



gardiner foundation annual review 2006

The Gardiner Foundation has an up to date website that offers full information about the Foundation and provides application forms and guidelines to apply for funding.

Visit our website at:

www.gardinerfoundation.com.au

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The Foundation's goal is to be a premier funding body, delivering measurable and sustainable benefits to all segments of the Victorian Dairy Industry and its people, for the benefit of the wider community.

Strategies to realise the goal revolve around research and development to improve industry productivity together with a strong emphasis on addressing critical issues facing dairying communities themselves.

Indicators of success include:

- a. Demonstrable and major benefits to individual sectors of the industry, the industry as a whole and the wider community as a consequence of projects funded by the Foundation;
- b. Recognition by the industry and Government that real benefits have been achieved and that the Foundation has established its own clear and unique role.

our goal



a year in review

2005/2006

key milestones

Stewardship of our Capital Base

- ANZ Executors & Trustee Company appointed to manage the Foundation's investment portfolio and shifted portfolio to Australian investments
- Charitable status endorsement generated \$4.6 million in franking credits, of which \$1.1 million related to prior periods
- Reserve reaches \$85m allowing increased investment in capability building projects

Impact of Current Operations

- \$3.5 million invested in the year to continue the current portfolio of projects
- Robust independent peer review of projects ensures progress and direction of major projects
- 46 projects completed in 2006 with outcomes at farm, manufacturing, community and leadership levels

New Initiatives

- The Foundation joined 16 other dairy participants in a bid to re-fund the Dairy Biotechnology Co-operative Research Centre. Our \$4.9m commitment will help develop three research programs – Innovative Breeding Systems, Healthier More Productive Cows, and Milk Product Innovation
- The Foundation is a participant in the bid to fund the Diabetes CRC. The Foundation's contribution of \$165,000 will be focused on a dairy foods weight control project
- With Dairy Australia Limited and seven of Australia's leading dairy companies the Foundation joins the new Dairy Innovation Centre Limited. Our commitment is \$1m. This Centre consolidates dairy manufacturing research at Werribee and our Chief Executive has been appointed as a Director
- The Foundation, with other dairy manufacturing participants, proposes to launch the "Gardiner Consortium" a \$5m co-investment with dairy companies to develop pre-competitive science underpinning health claims
- The Foundation is assessing 78 higher quality applications for Innovation and Community and People Development Program Funding for 2007

Refreshing and Strengthening Operations

- Major independent review of operations completed. Terms of Reference and the Final Report were endorsed by Members. The majority of the Foundation's operating principles are confirmed and a commitment to integrating industry wide strategic planning agreed
- Paul Ford and Amy Richards join the Foundation Team. They bring enhanced dairy industry networks and science skills
- Funding programs offered by the Foundation are streamlined from five to two. New applications guidelines have an increased emphasis on impact from the project



chairman's review

I am delighted to present this Annual Review of operations for the Geoffrey Gardiner Dairy Foundation Ltd for the year ended 30 June 2006. At the time of writing, the Victorian Dairy Industry is more buoyant than has been the case in some recent years and market conditions for dairy products are strong. However, the total volume of dairy production in the State is no longer increasing at the rate of recent years.

During 2006, the Board commissioned a comprehensive and independent review of the Foundation's activities and achievements since inception. The review also examined strategies to improve the structure and governance of the Foundation in pursuit of its objectives. Terms of reference for the review were agreed by our Members and the findings of the report, endorsed by the Members in August 2006, are currently being actioned by the Board.

The review recognises the Foundation's adherence to its business principles and its success in establishing a sound record of investment and associated processes to manage the performance of projects. Further work is needed however, to refine our business framework including active participation in a whole of industry approach to planning.

The review pointed to opportunities for the Foundation to further strengthen its integration into industry networks. But it also recognised that the Board is already actively pursuing this objective and that steps taken during 2006 have strengthened our relationships with Victorian dairy industry stakeholders.

Nevertheless, we are moving to further strengthen our engagement with industry in a number of ways. Firstly we will be taking a key role in the proposed new Dairy Biotechnology Cooperative Research Centre and making a significant commitment of funds to underpin the Centre's research program. Two of the three programs planned for the new CRC will directly address technologies for on farm application which we believe is a good fit with our mandate.

Secondly, the Foundation will take a core membership position in the new Dairy Innovation Centre Limited at Werribee helping to bring together a number of previously disparate manufacturing sector service bodies. Our Chief Executive will join the Board and concentrate on the identification of the priority research and development needs of dairy manufacturing and processing companies which will be of benefit to the Victorian dairy industry and the wider community.

Thirdly, and following extensive consultation and planning, the Foundation is proposing a new partnership with manufacturing companies by way of a soon to be established Gardiner Consortium. The Foundation is prepared to invest \$5 million in the Consortium which aims to assemble the scientific evidence needed to protect claims about the role that dairy products play as part of a well balanced diet. It will substantiate claims that dairy products can ameliorate preventable diseases, enhance human performance and improve individual well-being.

The Consortium's work will assist the industry to bring new products to the community that have novel health promoting properties. It will also be important in enabling the dairy industry to defend its products against unsubstantiated claims made by lobby groups with an anti-dairy bias. More will be said about the work of the Consortium in coming months.

The review highlighted the need for even greater clarity around the outcomes from funding committed to research and development projects. While recognizing the unpredictable nature of scientific research, the Foundation has further strengthened its program of mid-term reviews of major projects and made continuation of funding contingent on positive progress.

An important organisational initiative taken during 2006 has resulted in simplification of our administrative procedures for project applicants. Five categories of project funding have been consolidated into two streams, the first being 'Innovation' which includes all research and development which benefits the dairy industry. The second new stream is entitled 'Community and People Development' and comprises projects to build capacity and improve the lives of people working and living in Victorian dairying communities.

