drought, work has progressed on the SRT-funded trial to control the unpalatable grass *Paspalum mandiocanum*. Three trials have been conducted on a dairy property near Millaa Millaa and at the DPI research station at Walkamin. An attempt to control the weed in old pastures by using selective grass herbicides did not produce satisfactory results. It was then decided to evaluate atrazine during the pasture establishment phase.

This worked well and an on-farm trial has since been established to confirm the effectiveness of using atrazine.

Improving conception rates

Concerns about low conception rates during summer have prompted an investigation of the effects of high temperature and humidity on fertility. The detailed records of about 7500 cows in 25 herds over a two year period will be analysed and correlated against excellent local weather data.

Milk composition studies

As part of a DRDC funded project on the functional properties of milk, samples from six farms scattered over the Tableland are being tested for composition.

Grazing peanut project

Amarillo forage peanut seed is now being produced locally and ways to successfully establish the plants and maintain a good balance of grass and legumes in the pasture are being explored. The Kairi Research Station has just started up a new project that is looking at the use of Amarillo grazing peanut.

Rubber mats

Two rubber mats were made from the treads of old car tyres layered and screwed together. After nine months use, the tyres and screws had proved durable although the screws tended to work loose over time. After an initial curiosity the cows did not object to walking on the mats.

Project Reports

Natural Resource Management

Technical Coordinator

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Rebuilding Soil Productivity

A 6-year project, completed in late 2002, investigated management options to help arrest soil fertility decline, minimise soil erosion and improve forage production in the Darling Downs and Southern Burnett dairy regions. The project focused on tillage practices, nitrogen fertiliser, annual legumes and ley pastures, cropping frequency, and use of feedlot manure.

Principal findings:

Zero Tillage

- A successful option for both harvested and grazed crops.
- No production advantages under a set cropping program but did conserve crop residue and increase cropping flexibility.
- Gave a high level of protection against erosion when combined with summer cropping.
- Particularly beneficial for double cropping in the South Burnett.

Priority Issues

- Water and fertiliser use efficiency
- Effluent retention and recycling
- Soil health
- Industry NRM targets
- Image of farm practices
- Riparian management and biodiversity
- Plant and animal pest control



Nitrogen (N) Fertiliser

- Important for maximising forage production and forage N content.
- Fertiliser N rates for winter crops are generally excessive, whereas standard summer crop rates are too conservative.
- When deciding on crop N requirements, soil productive capacity, farming history, crop type and seasonal factors all need to be considered.
- Significant carryover of applied N from season to season was measured.

Annual Legumes and Ley Pastures

- Annual legumes are well suited to zero tillage and, when grown in rotation with grass forage crops, they offset fertiliser N requirements and increased forage quality.
- Summer legumes gave greater benefits than tropical grasses and warrant more attention.
- Short-term (less than 3 yrs) lucerne based leys are the most useful perennial forage option.

Double Cropping

- Double cropping, with its higher overall forage yield, increased soil organic carbon and gave greater protection against soil erosion.
- Double cropping is most suited to farms in the higher rainfall areas in the region.

Feedlot Manure

- High quality feedlot manure at 15-25 t/ha gave rapid improvements in soil organic carbon and N levels.
- It is desirable and beneficial for farmers to recycle manure from feeding areas to production paddocks.
- Purchased manure will most likely be only economic where the farm is close to the source.

Dairying Better 'n Better

This 3-year project focused on improving irrigation, soil, fertiliser and effluent management practices to gain both production and environmental benefits. The project was completed in late 2002 with the release of the *Dairying Better 'n Better CD Version 2.0* decision support tool for farmer and industry use. Two booklets, *Subtropical Dairying Better Practices Checklist* and *Successful Minimum Tillage on Subtropical Dairy Farms*, were also published and distributed.

Emerging Projects

Dairying Better 'n Better 2

This project aims to:

- Continue promotion of more profitable and environmentally sustainable farming practices.
- Encourage industry partnerships in natural resource management with catchment and other local environmental management groups.

Pilot workshops and farm field days involving dairy farmers, the local regional team and catchment groups in a number of selected catchments are proposed. These activities are designed to identify and action priority management practices.

Riparian Management

This project is being developed to:

- Collate existing information that will assist in the promotion of better riparian management policy and practices.
- Raise awareness and understanding of riparian management issues.
- Produce information and decision support tools to assist practice change.

