



MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

# ANNUAL REPORT 2010/2011

**GRASS  
ROOTS  
INGENUITY**

**A BLUEPRINT  
FOR SUCCESS**

# MISSION STATEMENT

TO ENSURE THE SUSTAINABLE USE OF  
MARLBOROUGH'S NATURAL RESOURCES THROUGH  
INNOVATIVE RESEARCH, TECHNICAL DEVELOPMENT,  
AND THE TRANSFER OF TECHNOLOGY.

# PURPOSE OF THE TRUST

IT IS AGREED BY THE PARTIES THAT THE FUTURE  
RESPONSIBILITIES OF THE BOARD ARE TO  
ENHANCE THE ECONOMIC WEALTH OF THE  
MARLBOROUGH REGION THROUGH WHATEVER  
OPPORTUNITIES PRESENT THEMSELVES IN A  
SCIENTIFIC OR TECHNICAL SENSE.

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**MARLBOROUGH RESEARCH CENTRE TRUSTEES**

John Marris		Chairman
Edwin Pitts		Trustee
Bernie Rowe	LL.B	Trustee
Gerald Hope		Executive Officer

**MARLBOROUGH RESEARCH CENTRE BOARD MEMBERS**

Ivan Sutherland	VFM, ANZIV	Chairman
Edwin Pitts		Deputy Chairman
Francis Maher		Marlborough District Councillor
Andy Frost	BSc(Hons)	Pernod Ricard New Zealand Ltd
Brian Jordan	BSc(Hons), PhD, MNZIFST, MRSNZ	Lincoln University
Philip Manson	BSc, DipBus	NZ Winegrowers
Derek Wilson	BAgrSc(Hons), PhD	Plant & Food Research
Warwick Lissaman	B.Com, PG Dip Com	Pastoral Representative

**TRUST SUPPORT STAFF**

Maree Way	Executive Administrator
Cherryl Fitzgerald	Financial Administrator

**ROWLEY VINEYARD**

Bruce West	Vineyard Manager
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**NEW BOARD MEMBERS**

Derek Wilson joins the Board of the Marlborough Research Centre as a representative of Plant & Food Research.

Derek has a Bachelor of Agricultural Science (Hons) from Lincoln University and a PhD from Texas A&M University, with more than 30 years' experience working on the physiology, agronomy and modelling of a diverse range of arable, vegetable and forage crops from his base at Lincoln.



DEREK WILSON

His first connections with the Marlborough Research Centre date back to its establishment years when, through his position as a scientist with DSIR Crop Research, he was involved with its early trials with vegetables and arable crops.

Since Plant & Food Research was formed in 2009, he has been General Manager of its Sustainable Production science portfolio, which has about 160 researchers located at a dozen sites around New Zealand including the wine-grape research group at the Marlborough Research Centre.

With industries increasingly being required to quantify their environmental footprints, Derek's role today is to lead the research teams looking at ways to achieve and maintain the balance between economic and environmental sustainability in production systems. This focuses on such things as assessing the likely impacts of climate change, predicting quality and yield, and optimising the cost-effective and environmentally responsible use of resources such as soil, water and nutrients.

Warwick Lissaman is from one of Marlborough's early farming families; the fourth generation of his family to farm in the Awatere Valley.

After completing a Bachelor of Agriculture and a Bachelor of Commerce with a post graduate diploma in Rural Valuation, Warwick followed his grandfather and his father onto the family property.



WARWICK LISSAMAN

After an active role within New Zealand Young Farmers, Warwick has gone on to take positions of responsibility within the rural sector in Marlborough. He is involved in the leadership team of the NZ Grassland Association and has served nine years with Marlborough NZ Meat & Wool and NZ Beef & Lamb Monitor Farm executive committees.

Warwick's efforts to help secure funding for dryland pastoral research and a direct involvement in a dryland legumes technology transfer research project precede his appointment in 2011 to the board of the Marlborough Research Centre.

Amongst his priorities is the wish to see the pastoral sector make greater use of the research capacity of the Research Centre. He believes that science and research is the key to unlocking future opportunities and that it is in the mutual interest of each of the productive sectors of Marlborough to work closely together to fulfill the potential of the district.