Within the Innovation stream, four new major research and development projects were approved for funding in 2006 comprising new investment by all parties of \$12.8 million, including \$1.95 million from the Foundation. The new projects bring total investment by the Gardiner Foundation and its research partners in major projects to nearly \$40 million to date.

Two new major projects were funded during the year under the Community and People Development stream with an investment by the Foundation of \$400,000. In addition, small grants and projects within the stream were funded to the extent of \$153,000.

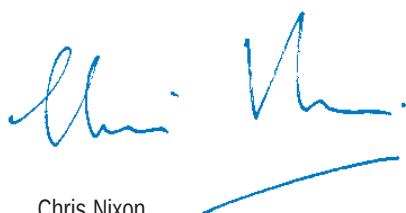
I am pleased to report that the Foundation's capital base has grown during 2006 to \$85 million after allowance for all disbursements. Such growth is a reflection of the strength of the Australian sharemarket. While this is an outstanding result, it must be remembered that economic conditions are cyclical and that investment markets will inevitably turn down at some time in the future.

Viewed from the industry's perspective, the size of the capital reserve is immaterial unless positive outcomes are being realised. With that in mind, I am pleased to report that the new initiatives outlined in the preceding paragraphs together with our commitment to ongoing programs will result in a 50% increase in total funds for allocation in the coming year.

During 2006, the Board appointed Paul Ford as Chief Executive of the Foundation following the resignation of Carol Bate who had served in that role since 2001. We are fortunate to have secured the services of someone with such a distinguished record of service to the dairy industry.

I wish to record my appreciation to all Members of the Foundation for their positive support for our activities over the past year. I am grateful also to dairying communities and the research community for their continuing positive response to the Foundation's work.

Finally, I would like to acknowledge the support and cooperation of my Board colleagues and the Chief Executive and his staff for their tireless contributions during 2006.



Chris Nixon
CHAIRMAN



chief executive's report

It is a pleasure to present this, my first Chief Executive's report on the management and operation of the Gardiner Foundation.

A focus on the Foundation's role

Being a relative newcomer to the Gardiner Foundation, I have been surprised to learn how unique it is within the dairy industry. Unlike many other organisations, the Foundation does not have a specific niche within dairying. Instead, it works across the whole Victorian dairy supply chain from farm to factory as well as with the people and the communities underpinning the industry.

I know that many people see the Foundation as a provider of funds for research and development. The truth is however, that it is also a major player when it comes to concern for people and communities in Victorian dairying areas. Some 150 projects, representing over \$2 million investment, have been funded to improve viability of communities and enhance people skills.

Building networks

The Gardiner Foundation is concerned with the Victorian dairy industry and the contribution that can be made by science and innovation. It is also concerned with industry and community strategies and directions, care for natural resources, industry productive capacity, and most of all with people. It understands that the creation of networks of people is pivotal to being in a position to recognise and respond to trends and emerging issues in a proactive way.

Effective networks are the key to remaining fully abreast of emerging issues, to receiving early warnings when action is needed, and planning to deal with them. The Foundation's goal is to share information and insights through a wide range of industry networks and to ensure that its investments are a strong match with the real priority needs.

The Chairman has referred to the new partnerships that the Foundation is forging with the Dairy Biotechnology CRC and the Dairy Innovation Centre, as well as the creation of the Gardiner Consortium. We are determined to continue forming close links with all parts of the dairy industry through the various networks in which the Foundation can play a constructive role.

The Foundation has both the opportunity and the obligation to expand its networks and to focus its work so that the maximum number of people derive benefit whether from science and technology or from hands-on projects within their communities.

Rationalisation of programs

During 2006, the Foundation reviewed its investment programs and decided to rationalise its funding offers, reducing them from the previous five, to two. This was a matter of simplifying and streamlining, not lessening the magnitude of the funds on offer.

Our new 'Innovation' stream, is about improving the Victorian Dairy Industry's future prospects by investing in key areas of research and technology, especially those that are likely to have an impact in the near future. Investments of up to \$1 million are being made in individual projects that offer worthwhile outcomes for the industry.

The Foundation's approach to the innovation stream is similar to what is known internationally as open innovation. Open innovation is about tapping into the creativity and solutions of a much broader and diverse group of inventors, technologists and product developers than any internal R&D group could ever support. Open innovation requires that we watch and monitor innovations in multiple areas and exploit them where it makes most sense.

The Foundation is continuing to fund its priorities in genomics and functional foods, food safety and processing, and the efficient use of on-farm resources. But increasingly it is inviting projects that will deliver measurable and sustainable benefits at any stage in the dairy chain. This includes the development of new functionalities and uses for milk which offer an ongoing opportunity for significant economic gains for the industry.

Whatever the field of science, the Foundation is concerned that existing and new knowledge is quickly implemented within the industry so that it produces positive outcomes. In marketing terms, whatever we are developing by way of products or technologies must have a clear path to market so that the work produces clear benefits for the Victorian Dairy Industry and its communities.

The 'Community and People Development' stream is about delivering a public benefit to Victorian dairying communities, with particular emphasis on initiatives that retain younger people in dairying communities, improve the local labour supply, expand community leadership skills and address the debilitating impact of an aging population in rural areas.

Working with project applicants

An important change in the way we interact with project applicants is through early contact to ensure that the applications have a greater chance of success at the selection table. We intend to help applicants to clearly articulate why the subject of the project application deserves to be funded. Is it because the issue has never been funded before, or is it because it addresses an old problem in a new way?

Typically, applicants are encouraged to meet with Foundation staff to ensure that the goals are clear, positive outcomes are likely and the best networks of people are involved.

All project proposals however, continue to be competitively assessed in terms of the nature of the issue being addressed, the expected outcome, impact and public benefit from the project, the quality of the project plan and the composition and track record of the project team.

Science capacity on the Foundation's team

During the year, Project Manager Alberto Pintos left the Foundation to take up a new career challenge. Dr Amy Richards has now joined the Foundation's staff on secondment from Food Science Australia and will take over the role of Innovation Program Manager. We believe that this appointment will add to the scientific expertise within the Foundation, provide commercial experience for a key member of Food Science Australia and provide valuable personal development for Amy herself.