Related National Projects

Dairying for Tomorrow

National dairy projects *Targets for Change*, *Dairy SAT* and *Dairy Farm Development Planning* have evolved under the industry's Dairying for Tomorrow banner.

Targets for Change

This project aims to develop a process and guidelines for building the industry's capacity to assess environmental issues and establish appropriate targets for practice change.

Dairy SAT

The Dairy Self Assessment Tool project is developing a capability for assessing and recording the industry's environmental management systems and achievements. It aims to establish a national checklist tool that:

- Is adaptable to various industry locations and circumstances.
- Is relevant to, and supported by, farmers and manufacturers.
- Complements other management aids.

Dairy Farm Development Planning

This project broadly encompasses dairy business development and farm planning. The *Dairying Better 'n Better 2* project intends to trial the *Targets for Change* process and *Dairy SAT* in its workshop activities.

Water Use Efficiency

Waterwise (NSW) and *Irrigation for Profit*, the dairy and lucerne industry component of the Queensland Rural Water Use Efficiency Initiative (QRWUEI), have continued over the past year to substantially contribute to the improvement of irrigation management, water savings and production gains within the subtropical dairy industry.

Environmental Management

Dairy Environmental Management Systems is a new NSW Agriculture project funded by the Natural Heritage Trust.

The project aims to:

- Examine the use of an EMS approach within dairy businesses.
- Evaluate the effectiveness of this tool in supporting sustainable dairying practices.



Project Reports

Feed Systems Management

Technical Coordinator

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Drought affects key projects

Continuing drought has had a significant impact on many projects. It has increased costs in the Mutdapilly farmlets, reduced pasture quality in the feeding under heat stress project, and slowed the establishment and growth of forage peanuts at Kairi and on farms. However all projects have continued to provide valuable lessons. The drought has also stimulated interest in the milk protein and Top Fodder projects.

Mutdapilly Farmlets

This comprehensive systems project was established in 2001 as a learning platform for the northern industry undergoing such rapid change.

The project has established 20-cow physical farmlet models of each farming system at Mutdapilly and, together with data from 23 companion farms throughout Queensland and Northern New South Wales, is evaluating these systems in five streams of investigation. Key findings to date:

Production

At the end of the second year of the project all the farmlets are on track to achieve their modelled production goals, despite drought conditions. Milk production per cow has been 7040, 6560, 7300, 7100 and 9650 for farmlets 1 to 5 respectively.

Water use efficiency

Ryegrass proved the most water efficient of the temperate forages. Maize was most efficient in summer although forage sorghum was more efficient when water became limiting. Highest water efficiency was from crops of maize and forage sorghum, about twice that from pastures.

Sustainability

Soil sampling has shown substantial residual nitrate-N levels at the end of the growing seasons. This suggests that rates of nitrogen fertiliser recommended as best practice have generally provided an excess of supply to crop requirements in the farmlets during the first 18 months of the project.

Business management

Real results from the farmlets are used where they are applicable and imputed costs are used for items like herd, shed and other variable costs.

Supplementary feeding

An experiment feeding hay to cows housed on a shade/sprinkler feedpad during heat stress conditions lowered heat stress but made little difference to milk production as cows compensated by grazing more at night.

The feeding of a silage/grain mix on the milk production and intake of cows in pasture-based systems during autumn demonstrated that there was no benefit in milk production to feeding additional protein above current recommendations.

Warm season legumes

The main thrust is the use of Amarillo forage peanut in raingrown pastures, but it also includes the use of other legumes such as Shaw creeping vigna, villamix and Cardillo.

Ways of introducing pinto peanut into existing grass pasture were investigated in a small plot experiment at Kairi Research Station in 2002/03. Direct drilling has proved very effective.

A component of the project aims to increase the use of legumes in tropical mixed pastures in dairying areas receiving more than 1000 mm of rain annually.

Peanut seed production

Amarillo forage peanut was released in 1989. However problems with seed production and seed storage during the 1990s almost ended the development of Amarillo. Commercial seed crops were moved to north Queensland in 1999. The DPI seed production unit at Walkamin Research Station has been working with Graham Godfrey to investigate crop development.

Lifting summer protein

A national project to improve summer milk protein levels with the Queensland DPI as lead agency began in June 2003.

The need for the project was highlighted by ADHIS data which shows about 50 percent of cow records from the Western Dairy region and 30 percent from the Subtropical Dairy region failing the ANZFA standard for milk protein percentage. At farm level this is reducing average annual income by \$12000 or more.