**MARLBOROUGH RESEARCH CENTRE**

**Plant and Food Research**

Mike Trought	BSc (Hons), PhD	Principal Scientist
Rob Agnew	BAgrSc	Scientist
Jeff Bennett	BSc (Hons), PhD	Scientist
Marc Greven	BAGSc (Hons), PhD	Scientist
Dion Mundy	BSc, MSc (Hons)	Scientist
Sue Neal	DipHort, DipFieldTech	Research Associate
Victoria Raw	BSc (Hons Agri), GDip(Vit)	Research Associate
Emma Sherman	BSc (Tech)	Research Associate
Claire Grose	BSc Viticulture & Oenology	Research Winemaker
Sharlene Haycock	BSc Viticulture & Oenology	Laboratory technician - Viticulture
Pawan Lal	BSc (Chemistry & Biology)	Fixed Term Technician
Lily Stewart	BAG	Fixed Term Technician
Cherryl Fitzgerald		Site Services Administrator
Bruce West		Permanent Seasonal Technician
Trevor Skilton		Permanent Seasonal Technician
Edwin Pitts		Permanent Seasonal Technician
Margaret Roberts	BHSc	Permanent Seasonal Technician
Sybil Robertson	BSc(Hons), Dip. Vit & Oenology	Permanent Seasonal Technician

**RMH & Associates**

Richard Hunter	Dip Ag, JP	Consultant
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**Marlborough Winegrowers Assn Inc (Wine Marlborough)**

Marcus Pickens	BCom, Dip.Com	General Manager
Sarah Booker	Dip Mtkg	Events Manager
Julia Hill	BSc (Hons)	Marketing Executive - Resigned
Kate Cameron		Marketing Executive
Andrea Craig	BCom (Hons)	Fixed Term Events Manager

**Sustainable Winegrowing NZ**

Sally van der Zijpp	M.Appl.Sc (Hons)	National Coordinator
Rowan Pettigrew		Administration Assistant
Sarah Barnes		Data Administrator