The Foundation's access to high level science expertise has also been boosted by Professor Timothy Reeves and Dr Nick Gough who are performing a rolling series of mid-term reviews of all major innovation projects.

Finance and administration

The Foundation's statutory audit of its financial statements has been performed by Ernst & Young for the financial year to 30 June 2006. It is pleasing to note that positive outcomes have been realised from action taken in the previous year to have the Foundation endorsed as a tax concession charity for income tax purposes. The new taxation arrangements recognise that the Foundation's objectives and activities are for the public benefit. This has resulted in an additional \$1 million being directed to projects for the development of the industry and dairying communities.

During my short time with the Foundation, it has been a stimulating experience to work with the Foundation's Chairman and highly professional Board of Directors. I thank them for their support and guidance over the period.

I also wish to thank all of the Foundation's staff for their valuable contributions during 2006 and especially the Program Administration and Communications Manager, Mrs Cynthia Mrigate.



Paul Ford
CHIEF EXECUTIVE

the gardiner foundation board of directors



Chris Nixon CHAIRMAN

Chris has had a 35 year career in various engineering, manufacturing and general management roles, including postings in North America and Europe, culminating in appointment as Managing Director of the international Containers Packaging group. Chris is currently an independent strategic adviser. He is a former Chairman of Bayside Trains and Board Member of Dairy Food Safety Victoria and an adviser to various private and publicly listed companies.



Dr Graham Mitchell AO RDA BVSc PhD FTSE FAA DIRECTOR

Graham is a veterinary graduate and University Gold Medallist of the University of Sydney. He had a distinguished research career in cellular immunology with periods at the Walter and Eliza Hall Institute of Medical Research and leading research organisations in California, England and Switzerland. He also served as Director of Research with CSL Limited.

Graham is recognised as one of Australia's leading biological scientists. He is an adviser in science, technology and innovation to the Victorian Government and is joint Chief Scientist for the Department of Primary Industries. He is a non-executive director of AgVic Services Pty Ltd, Antisense Therapeutics Limited and Compumedics Limited.



Professor Paul J Moughan *BAgrSc (Hons) PhD DSc FRSNZ* DIRECTOR

Paul is a distinguished academic from Massey University, New Zealand. Currently he leads the Riddet Centre of Excellence for innovation in foods and biologicals and was previously Foundation Head of the Institute of Food, Nutrition and Human Health. He was also Foundation Scientific Director of the Milk and Health Research Centre, a centre focused on scientific research into the nutritional and health-promoting properties of milk components and dairy products.

In 1996, he was awarded a Doctorate of Science for distinguished contributions to Science and in 1997 was awarded a Personal Chair at Massey University, and elected a Fellow of the Royal Society of New Zealand. He is a Fellow of the Australia, New Zealand Food Authority. He has recently been appointed to the position of Distinguished Professor, Massey University, New Zealand.



Max Fehring DIRECTOR

Max has been a practising dairy farmer most of his working life. He currently operates a 350 cow dairy farm in partnership with his wife Denise. He has been a member of the United Dairyfarmers of Victoria since 1977 during which period he served as a Central Councillor (1980 – 1997) and as President (1997-2001). He has a special interest in water supply and policy and served as a member of the Torrumbarry Water Services Committee. He was Chairman of the Victorian Farmers Federation Water Committee and held a Churchill Fellowship in 1997 (Water Studies).

Current roles include Board membership of Wimmera/Mallee Rural Water and Councillor, Shire of Ganawarra. He is a Fellow of the Australian Institute of Company Directors (AICD).



Ian MacAulay DIRECTOR

Ian is an Agricultural Science graduate from The University of Melbourne and currently operates a 500 cow dairy farm. He was the Gippsland Regional Agronomist with Pivot Fertilisers for 12 years. He was elected to the Board of Murray Goulburn Co-operative in 1991, became Deputy Chairman two years later and has been Chairman since 1998. He is a Fellow of the Australian Institute of Company Directors (AICD).



business principles



going about the foundation's business – some principles

> The Foundation through its membership will be an integral part of the dairy industry.

The Foundation works closely with its Member organisations and with Dairy Australia. During 2006 it supported planning of the Dairy Innovation Centre and the Dairy Biotechnology CRC, as well as participating in several industry strategy and planning bodies. The Foundation has grass roots linkages with dairying communities and has supported over 200 small projects and grants to develop community infrastructure and strengthen leadership at the local community level.

> All funding decisions will be taken proactively in the best interests of the industry and the wider community using formal rules and procedures and a principle of care.

The Foundation operates with formal and well promoted guidelines that attract wide interest and ensure that all applicants are dealt with fairly and professionally. The Foundation is assisted in these deliberations by panels of independent experts. Final decisions are taken by the Board of Directors with the key criterion being that its investments are made in the best interests of the Victorian Dairy Industry, dairying communities and the wider community.

> The Foundation is an enabling organisation and does not directly provide services.

The Foundation does not provide services directly but works through partnerships and networks to promote the best interest of, and secure positive outcomes for, the Victorian Dairy Industry, dairying communities and the wider community.

> Foundation staffing and administration costs are the minimum practicable.

By any standards the Foundation is a lean organisation. Total staffing of not more than 4.5 full time equivalents and total administrative expenses of approximately 13% of budget compare more than favourably with relevant industry benchmarks.

> Management of the Foundation's capital will be outsourced to reputable fund managers.

Following a review of the management of the Foundation's investment portfolio, ANZ Executors and Trustee Company Limited was appointed as fund manager early in 2005. The dollar value of the capital base is currently some 30% above its original value after allowance for disbursements of over \$13 million from the fund.