Improving silage quality

TOPFODDER Silage is a national project aimed at improving the quality of silage produced on Australian farms. Greater benefits can be gained by focusing on quality and wastage. Increasing the feed value of silage by one megajoule/kg dry matter will potentially boost milk production by 2-3 litres of milk per cow per day.



Project Reports

Whole Farm Management

Technical Coordinator

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Improving business skills

The Milk Business project has now been going for 18 months.

The objective is to increase the use of advanced business management principles by dairy farmers.

It takes a business approach which links personal goals and farm technology to the achievement of business goals. The broad process is to assess the owners goals and objectives, analyse the business, identify gaps and the key drivers of change, develop scenarios for getting to goals, test these out in terms of risk and other issues, plan the detail of how to phase the changes in, and fine tune for other implications such as taxation.

The focus is always on business, or dollars, and the farm becomes subjective to the business goals. For example to identify gaps refers to gaps in business performance, such as return on assets and debt repayment capacity, and not gaps that may be evident in the management of the farm. This distinction between business management and farm management has been very important in assisting people understand the Milk Business process.

The curriculum consists of a manual, worksheets and a generic case study, Bob and Betty which was developed from the Mutdapilly farmlets. Marvin Hoekema took the lead in developing the manual and worksheets, with editorial input from the management team. Marvin and Graeme Busby developed the Bob and Betty case study.

State workshops deliver the program in 4 to 6 sessions. Between workshops participants worked in groups to follow this process through with a real case study in each region. Six cases were developed in Queensland and 4 in New South Wales.

Participants leave the state workshop series with the experience, skills and supporting documentation to conduct regional workshops with milk producers, and to lead discussions of individual topics at farmer meetings.

Delivering Milk Business

The University of Queensland has subcontracted NSWAg and QDPI to coordinate the delivery of Milk Business to dairy farmers in the two states. The contract is to train 100 farmers to the level of understanding and 400 to the level of awareness.

The management committee will continue to support these activities, through planning, financial support, materials and equipment, and involvement of Marvin.

The two states have formed a joint working party to develop tools including:

1. Herd dynamic model
2. 5-10 year cash flow
3. cash flow spreadsheet
4. loan calculator
5. analysing change template
6. statement of assets and liabilities
7. manual (Vic and/or Qld/NSW)
8. selected spreadsheets from Marvin

The key elements for delivery in each state are:

New South Wales

- Two day workshops, consistent across the state
- Ten regional workshop series
- Use of focus farms in these workshops
- Use of Bob and Betty case study
- Shared comparative analyses with DPI Queensland and Tony Dowman model
- Workshop for agribusiness

Queensland

- Base around QDAS groups in initial phase
- Use Bob and Betty case study
- Milk producer to work through own data
- Two day workshops, consistent across the state
- Two follow up days 2 and 3 weeks later
- Technical manual for use across the two states
- Eight regional workshop series

An important aspect of delivery is to engage private consultants. Milk Business delivery is intended to generate an increased level of demand for business planning skills from milk producers, and only consultants will be in a position to follow through with detailed service to individual producers.

Milk Business Research

Gary Issar is doing his PhD in association with Milk Business, on risk management in the milk supply chain, particularly for the producer.

Helen Todd is studying issues facing families on farms where milk production is expanding rapidly. This is part of the Mutdapilly project, but links to Milk Business have become important to the study. The interaction of family and business goals is very strong on northern Australian dairy farms.

VicGatton project

The Victorian DPI is also training dairy advisers in Milk Business, under the name of VicGatton. They intend training 80 advisers at this stage. The manual from Milk Business is being rewritten.



Project Reports

Animal Management

Technical Coordinator

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Countdown Downunder

There has been strong support and positive feedback for the national Countdown Downunder program in the Subtropical Dairy region with mastitis management courses and workshops held from northern NSW to the Atherton Tableland.

The program offers a wealth of information on managing mastitis. The program challenges participants to 'close the gap' between their current practice and best practice as recommended by the Farm Guidelines. Courses are limited to 21 participants to encourage interaction and vigorous discussion.

Twenty-four topics are covered in the course including teat biology, calving management, teat disinfection, milking routines, milking machines, clinical case management, dry cow treatment and culling.

The topics are based on real farm scenarios, current farm activities, discussion in small groups and demonstrations. Topics within the course are woven together by four themes to support the management planning process and two basic biological principles.