**GROVETOWN PARK**

**AsureQuality Limited**

Peter Brunsden

**Cawthron**

Sam Murray

**Fish and Game Limited**

Vaughan Lynn

**Jim Tannock Photography**

Jim Tannock

**Marlborough Travel**

Chris and Sue Godsiff

**Ministry of Fisheries**

Compliance – Liz Murray  
Operations - Tracey Williams

**NZ Food and Safety Authority**

Brian Roughan

**P F Olsen and Company Limited**

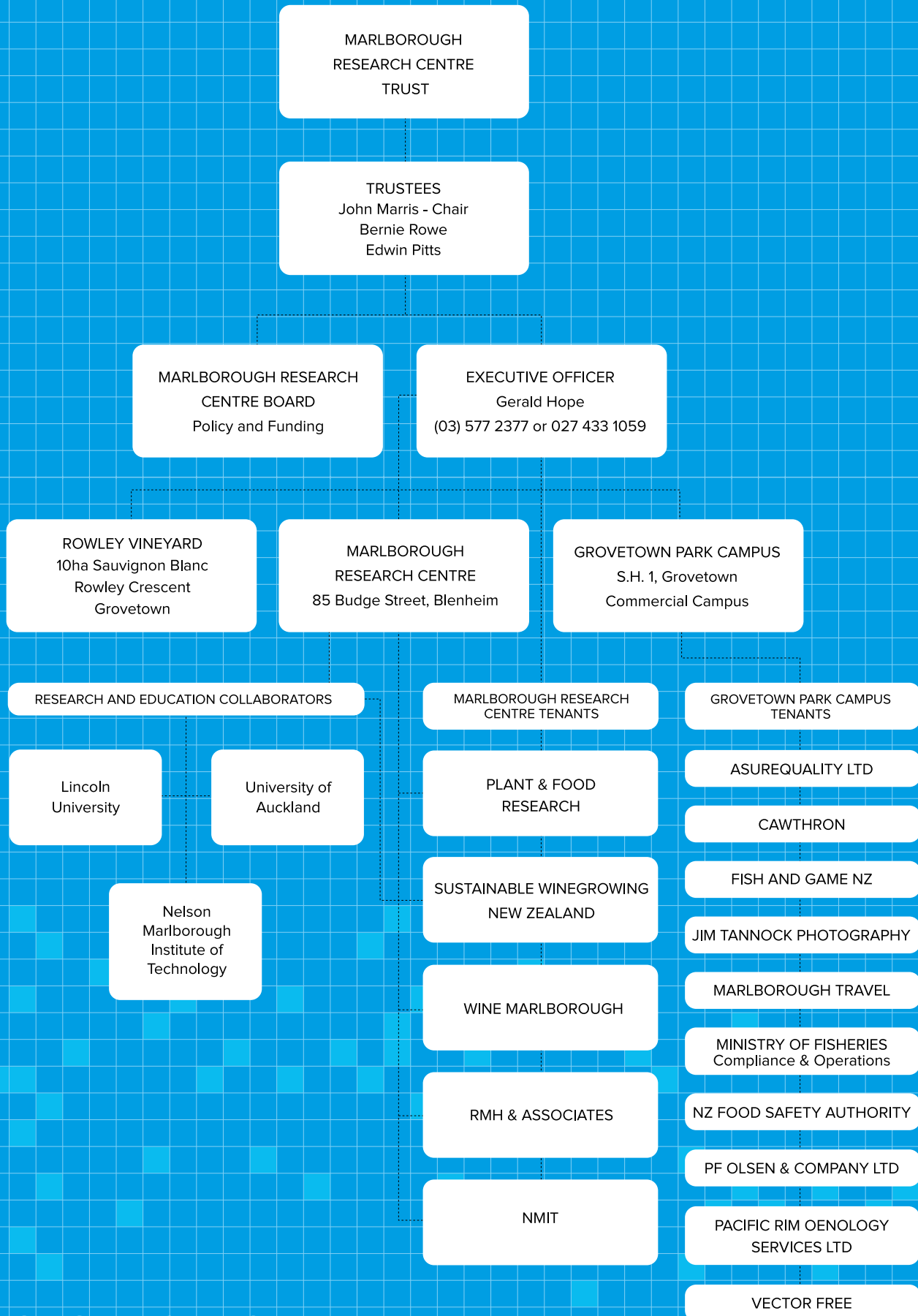
Rob Lawrence

**Pacific Rim Oenology Services Limited**

Debra Hedley

**Vector Free**

Barry Polsen



# ORGANISATIONAL STRUCTURE

## Overview

As we look back over the year it's clear the Marlborough Research Centre has reached a point in its history when it must marshal all the skills at its disposal to ensure local research is maintained for the benefit of the region.

This is the 27th annual report for the Research Centre Trust and again the Trust Board has been confronted with some significant challenges.

As reported in the 2009–2010 annual report, the Trustees shepherded the Marlborough Research Centre through a financially testing period which required the Trust to pare back research investment to the minimum level acceptable; \$107,000. It had been hoped this limitation would be temporary. However a continued need for fiscal restraint has allowed only a modest funding increase for projects over this last year, to a ceiling of \$141,000, with the final allocation being \$125,000.

## FISCAL RESTRAINT IS LIKELY TO CONTINUE TO BE THE CATCHCRY

The wine industry, where the Centre directs so much of its research and on which the Trust relies for a significant portion of its income, has continued to experience difficult times. Therefore our key income stream, the 10-hectare Rowley Vineyard, has not recovered as quickly as had been hoped. With the continuing spill-over of grape supply from the 2008 vintage, the Trust vineyard has been left very exposed to the depressed grape prices offered by the few active grape purchasers in the market. This situation is likely to remain for the foreseeable future as the industry undergoes a correction.

Fiscal restraint is likely to continue to be the catchcry in the short to medium term, until further surpluses are returned from Rowley Vineyard.

At a time when this country urgently needs more research and development activity to recharge the economy, it's unfortunate that a decision by one of the Trust's key funders has further limited research activity.

The Marlborough District Council is the only region in the

country where the local authority has made a financial commitment to assist primary industry research. That enlightened stance continues but, sadly, this year the District Council has pulled back on its commitment. Due to financial and political pressures, councillors have halved that funding, a decision which has been frustrating and destabilising for the Trust and the Centre itself. I believe the decision to be short-sighted.

It will seriously affect the Research Centre's programme this year. Moreover it sends a very negative signal to central government in terms of the on-going bids for projects and funding at national level.

The Trust's ability to assist fledgling projects is an important strand of its work, drawing significant research resources into the region. For example, the \$10,000 seed funding from the Research Centre to the New Zealand Dryland Forests Initiative has assisted that project to attract more than \$1M in research funding from a mixture of national and industry sources.

We have long valued the fact that the Marlborough District Council is the only local authority in New Zealand directly linked to a research organisation. It is a unique and quite remarkable partnership. The funding is a tangible way for the Council to show its commitment to Marlborough's large rurally-based community. Instead our rural sector has received a negative signal about the value of research and development. I hope the decision will be reversed next year.

These difficulties have been balanced by the strong tenant base at Grovetown Park on State Highway One and the Marlborough Research Centre campus at Budge Street. All tenants remain committed to their rental agreements and some have signed lease renewals. It's gratifying that we have been able to maintain a mix and range of tenants.

The Trust is anxious to ensure its capital is not eroded over time, so it was important to have a clear picture of our future financial sustainability. The annual budget cash flows, project expenditure and vineyard operations have all been examined and we have clear financial projections for the year ahead. The exercise has also been invaluable in setting up a strengthened framework for continuing financial monitoring of the Trust's activities.

It was a pro-active approach to ensure the future sustainability of the Trust.