Bob Cameron, Minister for Agriculture

> *The Foundation relates to Victoria, but parochialism will be avoided in the industry's best interests.*

The best interests of the Victorian Dairy industry and wider community are served by having the involvement of the country's most capable scientists and community development personnel wherever they are located. Currently, about 10% of the Foundation's investment is with interstate project teams.

> *Gardiner Foundation Members will be included in the business planning processes of the Foundation.*

The Members of the Foundation are:

- Victorian Farmers Federation Property Trust Ltd on behalf of the United Dairyfarmers of Victoria Commodity Group of the Victorian Farmers Federation
- Milk Processors' Association of Victoria Inc.
- Victorian Dairy Products Association

Member Representatives convene annually to formally consider the annual report. Additionally, the Foundation meets with Member Representatives, collectively and individually, regularly throughout the year and their input is incorporated into strategic planning processes.





an overview



gardiner foundation projects

The Gardiner Foundation does not have a single area of focus for its investments on behalf of the Victorian Dairy Industry and the communities that support it. Instead, it works through networks and partnerships to identify opportunities and needs across the whole dairy supply chain, from farm to factory and within communities.

During the past five years the Foundation has supported over 230 different projects being a combination of large and small projects, and grants. Total investment by the Foundation has amounted to nearly \$13 million while the combined value of the work, including investments by our partners, has totalled over \$61 million.

Our most significant area of investment is in major research and development projects which account for nearly two thirds of total commitments. Major community development projects have only been funded for the past two years but already \$644,000 has been committed to them.

In reviewing the entire portfolio, it is apparent that funded projects tend to fall into natural groupings or themes, determined not by the Foundation, but by the project submissions themselves identifying industry and community needs. The following pages provide a glimpse of several of the key themes in order to illustrate the diversity of work supported by the Foundation.

health and wellbeing of dairying communities

Dairying families need financial viability, key physical and social infrastructure, essential services and a supportive community. They also need good health and care for their wellbeing.

The defining project within the theme area of health and wellbeing is an ongoing study entitled *Sustainable Dairy Farming Families* led by Susan Brumby and involving a partnership between Western District Health Service and partner organisations RMIT University, WestVic Dairy Inc, United Dairyfarmers of Victoria, Colac Area Health Service and the Department of Primary Industries. Her team realised that farmers are ageing, working harder and experiencing death, injury, suicides and morbidity at rates that are higher than in the Australian population generally. The team postulated that the health of dairy farmers is a major issue that will threaten the sustainability of the industry if left unchecked.

The researchers initially identified key indicators for assessing the health of farmers. Educational programs were initiated and physical assessments of 200 dairy farmers and their families were undertaken. Early evaluation of the program is indicating that positive changes can be achieved in attitudes and behaviour concerning personal health and safety. This is demonstrated by improvement in farmers' cholesterol levels, body mass index and increased knowledge of their own, and their family's health. Feedback from participants indicated that many felt empowered by the knowledge gained from participation in the project, and have benefited from more effective interaction with medical professionals.

The project is also promoting measures to prevent the progress of disease by raising awareness of what can happen if left unchecked and by providing referrals, education programs and support. Farmers in the program are now more likely to take the time to seek medical assistance from their general practitioners and primary health care providers as the need arises.



(left) Guiding dairyfarmers to healthy choices in the supermarket
(centre) Sustainable Dairy Farming Families participants' workshop
(right) Typo Station – hiking in the mountains.

A number of other projects have also had the wellbeing of communities as their prime concern but have approached it from quite different directions. For example, in the Goulburn Valley the *Old Mates* program led by Michael Walsh of Kyabram Secondary College, set out to improve linkages between secondary school students and the dairying communities in which they live. Senior members of communities in the Goulburn Valley worked with school students on tasks such as reading, discussion of issues affecting their community and planning future directions. The sessions helped young people become more connected to their community and, in the process, to grow their own self worth.

Another approach was the *Building Community Links for Disadvantaged Youth in Dairy Communities* program offered by *Typo Station* where the Foundation sponsored young men from Victorian dairying communities to attend an alternate education, life skills and mentoring program. The places were offered to applicants from dairy families facing financial hardship and where the young men were experiencing problems at home, school, or in their community. The program has provided participants with new skills and helped them to find a way to accept responsibility and play a more positive role in their families and the community.

The Gardiner Foundation strongly supported a *Drought Response Program* launched in 2002 and coordinated by the United Dairyfarmers of Victoria. A project manager was appointed to coordinate responses to farmers seeking information and one-to-one support, communication of important information and organisation of fodder relief schemes. A significant part of the project was a *Time Out* program which provided short breaks for dairy farmers and their families in drought declared areas of Victoria. Over 250 affected dairy families were selected to take part in the program, each spending a weekend in Melbourne visiting various attractions. Families were also given cash where needed to assist with relief milking while away.

resilient dairying communities

The Foundation is committed to doing what it can to reinvigorate rural Victorian communities affected by the movement of their young people to urban areas. The resultant shortage of skilled labour and loss of services only exacerbates the problem as well as having a negative impact on the dairy industry and Victorian community as a whole.

The defining project within the resilient community theme is about enhancing the capacity of the individual, organisations and communities to manage their own affairs and to work together for positive change. At the centre of community strengthening is volunteerism where people come together voluntarily to perform services without pay. The *Strengthening and Sustaining South West Communities* project initiated by the South West Community Capacity Consortium and Community Connections (Vic.) Ltd is led by Josie Black OAM and Sue Meyer, with partner organizations Warrnambool City Council, South West LLEN and the Terang and Mortlake Health Service. The project builds on earlier work on volunteerism and is looking for ways to involve a diverse range of people and groups in the volunteerism effort even where they have not previously been involved in any community based activities.

The project will comprise three stages during which an infrastructure to coordinate volunteer efforts will be established, local projects will be started to improve the recruitment, education and training of volunteers, and a plan developed to sustain the effort once the project funding is complete.