Over the course, participants build a Mastitis and Milk Quality Action Plan for their individual farms using the Farm Guideline recommendations.

CowTime launched

The CowTime Course is an intensive farmer group training program that works through the process of setting milk harvesting targets and developing a plan for improvements.

It has been launched nationally following a successful pilot program held on the Atherton Tablelands. A series of Shed Shake Up Days in Queensland in October were well attended.

CowTime examines every step of the milking program from bringing in the cows to dairy wash down.

Fungal treatment for ticks

Consecutive successful field trials at Mutdapilly Research Station this year have highlighted the potential of the fungal biopesticide. A pen trial in March compared two different treatments.

The effects on the ticks on cattle only reflect a portion of the potential of the biopesticide. Engorged ticks that did not die were collected off the heifers for 3 days after treatment and were monitored for death and egg laying under controlled conditions in the laboratory. Egg laying was reduced to very low levels. The egg laying results are important as they show what will happen to future tick generation numbers. Several funding bodies have been approached to continue this work.

Buffalo fly trap

A trial has been planned demonstrate the effectiveness of the Buffalo Fly Tunnel trap in reducing fly numbers on dairy cattle over a fly season in several different dairying areas.

It is proposed that there be at least five to seven evaluation sites, one being Mutdapilly Research Station.

Project Reports

Human Resources Management

Technical Coordinator

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Surveys shows progress

Action has been taken on most of the 8 recommendations from the evaluation report conducted during 2002.

The first concerned the number and quality of ideas for research coming from the dairy community. The result is that

ideas are coming through at least two channels but there is still concern that these may not represent the most pressing needs. The second was about the impact of projects. There is no consistent record kept of what extension and information sharing is occurring by Subregional Teams. More consistent reporting at meetings so that activities are recorded in the minutes is the easiest way of keeping track of these activities. Once these activities are known, SRT members will have a better idea of the impact of their projects.

Recommendations three and four were about requests for information on projects and the Subtropical Dairy to go on the website. This has happened.

Recommendation five was about motivation. A suggestion was to invite a motivational speaker for this year's Annual Forum. The function of the Management Committee was the



subject of recommendation six. Committee procedures and content are now regularly reported on. The other area – relationship with the SRTs is reported inconsistently. Action on the seventh recommendation takes place next year. It concerned the impact of Subtropical Dairy and the SRTs to an outside audience. The final recommendation is again about motivation and will be addressed at the Annual Forum.

SRT views sought

A total of 51 members of the SRTs contributed their views and opinions. They were asked questions about: their involvement with their SRT, their expectations of it, benefits to them of their involvement, benefits to their communities, how they know about what their dairy community wants researched, and what they do.

When asked about the expectations members have of their SRT, it corresponded to the benefits they received from it. That is they expected and received information, access to expert help and contributed to research ideas.

Respondents stated that members of SRTs collected research ideas, worked on projects and passed on information. Research ideas from the dairy community are mainly collected through the SRT meeting process, from SRT members as well as through informal talks and at other meetings. Information is passed back to the dairy community through a similar path although newsletters also featured in that process. Where they thought their SRT could improve was to communicate more, motivate farmers and meet more often.

Respondents focused on the negative aspects of dairying such as prices and drought. However, a significant proportion also stated that involvement with the SRT had been a positive experience.

Management Committee

Improvements to meeting procedure continue to be made because of the review reports. Review information about the content the Management Committee is dealing with is now coming through. Assessments can be made about gaps and inconsistencies when a clearer picture emerges. Data about SRT relationships with the Management Committee is not being collected consistently at this stage.

Recommendations

1. There needs to be a way of reassuring the Management Committee and SRT members that the research carried out, and funding spent, is for the most urgent and pressing needs.
2. The extension activities of the SRTs needs to be consistently reported in the minutes of meetings so that the number and variety of activities can be recorded for the information of other SRTs and for the purposes of tracking

the impact of projects. The impact cannot be evaluated if there is no record of where the messages have gone.

3. The evaluator assessed 12 months of MC minutes to ensure that core business covers all areas of the Annual Operating Plan. If there are gaps, alert the MC and recommend that they make a decision.