Flowing from this financial review has been a decision to carry over the immediate past costs of operating the Rowley Vineyard to the next financial year. We are fortunate that Marisco Vineyard has stepped forward to support the Research

# REPORT <sup>TRUST</sup>

Centre this year by taking the 2011 Rowley crop. Marisco Vineyards is satisfied that it received good quality fruit and it is pleasing to know the wine has been sold. Trustees are satisfied the price received was competitive in the current market. The Trust wishes to acknowledge Marisco Vineyard's support for the Trust by enabling us to make a good return from this asset.

#### **The Trust has also committed to more detailed forward planning.**

In 2009-10 the Research Centre was the subject of a Local Government New Zealand study conducted by Business Economic Research Limited (BERL). The Trust has asked BERL to undertake further research to generate a strategy development programme for the Centre for the next three to five years.

With the new Ministry of Science and Innovation in place, and New Zealand Trade and Enterprise still active in the top of the South Island, it is timely for the Centre to consider its place as part of further regional development programmes. We need clarity and certainty to ensure all opportunities are identified and followed up.

We anticipate a more active role for the Marlborough Research Centre board - a committee of the Trust. Trustees believe there is ample scope for this research-focussed entity to take a bigger role engaging with the primary sector to identify scientific and innovative activities which the Trust may be able to support.

#### **2010 – 2011 FINANCIAL HIGHLIGHTS**

Overall the financial position of the Trust is healthy with only the vineyard operation being a poor performer. Strong cash flows from rental income are able to support the vineyard without borrowings or impacting on cash reserves. Growth has been constrained mainly due to the low price of grapes and wine. The Trust declined to sell its grapes at the low price of \$1000 per tonne or sell bulk wine at \$3.00 per litre or less.

The Trust board has continued to implement conservative financial decisions, reflecting the uncertain regional and national economic outlook. As a result, the surplus for the year has improved. This is mainly due to vineyard costs being carried forward as work in progress (\$206,975) and the consolidation of NZDFI activities which resulted in the recognition of \$64,025 of income previously deferred.

Surplus of \$91,568 year ending June 2011 compared with previous year \$17,824.

Income for the Trust is sourced from the longstanding Marlborough District Council grant of \$131,600 (\$110,000 available for research allocation), surplus from vineyard operation (where no income was received for the reporting period) and rent from Grovetown Park and Budge Street campuses which improved due to re-valuation.

Revaluation of some rental agreements has resulted in revenue of \$166,392 (\$122,296)

The independent auditors report from Angela Wood confirms that the operations of the Marlborough Research Centre of Excellence Trust complies with generally accepted accounting practice in New Zealand and International financial Reporting Standards.

#### **Rowley Vineyard**

Grapes harvested from the 2011 vintage totalled 90 tonnes, lower than estimated but the quality of fruit was exceptionally good.

Given the low grape prices, the Trust entered into a contract with Marisco Vineyards Limited to make wine for bottled product in order to avoid entering the bulk wine market for a second time.

Marisco Vineyard owner and winemaker Brent Marris says involvement with the Rowley Vineyard crop this year was a way to contribute to the Centre and to support its role in Marlborough.

“We were happy to take responsibility for the harvest, the blending and the marketing of the wine from this vineyard and to ensure the Trust got the best returns in the current market. We’ve also indicated we’re willing to follow through with the same arrangement for next year’s vintage as our way of acknowledging the important work the Centre does for the Marlborough viticulture sector.”

Vineyard income will be received in the next financial year.

The outlook for the vineyard operation is improving as the 2012 vintage will see full production from 10 hectares for the first time. However, long term viability of our vineyard will depend on grape prices returning to at least \$1400 per tonne.

#### **Tenancy Report**

The tenant base remains the same as previous years with 14 organisations residing at the Grovetown Park campus or at Budge Street. With the global recession continuing and a general dip in business activity, plus competitively priced office space available locally, it's pleasing that all our available space is leased.

Due to continued demand for more space from existing tenants, and to minimise building costs, further internal subdivision of the main Molesworth meeting room into an additional office at Grovetown Park was completed for Ministry of Fisheries. An extra laboratory was created from an adjoining office for Cawthron to provide a specialist laboratory for testing export wine.

Satisfactory terms have been settled for several other organisations after rental reviews.





## “DESPITE A CHALLENGING YEAR, THE TRUST IS IN GOOD HEART”

As a model for regional economic development partnership there is no other example like the Marlborough Research Centre to be found in New Zealand. The strong professional and governance alliance between researchers, the primary sector of Marlborough and the District Council provides a local response to the need for pathways to economic development.

Sustainability of natural resources and managing land-based production systems is an on-going scientific challenge as well as a Resource Management Act imperative. The Centre has established itself as a respected world-class research leader and provider of a range of services which help deliver on those aims and aspirations.