Through other projects at a grass roots level, the Foundation has provided grants to enable badly needed improvements to community facilities. Community organisations in all dairying districts have benefited from the provision of such essential items as kindergarten and playground equipment, fire fighting equipment, community buses, education equipment, renovations to community halls and youth clubs, building of rotundas and much more.



The Foundation has also provided grants in support of services to support rural women, aged care, holiday programs for children, pre-employment skills development, information sessions for dairy farmers, personal development workshops, rural counselling services, child literacy, safety training and many others.

In total, nearly 100 small grants totalling about \$500,000 have been made with the assistance of the *Foundation for Rural and Regional Renewal*. The Community and People Development Small Grants program is filling a critical and much appreciated role in small rural communities.

a more sustainable, innovative and vibrant industry

For the Australian community to benefit from a sustainable and innovative dairy industry, it is necessary to achieve cost efficiencies that can be passed on to consumers and for us to develop uniquely Australian products that other countries do not offer. The Gardiner Foundation is actively investing in both options through its program of major research and development. A short selection of projects is briefly described below.

pre farm gate

The dairy industry has enjoyed spectacular advances in farming technology over the past 50 years but the rate of gain is proving increasingly difficult to maintain. Artificial insemination with imported frozen semen from superior cattle, modern fertilisers and pesticides, anthelmintics, modern milking facilities and fodder conservation technologies have all contributed to steady productivity increases gains on dairy farms of several percentage points each year.

There is every reason to believe that incremental improvements in farming technology will continue but at a declining rate in the absence of another significant breakthrough in science. Fortunately scientific commentators around the world have growing optimism that the massive investments made in the biosciences in recent years will be the spark for a number of such breakthroughs.

From the Foundation's perspective, investment in major research and development projects in partnership with industry organisations and scientific institutions is seen as offering the best chance of Gardiner Foundation dollars translating into genuine advances for the Victorian Dairy Industry and its communities. As much as we would like to believe otherwise, it seems unlikely that small low cost projects can in future deliver significant improvements in product quality or production efficiency that can be passed on to consumers. They can however, provide a useful means of addressing specific issues of importance to the industry, as has been the case with projects including: *Meeting the Demand for High Quality Colostrum*, *Reproductive Performance of Holstein x Jersey Dairy Cows*, *The Measurement of Feed Conversion Efficiency in Dairy Cattle*, *Electronic Herd Testing and Robotic Sorting System*, *CowTime* and development of reference tools for farmers such as *Guidelines for Safe Food Production*, and the *Practical Health and Safety Management website for Dairyfarmers*.

Improvement of the pasture feed base for dairy cattle continues to offer huge potential gains in on-farm productivity, perennial ryegrass and white clover being the main target species. After nearly one hundred years of global traditional breeding programs, the process is known to be enormously expensive and can be very slow. The Victorian Department of Primary Industries (DPI) is several years into a project led by Professor John Forster and Dr Kevin Smith entitled *Development and Implementation of Candidate Gene-based Markers in Outcrossing Forage Species*. The project uses next-generation molecular marker technologies to rapidly select mother plants of these outcrossing species which carry superior versions of the genes for important performance characters. Selection can be performed very early in the life-cycle of the forage



(left) Gardiner Foundation Directors Paul Moughan and Graham Mitchell with project leaders Professor Jock MacMillan and Dr Martin Auld. (centre) A project field inspection trip. (right) Max Fehring and Ian MacAulay inspecting silage with Dr Chris Grainger. Extended Lactation project leader (l) and Tony Hokey (r) DPI Research Institute, Ellinbank.

plant and can partially replace large-scale field trials. Genetic markers have already been developed for close to 100 genes from both perennial ryegrass and white clover, including those controlling herbage quality, disease resistance and stress tolerance traits. The genes are now being deployed for testing in pre-breeding experiments.

“The methods for improvement of breeder’s selections for difficult traits based on genetic markers are now established and are being tested in practice for pre-commercial breeding,” Professor John Forster, DPI

“Recent reviews have demonstrated that the work at the DPI is world-class and is well on the way to providing a valuable new tool for commercial breeders to make large advances in plant breeding. Pilot trials have already commenced and new opportunities for making progress are being discovered on a regular basis as the team gains a more precise understanding of plant genes. This project paves the way for a new era in plant breeding, and dairy farmers will be quick to benefit.” Dr David Nation, Animal Systems Program Manager, Dairy Australia

Another project by the DPI, *Profitably extending lactation in pasture-based dairying systems*, led by Dr Chris Grainger, is examining the trend away from annual calving of Holstein cows due to their declining fertility. The most interesting outcome so far is that some cows have the potential to increase lifetime milk yield if they have calving intervals of 15 to 18 months instead of the usual twelve. This result has to do with the fact that annual yields of milk protein can be increased for some cows when they calve less frequently.

“There are some clear management and cost benefits in extending each cow’s lactation: less calvings, less joinings and better lifetime production.” Ron Paynter, Ellinbank, Gippsland Dairyfarmer

Much of the dairy grazing pasture in Victoria relies on irrigation, typically flood irrigation. But new environmental concerns are prompting changes in Government water policy that are greatly increasing competition for limited water supplies that could threaten future economic returns for the industry and therefore its viability. A project led by Professor John Langford of The University of Melbourne, *Improving water efficiency in dairy grazing pastures*, is comparing flood irrigation and sub-surface tape irrigation. The aim of the work is to increase the irrigation water and land use efficiency through the use of new technologies, particular sub-surface tape.

“Improving irrigation efficiency is very important for the future profitability of irrigated agriculture. It is important that farmers know exactly what forms of irrigation are the most efficient and which will return the best investment to their farm business. Let’s hope this project answers the questions about the viability and profitability of sub surface drip irrigation to grazing agricultural industries as compared to more traditional border check irrigation.”