SRT survey results

1. From the information provided through the survey, less than half the members of most SRTs are involved in projects or on farm trials. The question needs to be asked at SRT meetings, and through the survey in 2004, if this is desirable for members or not and appropriate action taken.
2. More communication with the dairy community was raised as an issue. This matter should be raised at the Annual Forum and ideas sought about what has been found to be useful and appropriate by the group. It should also be canvassed when MC members responsible for liaising with the SRTs talk to SRTs ahead of each MC meeting.
3. Lack of motivation of dairy farmers for dairying in the face of drought, the continuing effects of deregulation and lower prices needs to be addressed. It was raised as a major factor in last year's survey also. It needs discussion at the Annual Forum and should also be canvassed when MC members responsible for liaising with the SRTs talk to SRTs ahead of each MC meeting.
4. SRT and SD members are still uncertain about the priority of research ideas flowing through from the dairy community. There is no mechanism for validating the importance of the needs expressed in the ideas. It is recommended that at the Annual Forum participants discuss a method of attaching a priority to the research idea. It should also be canvassed by MC members responsible for liaising with the SRTs.

Management Committee

Reporting on meeting procedure has resulted in improvements in that area and the effort needs to be maintained.

1. Reports about content still need to be monitored over time to see if there are gaps in the AOP.
2. There are a number of issues raised by the SRT members in the annual survey that should become part of MC discussions.

They are to do with:

- motivation,
- priority of research projects,
- allocation of funds and
- better communication.

SRT members responsible for liaising with SRTs need to bring these issues to the attention of the MC as they arise rather than relying on the annual survey.



Subtropical Dairy Program Ltd

Statement of Income and Expenditure for the year ended June 30, 2003

INCOME	\$
SDP001 – Administration	51,200.91
SDP003 – Sub Regional Teams	70,000.00
SDP004 – Project Development	25,000.00
DAQ177 – (NHT982708)	20,942.66
SDP008 – Annual Forum	34,086.14
SDP11055 – Dairyinfo.biz	17,440.00
Program Management	37,358.52
National Projects	<u>14,390.29</u>
Total Income	<u>\$270,418.52</u>
EXPENDITURE	
SDP001 – SRT Expenses	8,953.29
– Communication, Annual reports etc	12,979.67
– Administration	36,258.83
SDP003 – Small Projects	24,840.76
SDP004 – Project Development	25,220.00
DAQ177 (NHT982708)	36,870.22
SDP008 – Annual Forum	15,586.35
SDP11055 – Dairyinfo.biz	43,343.85
Program Management	35,761.00
Dairying Better n Better II	296.82
National Projects	<u>19,112.79</u>
Total Expenditure	<u>\$259,223.58</u>
NET INCOME	<u>\$11,194.94</u>



Subtropical Dairy Program Limited

Project Areas and Expenditure 2002-03 (x \$1000)

Total

Funding Source:	Subtropical Dairy	DRDC National Pool	Collaborative Funding
1. FEED SYSTEMS MANAGEMENT			
DAQ10785 Mutdapilly Farmlets (Walker)	100	61	930
DANI0806 Feeding/heat stress (Granzin)	30	24	125
DAQ10949 Sustainable wet area legumes (Lowe/Walker)	50	115	279
DAQ10756 Improving forage peanut seed (Cox)	30.4		54
UM099 Contribution to Farming Systems Coordinator	7.3		7.3
2. NATURAL RESOURCES			
SDPI1519 Dairying Better n Better II	42.6		75
3. WHOLE FARM MANAGEMENT			
UQ10833 The Milk Business	35	127	1,057
4. HUMAN RESOURCE MANAGEMENT			
SDP003 SRT Small Projects	Included in Program Conduct		
REC001 Monitoring & Evaluation Project	16		16
SDSP008 Annual Forum	25		31
SDPI1055 Dairyinfo.biz	10	30.7	200
5. ANIMAL MANAGEMENT			
Tick/Fly Control Extn			
Tick-Fungal Control Feasibility study (Turner)	QDPI		
Tick Research CSIRO/UQ/QDPI (Turner)	DRDC		
CowTime delivery	20		40
6. PROGRAM CONDUCT			
SDP006 Program conduct	195		235
FNP10867 Contribution for National activities	8.3		8.3
Total	\$570,424	\$357,700	\$3,057,600
Total DRDC contribution	\$928,124		
Total Project value	\$3,057,600		
Value adding on R&D funds	x 3.3 times		

Annual Report 2002-2003



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DAIRY RESEARCH
AND DEVELOPMENT
CORPORATION