**John Marris**  
Chairman  
*Marlborough Research Centre Trust*

# REPORT <sup>TRUST</sup>



Since the establishment of the Centre in 2003, staffing now associated with Plant & Food Research has grown to 15.5 FTEs, far surpassing the expectations of those early establishment years. The Centre enjoys a close alliance with our primary research provider Plant & Food who, in conjunction with New Zealand Winegrowers sourced research funding, have built a solid base of public and industry funded programmes.

## “THE MARLBOROUGH RESEARCH CENTRE HAS ENJOYED ANOTHER EXTREMELY BUSY & PRODUCTIVE YEAR.”

Plant & Food Research staff in association with other research providers have been involved with a number of research projects, both locally and nationally, with on-going programmes centred on wine and grape research, pastoral and agriculture, along with eucalyptus selection for dry hill country.

The projects directly funded by Marlborough Research Centre-funded projects include meteorological services (data collection, analysis and dissemination), vinefax (subscription based disease monitoring service), phenological monitoring (linked to meteorological and vinefax), trunk diseases (looking at stress and the effect on the vine), pastoral and agriculture (legume management to improve productivity and profitability), durable hardwood (eucalyptus selection for dry hill country).

It is a credit to the work of diligent staff over many years and their attendance at national and international seminars, workshops and conferences that the Marlborough Research Centre’s capability is now well recognised internationally.

The Government’s strong emphasis and commitment to research, science and technology is pleasing and will assist in reinforcing our existing and proposed research projects. These will, over time, have enduring economic benefits to the Marlborough region and to New Zealand.

It is acknowledged that the primary production sector, particularly the wine industry, is experiencing difficult economic times with over-supply and adverse exchange rates affecting profitability. Research work associated with wine style, yield prediction and crop loading and vineyard and disease management will hopefully assist the industry to produce more innovative and creative wines, achieve a better balance of supply and demand and reduce vineyard running costs.

Through its association with Richard Hunter and Associates the Board is committed to assisting the pastoral and agriculture sector to improve overall production and greater economic returns. We welcome the appointment of Awatere farmer Warwick Lissaman to the Board as he brings a great depth of experience and knowledge of the agriculture sector across a range of farming systems.

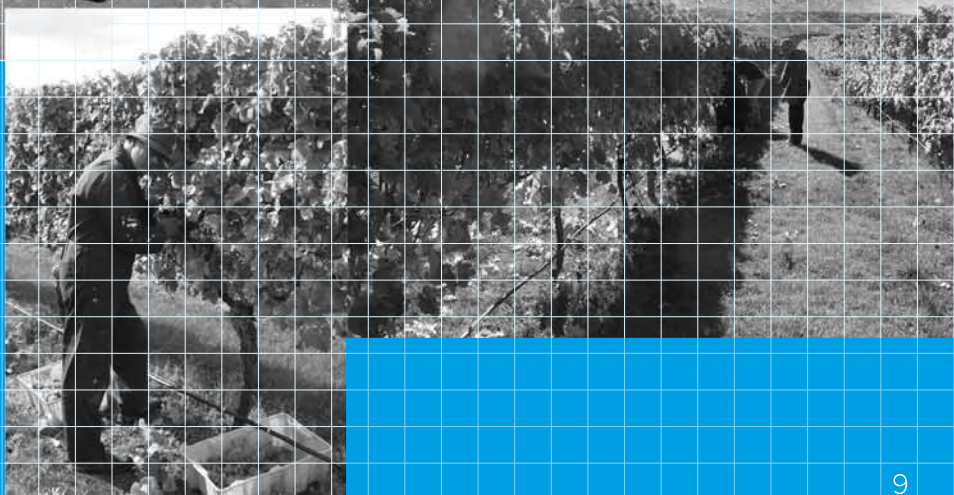
Over the next few months, the Board will work closely with the Trustees in the engagement of BERL to help pinpoint our research focus for the next five years. This review will ensure we continue to be engaged in research activities that will offer significant economic benefit to primary production in Marlborough and at a national level.

**Ivan Sutherland**  
Chairman  
*Marlborough Research Centre Board*

ANNUAL RESEARCH ALLOCATION 2010 - 2011	
Meteorological Services	\$23,325
Phenological Monitoring	\$17,900
Trunk Disease	\$15,000
Plant Materials	\$12,000
Sub Total	\$68,225
Pastoral & Agricultural	\$45,000
NZDFI	\$10,000
Environmental Awards	\$ 1,500
Sub Total	\$56,500
<b>MRC Grant</b>	<b>Total</b>
	<b>\$124,725</b>

(includes Marlborough District Council contribution \$110,000 toward research)

# BOARD REPORT





# INNOVATION, SCIENTIFIC INTEGRATION AND A WEALTH OF EXPERIENCE VITAL FOR THE FUTURE.

Plant & Food Research is a New Zealand-based science company providing research and development to add value to fruit, vegetable, crop and food products. The Institute has active wine and viticulture research programmes across New Zealand, with the majority of work operating from the Blenheim-based Marlborough Research Centre. Our researchers provide scientific leadership, authoritative information and innovative technological developments for the grape and wine industry, both in Marlborough and throughout New Zealand.