Geoff Akers, dairyfarmer, Tallygaroopna.



post farm gate

A study led by the Dr Peter Doyle from the DPI with collaborators from Flinders University, Tatura Milk Industries and Alltech Biotechnology, is developing feeding strategies that enable cows to produce milk with elevated concentrations of selenium. Selenium is an essential factor in the proper functioning of human enzyme systems and helps to maintain immune function and prevent the development of diseases such as cancer. Soils in many countries in Asia are naturally deficient in selenium leading to low dietary intakes and new market opportunities may be found there. The research partners have already found that the bioavailability of selenium in enriched milk is higher than from other sources.

“This is an exciting project as the research brings together a team with expertise in dairy production systems, cow nutrition, milk chemistry and human nutrition and health. At the same time the research project is running in parallel with commercialisation activities, providing a unique environment in which to conduct research and a clear route to market.” Dr Peter Doyle, DPI

An exciting concept being tested by the Innovative Dairy Products CRC and CSIRO Livestock Industries and Deakin University is using cattle breeding programs to change the protein composition in milk fat globules. The project, *High-value milk with improved health and manufacturing benefits*, is led by Dr Ross Tellam. The team hopes to improve the value of milk leading to new products with additional human-health benefits and improved manufacturing properties. The project will purify and characterise a milk protein that may be used as an antimicrobial agent in infant formulations and as a food additive to enhance resistance to bacterial growth, especially for travellers susceptible to gastro-intestinal disturbances caused by infectious bacteria.

“The project will harness the natural anti-microbial activity of a milk protein and identify individual animals or herds that produce a natural genetic variant of the protein with higher levels of anti-microbial activity. This is very interesting science with strong potential for generation of a commercial product.” Dr Ross Tellam, CSIRO Livestock Industries

The Foundation is also investing in projects to improve the biosecurity of dairy production and to improve the management of waste streams from dairy processing.

building industry and community capacity

Like any other industry, the dairy industry recognises that in order to remain sustainable and innovative, it must continually improve the capacity of its people. Equally, resilient communities need people able to lead and to motivate. In both cases, the future of the industry is about having people with different combinations of knowledge, skill, experience and judgement. But there is no single way of achieving this result. The development of different capabilities requires different approaches.



The Foundation for Rural and Regional Renewal and Gardiner Foundation hosted an awards reception for recipients of Small Grants. (left) FRRR Chairman the Rt.Hon. Ian Sinclair AC (l) with Wayne Breugel, Haddon Kindergarten. (centre) Jane Boys, Pleasant Park Jersey Stud with Maurice Incerti, Murray Dairy Inc. (right) Ted and Diane Osler, Nilma North Fire Brigade, with Gardiner Chairman Chris Nixon

The Foundation is pleased to have worked over five years with a wide range of partners in community, leadership development and educational organisations as well as with industry itself to grow the capacity of people. Much has been learned in that time about the best ways to engage people in the learning process and how to cater for the special needs of particular groups including young people farming women.

A total of sixty individuals have benefited directly from Foundation sponsored programs including community leadership programs, travelling scholarships, higher degree scholarships, undergraduate bursaries, study tours and youth opportunity programs. Support has also been offered for non formal leadership training with programs such as the *Australian Rural Leadership Programme*, *Australian Nuffield Scholars*, *Loddon Murray Community Leadership*, *Fairley Leadership Program* and the *Advanced Diploma of Education (Dairy)*.

The Foundation has provided funding support for numerous Workshops and Conferences, such as the *UDV Annual Conference*, the *Dairy Science Conference*, and the *Australian Dairy Conference* with wide industry attendance.

Central to the aim of developing people for careers in dairying has been the conduct of programs directly aimed at providing an affinity for the industry among school children. The Foundation has supported programs such as *Career on a Plate* and *Cows Create Careers* as well as the development of interactive multi-media educational tools for use in primary schools.

The Foundation is also supporting a UDV led project to develop strategies to *Build the Capacity of Younger People in Dairying Communities*. Skill, capacity and confidence will be engendered at the personal, industry and social and community levels. This project is building on earlier work including the *Young Dairy Farmer Development Program* that the Foundation has funded in Gippsland.



This is the fourth year in which the Foundation for Rural and Regional Renewal has delivered a Small Grants Program on behalf of the Gardiner Foundation, and the excellent cooperation of FRRR's CEO, Ms Sylvia Admans, and her team, is acknowledged.

"Morale at Kergunyah received a huge boost when we received the grant to improve the church facilities. It brought people together and gave us the confidence to restore a needed community facility. It's amazing how much can be achieved with a small financial grant if it comes at the right time." Ann Jarvis, OAM

Presentation to Ann Jarvis by Paul Ford, in recognition of her contribution to community and OAM award.



new major project funding 2006

The following projects were selected during 2006 for major funding.

innovation stream



Improved functional dairy products through high pressure processing

This project focuses on the use of high-pressure in combination with heat to improve dairy product and dairy ingredient functionality.

Lead Organisation: Food Science Australia

Contact: Dr Cornelis (Kees) Versteeg



Improving water efficiency in dairy grazing pastures: production system and environmental benefits of best practice irrigation utilising sub-surface tape technology

Determination of how, and in what circumstances, new irrigation technologies can contribute to water use efficiency in dairy grazing applications and support the efficient use of land and resources in the industry.

Lead Organisation: The University of Melbourne, Melbourne Water Research Centre,

Contact: Professor John Langford



Producing selenium enriched milk proteins and identifying and confirming human health benefits

This project builds on earlier work and will develop the technology needed to produce milk proteins containing therapeutic levels of Selenium consistently and predictably across a range of feeding systems.

Lead Organisation: Department of Primary Industries, Kyabram, Victoria

Contact: Dr Peter Doyle



Adaptation of technologies to achieve high productivity from dairy farming systems

An investigation of the ways in which dairy farmers adopt new and sophisticated technologies. Forage crop production will be used as a model to examine the support services needed including technical packages, extension programs and decision support models.