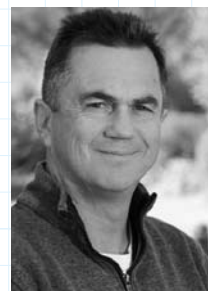
Our viticulture and wine research is driven by an awareness of issues that relate to the wine industry as a whole, including yield management and prediction, pest and disease management, vine and fruit health, consumer preference and purchase behaviour. We integrate science across the value chain, combining a detailed understanding of viticultural practices and industry specific knowledge to meet the research and innovation needs of the industry.

Our wine studies are uncovering how vineyard practices influence wine quality and identifying the attributes which contribute to wine flavours. Our work with winegrowers is improving the sustainability of vineyards and addressing key pest and disease management issues. The knowledge we create allows the wine industry to produce higher quality grapes from less land, with reduced environmental impacts and fewer chemical, carbon and water inputs.

Plant & Food Research would like to acknowledge the investment of NZ Winegrowers' and the R&D funding that underpins key programmes for the wine industry, as well as funding from the Marlborough Research Centre Trust, and their support for the programmes featured in this report, including Trunk Disease; Vinefax; Meteorological Services; Phenological Monitoring; and Plant Materials.

## Plant & Food Research welcomes Dr Damian Martin

Dr Damian Martin recently joined Plant & Food Research as a Senior Scientist specialising in Viticulture and Winemaking research. Based at the Marlborough Research Centre, Damian's move back to research follows 14 years working in the commercial sector of the New Zealand's wine industry.



DR DAMIAN MARTIN

Damian graduated with a BSc (Chemistry) from the University of Canterbury, New Zealand, before completing postgraduate studies and PhD in Oenology and Viticultural Science from the University of Bordeaux, France. His research focused on the eco-physiology of the grapevine and in particular soil moisture influences on grape and wine quality attributes in the Southern Rhône Valley.

Most recently as General Manager of Ara Wines, Damian was the driving force behind the establishment of a vineyard, wine style and brand proposition unique to New Zealand. His professional career has included senior technical and operational roles for two of New Zealand's leading wine companies, Corbans and Montana. Damian is also a former staff member of Plant & Food Research legacy company HortResearch, where he worked as a Viticultural Scientist from 1996 to 1998.

Throughout his time in the New Zealand wine industry, Damian has also played a significant role in promoting New Zealand's grape and wine research efforts as both a member of NZ Winegrowers Research Committee and as an original member of the Steering Committee and Board of the Marlborough Wine Research Centre.



# NEW FACES AT PLANT & FOOD RESEARCH BRING ENTHUSIASM AND A WEALTH OF EXPERIENCE.

## Sharlene Haycock - Laboratory Technician

Sharlene was a Picton barista looking for a change of direction when she decided to make the switch from coffee to wine.

She completed one year's training in laboratory skills through the Nelson Marlborough Institute of Technology in Nelson before embarking on her Bachelor of Viticulture and Oenology, through Lincoln University and the NMIT.

After graduating, she joined the Plant & Food Research team at the Research Centre at the beginning of 2010.

As a mother of two young children, Sharlene began working at the laboratory as a casual technician and, after six months, took on the role of laboratory technician. Her role is to assist with the analysis of the Centre's scientific projects.



SHARLENE HAYCOCK

## Lily Stuart - Winery Assistant

is a vineyard owner whose experience with a couple of vintages prompted her to want to learn more about the science of winemaking.

Born in Malaysia and arriving in Canterbury in 1979 for her secondary schooling, Lily's path took her in a rural direction; she earned her Bachelor of Agriculture at Lincoln College and then went farming; dairying on the West Coast.

The move to Marlborough was in 2002, a time when the momentum of the region's wine industry was building fast.

After establishing a Sauvignon Blanc block at Hawkesbury, Lily decided she wanted to expand her understanding of the whole wine-making process. She experienced harvest on a large scale at Marlborough's Brancott Estate Limited, then the following year's vintage at Omaka Springs, before deciding that she'd like to gain more knowledge of the research behind winemaking.

Lily joined the staff of Plant & Food Research at the Research Centre in March this year, working as winery assistant at the Centre's small-scale research winery.



LILY STUART

## Pawan Lal - Laboratory Technician

Pawan has spent nine months with the Research Centre extending her experience within the food industry to the analysis of grape juice and wine.

With a Bachelor of Science majoring in Chemistry and Biology from the University of the South Pacific in Fiji gained in 2001, Pawan's initial experience was as a research assistant at the university, researching the qualities of natural products including kava root powder, mahogany leaves and marine sponges.

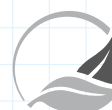
She then joined the University staff as a Chemistry Lab Technician where her job required her to assist the demonstrators and lecturers by ensuring each laboratory session ran safely and smoothly.

After migrating to New Zealand, Pawan was employed as a laboratory analyst in a commercial food testing laboratory AsureQuality, in Wellington, before spending nine months in Queensland working as a microbiology analyst for the Peanut Company of Australia.

On her return to New Zealand Pawan went back to AsureQuality before a wine industry appointment for her husband brought the family to Marlborough. Pawan joined the Research Centre team early in 2011, working on wine and grape juice analysis for all the Plant & Food scientists. However, another trans-Tasman transfer will see her leave the Research Centre by the end of the current year.



PAWAN LAL





EACH OF THE SUMMARISED RESEARCH STATEMENTS CONTAINED IN THIS SECTION ARE LINKED TO THE MARLBOROUGH RESEARCH CENTRE WEBSITE WHERE THE COMPLETE REPORT WITH ASSOCIATED DATA AND FURTHER LINKS CAN BE FOUND. [www.wineresearch.org.nz/projects.htm](http://www.wineresearch.org.nz/projects.htm)

# SUMMARY OF RESEARCH

2010/2011



## METEOROLOGICAL SERVICES

**Rob Agnew, Victoria Raw**

**Plant & Food Research, Marlborough**

Blenheim's weather station is located at the Grovetown Park campus of the Marlborough Research Centre. Data from the Blenheim weather station and Dashwood weather station in the lower Awatere Valley are summarised monthly and made available, free of charge, on the Marlborough Wine Research Centre website.

Monthly meteorological summaries for the Blenheim and Dashwood weather stations were posted on the Marlborough Wine Research Centre website in the first few days of the new month. These summaries were viewed on the website by approximately 50 people each month.

Press releases were sent to local media at the beginning of each month, outlining details of the previous month's weather. These summaries provide the basis for newspaper and radio articles.

Meteorological Report in Winepress July 2010 – June 2011 Issue Numbers 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204.

## VINEFAX INFORMATION SERVICES

**Victoria Raw, Rob Agnew,**

**Plant & Food Research**

Vinefax is a weekly publication sent out on a Thursday evening to subscribers during the growing season of grape vines (October to April). One of the main aims of Vinefax is to inform readers of phenological timing of different growth stages (budburst, flowering, véraison and harvest) throughout the current season and to compare timing of the stages between seasons. Other information includes the occurrence of Botrytis cinerea infection periods as soon as they occur, weather summaries (rainfall, evapotranspiration and growing degree days), berry maturation rates from véraison until harvest and other general information, such as climate forecasts from NIWA and disease management advice.

The 2010-2011 season completed the fifteenth year of Vinefax publications.

Thirty issues were sent out from 14 October 2010 to 28 April 2011. In addition to this, eight supplementary Vinefax emails were sent out when a Botrytis cinerea infection period had been recorded by the HortPlus™ MetWatch software. The supplementary emails inform readers of the severity and duration of the infection period, as well as the rainfall and temperature. This information is useful for management decisions regarding spraying regimes and for understanding potential disease pressure.

Vinefax accesses the meteorological data from 14 weather

stations spread throughout the Wairau Plains and the Awatere Valley. Eight of the weather stations are owned and operated by The New Zealand Institute for Plant & Food Research Limited (Brancott Valley, Blenheim, Rapaura, Renwick, Rapaura Central, Rapaura Upper, Awatere Seaview, Awatere Tohu) and the remaining six weather stations are owned by Constellation Wines (Rarangi and Waihopai Valley), Delegat's Wine Estate (Awatere Dashwood and Oyster Bay), Agersectus (Waihopai Bridge) and Matua Valley Wines (Awatere Redwood Pass Road).