Lead Organisation: The University of Melbourne, Faculty of Land and Food Resources

Contact: Dr Mark Paine

community and people development stream



South West local and regional volunteerism initiative - strengthening and sustaining SW communities (2006-2008)

Establishing an active infrastructure to promote and support volunteerism within communities in western Victoria by targeting the recruitment, training and retention of the volunteers in rural communities and the coordination of their efforts.

Lead Organisation: South West Capacity Building Consortium/Community Connections (Vic.) Ltd.

Contact: Ms Josie Black/Ms Sue Meyer



Building the capacity of younger people in dairying communities

A project developing strategies to build the capacity of younger people in dairying communities. Skill, capacity and confidence will be engendered at the personal, industry and social and community levels.

Lead Organisation: United Dairyfarmers of Victoria

Contact: Ms Jenny Frederiksen



small projects funding 2006

small projects funding 2006

The following projects were selected for Gardiner Foundation small projects and grants funding during 2006.

Organisation	Project Title
Dairy Australia Limited/National Dairy Alliance	Dairy Science Symposium 2006
United Dairyfarmers of Victoria	UDV Annual Conference 2006
Dairy Australia Limited/National Dairy Alliance	Dairy industry strategic planning

small grants funding 2006

Program delivered by the Foundation for Rural and Regional Renewal on behalf of the Gardiner Foundation

Organisation	Project Title
Boisdale Consolidated School	Upgrade of the Boisdale Consolidated School oval
Calivil Recreation Reserve Committee, Yarrowalla	Upgrade of Calivil Community Recreation Reserve toilet facilities
Cohuna Kangas Football Netball Club Inc.	Airconditioning of Cohuna Kangas Football Netball Club for sporting and community club use
Crossley Hall Committee, Tower Hill	Young Farmers Club – venue and equipment
Dingee Bush Nursing Centre Inc.	Furnishings for new extension
Ellinbank Football and Netball Club Inc.	Club room kitchen upgrade – for use by sporting and community organisations
Emergency Accommodation and Support Enterprise Inc.	Toys and equipment to create children's playroom for use during parents' counselling sessions
Goorambat & District Public Hall	Goorambat Hall – repairs and refurbishment for community use
Haddon Kindergarten	Upgrade of kindergarden playground
Korumburra Guides	Upgrade of Kongwak bush campsite used by Guides from Poowong, Leongatha, Meeniyan, Wonthaggi, Cowes, Yarram and Korumburra
Maffra & Districts Landcare Network	Maffra Environmental Learning Program
Maffra Area International Inc.	Maffra Guild Hall – refurbishment and equipment for use as centre for learning, discussion and recreation
Mirboo & District Historical Society Inc.	Paved walkway commemorating the pioneers and early settlers of the Mirboo District
Nilma North Rural Fire Brigade, Buln Buln	Contribution toward big-fill pump for 4WD fire-fighting vehicle
Poowong Football and Netball Club Inc.	Heating and cooling for Poowong Community Football Netball Club Rooms, for club and community use
Red Hill Public Hall and Recreation Reserve, Cobden	Playground Facilities for Future Families: encouraging retention of young families in the community
Rotary Club of Cobden	Books to improve literacy of Cobden Prep Grade, and citizenship awards for Prep-Grade 6 students
Sacred Heart Parents & Friends Club, Corryong	Upgrade of kitchen equipment for recreational and fund-raising use
Shire of Campaspe, Echuca	Upgrade of catering facilities to OH&S standards at Echuca Farmers Market
South West Local Learning & Employment Network Inc., Warrnambool	'The Grass is always Greener' – The Learning Network (Timboon, Cobden, Camperdown, Mortlake, Derrinallum and Terang Secondary Colleges and Mercy College – improvement of students' communication skills through development of radio programs
Tatura Blue Light PCYC	Victoria Police High Challenge Program for rural youth – building confidence and community relationships for lasting community benefit
Murray Dairy Inc.	Trailer and safety workwear to OH&S standards for Pre-employment Dairy Trainee Course (Certificate II) in Rural Operations, conducted at Pleasant Park Jersey Stud



future



our framework for the future

The Foundation has a vision for the future in which the Victorian Dairy Industry is, in every facet, sustainable with benefits flowing to the Industry, dairying communities and the wider community. Central to realising this vision are the joint objectives of innovation within the industry and support for the community and its people.

innovation

The Foundation's Innovation Program has a high level strategic intent to build a strong science capability for the dairy industry and to invest in individual projects with potential for impact on farm or at the factory level.

Capability in science means having the infrastructure and the networks that offer the dairy industry access to people and facilities to address technical concerns and exploit new opportunities as rapidly as our major competitors. We recognise that Australia's investment in research and development cannot match that of our competitors, so our innovation processes must be smarter and more effective.

This capability will be developed in part through investment in defining areas of science that provide us with an entry card to the global scientific fraternity. It will also be accomplished through specific investment in the Dairy Innovation Centre, new CRCs and the Gardiner Consortium.

In line with its vision, the Foundation's focus is very clearly on lowering the costs of production, achieving cost efficiencies which will be passed on to the wider community and improving the functionality of the final product for the public benefit.

While many advances are of an incremental nature, the Foundation will be constantly alert to opportunities to bring about quantum change whether through the application of biotechnology, new farming systems or the development of manufactured products that deliver clear human health benefits.

community and people development

The purpose of the Community and People Development program is to build and nurture vibrant dairying communities and to promote dairying as a career of choice.

Dairying depends on rural and regional communities which, at present, are threatened by the drift of young people to urban areas and consequential erosion in social infrastructure and services. The Foundation will take a very lateral view in seeking out ideas for projects which can arrest demographic change and renew the vibrancy of dairying communities.

The Foundation will initiate a review of the ways in which the industry attracts, retains and develops people. While activities undertaken to date have been successful, we are looking to identify more precisely the number of people and types of skills that will be needed to drive the Victorian Dairy Industry in the future.

Coupled to this will be a further review of steps that can be taken to build a more positive image of the industry in the minds of school children and university entrants. Work already done has highlighted key decision points during school years when dairying can be effectively promoted as a worthwhile life choice.

about the gardiner foundation people



Paul Ford CHIEF EXECUTIVE

Paul Ford has a thirty year association with the Victorian dairy industry including technical service roles for major dairy companies. Paul has held Board positions with the Australian Starter Culture Centre, Dairy Research and Development Corporation, Murray Dairy Inc and Dairy Food Safety Victoria. He is currently a Director of the Dairy Innovation Centre, the Dairy Ingredients Group of Australia, and is a Fellow and Board Member of the Australian Rural Leadership Foundation.



Barrie Lawson COMPANY SECRETARY

Barrie Lawson is a Fellow of the Chartered Institution of Secretaries and a Fellow of the Australian Society of Certified Practicing Accountants. He has been Company Secretary of three Australian public listed companies, Sunraysia Television Ltd, Associated Dairies Ltd and Futuris Corporation Ltd and Company Secretary/Accountant of Engelhard Industries Pty Ltd, the Australian Division of a USA listed company.



Cynthia Mrigate PROGRAM ADMINISTRATION AND COMMUNICATIONS MANAGER

Cynthia Mrigate has worked in program administration for the Parliament of Victoria, the Victorian State Government, the International Maritime Organization (a specialised agency of the United Nations) and IMO's World Maritime University.



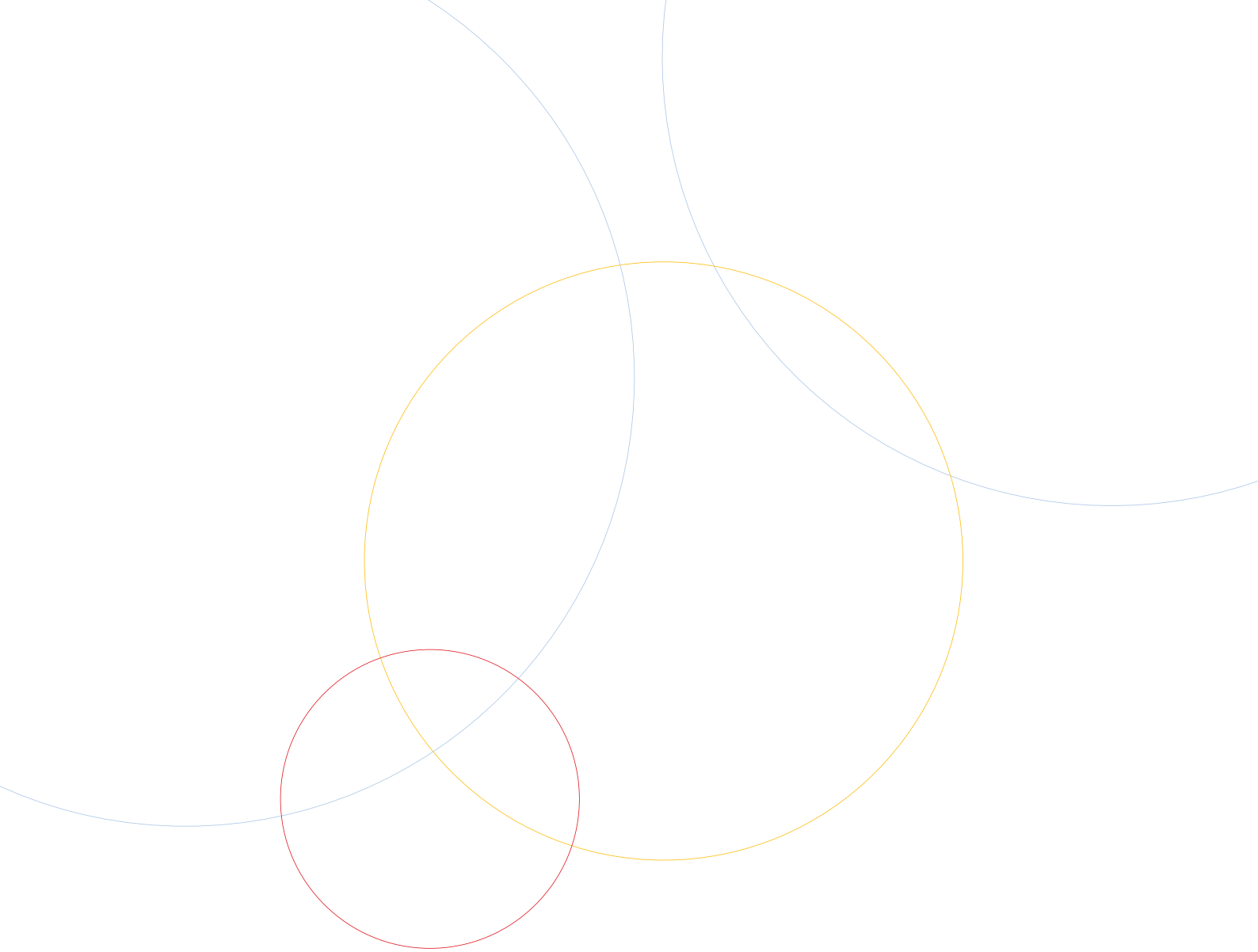
Alberto Pintos INNOVATION PROGRAM MANAGER (to June 2006)

Alberto Pintos is an Agricultural Science graduate from the University of Uruguay and Master of Business Administration (MBA) from the Melbourne Business School. Previous experience included business management/administration in farming and agricultural operations, as well as research consulting.



Dr Amy Richards INNOVATION PROGRAM MANAGER

Dr Amy Richards has taken over the role on secondment from Food Science Australia, where she was a Research Scientist in the Food Architecture and Delivery Systems Science Group. Amy has a BAppSc (Hons) Chemistry from RMIT University and a PhD in Agriculture and Food Systems from The University of Melbourne.



GARDINER FOUNDATION