## PHENOLOGICAL MONITORING

**Rob Agnew, Trevor Skilton, Victoria Raw**

**Plant & Food Research**

In the six seasons 2005-2010 collection of phenological data from five sub-regional Sauvignon Blanc vineyards located in Marlborough was incorporated within the Foundation for Research Science and Technology programme "Quality New Zealand Wines, UOAX0404". Phenological data were collected over important growth stages (budburst, flowering and from véraison to harvest), the timing of which are largely dictated by the temperature within a season. Data were collated on a weekly basis and the summaries were incorporated into the weekly Vinefax email service operated by Plant & Food Research in Marlborough. Many of the approximately 190 subscribers to Vinefax came to rely on the phenological summaries as they provided a very good heads-up early in the growing season on whether the current season was early or late in comparison with previous seasons. The phenological data contribute to a number of research programmes and provide a very valuable source of information for the Marlborough wine industry. The data help to quantify the season-to-season variability in harvest date and yield components as dictated by the climate.

The "Quality New Zealand Wines" programme was completed in 2010 and, as a result, funding for collection of the phenological data from the sub-regional vineyards came to an end at harvest in 2010. A successful application was made to the Marlborough Research Centre Trust to provide funding to continue this service for the 2010/2011 growing season.

## DOES STRESS EXPRESS VINE TRUNK DISEASES?

**Dion Mundy**

**Plant & Food Research**

The major outcome from year one of the project is the acceptance of a review of current wound healing and stress-related research for grapevines and trunk diseases in the New Zealand Plant Protection Journal. The paper was published in August 2011 in Issue 64 and the PDF of the final paper is available on the New Zealand Plant Protection Society website for free public access. The Marlborough Research Centre hosts a trunk disease website, so that industry and other parties can access it freely.



The research group and New Zealand Winegrowers are investigating options for extending research on grapevine trunk disease management including collaborations with international researchers working on the management of these diseases. Plant & Food Research have also just conducted a review of all grapevine trunk disease research and how this work relates to the portfolio of grape wine research and cross sector diseases of vascular pathogens.

### ROOTSTOCK EVALUATION FOR PREMIUM WINE

Sue Neal, Mike Trought, Bruce West  
Plant & Food Research

In 1991, a survey of Marlborough vineyards found *Phylloxera* to be widespread. Vineyards were replanted on a range of rootstocks although the selection of rootstock often reflected its availability rather than its suitability for any particular site. In response to this, a rootstock trial was planted on the deep soils of the Rapaura area back in 1991. It is the Marlborough Research Centre's longest running trial and has provided information on the influence of rootstocks on Sauvignon Blanc. It has also been a valuable resource for long-term data collection on yield parameters for the district. Vineyards are now being replaced and this trial is providing growers with information on the influence of yield and juice composition that can assist them in making a decision on the most suitable rootstock for their needs, either when planting a new block or replanting existing vines. It is well documented that grape vine rootstocks can influence yield and juice composition and therefore wine quality. This influence should not be underestimated when selecting the most suitable rootstock for growers' needs.

This is the final year for this trial.

#### Conclusions:

Long-term evaluation has revealed consistencies and trends between these rootstocks, including:

- Vines on rootstocks SO4 and 125AA continue to produce the earliest shoot or bud development. This may make them more vulnerable to late spring frosts.
- Vines on Schwarzmann continue to produce the highest average berry weight and the lowest soluble solids content. This is not a reflection of differences in vine yield.
- Vines on SO4 continue to produce high acidity.
- Rootstocks 3309 and 125AA have produced the top yielding vines for the past four years, although these results are not always significant.
- Vines on SO4 continue to record the highest pruning weights and lowest Ravaz

index (yield to pruning weight ratio), making SO4 the most vigorous of the rootstocks evaluated at this site.

These observations can assist growers in making informed decisions when selecting rootstocks best suited to their vineyards.

### AGRICULTURE: NEW ZEALAND DRYLAND FORESTS INITIATIVE PROJECT

Paul Millen  
Millen & Associates

Following the successful launch of NZDFI project in 2008, the first breeding populations of *E. bosistoana* were planted in 2009. These have been added to this year by the planting of 35 new families, bringing the total families under research to over 100.

A significant boost in funding as a result of a successful bid to MAF's Sustainable Farming Fund has ensured a three-year Research and Development programme to plant further large scale breeding populations and deliver a multi-region extension programme.

Labeling and sorting is complete of over 30,000 *E. globoidea* seedlings planned for planting in three breeding populations.

Also, 9,000 *E. quadrangulata* seedlings will be planted at four sites; another 1,500 *E. tricarpa* seedlings will be planted at three sites and 4,000 *E. argophloia* seedlings also for planting at three sites.

Sites for these breeding populations have been secured with landowners located in Hawkes Bay, Wairarapa, Marlborough and Canterbury.

Seedlings have also been graded and labelled for planting at 12 regional demonstration trials that include from three up to 10 different species of durable eucalypts. Sites for these demonstration trials have been secured with landowners in all the above regions as well as Bay of Plenty due to the financial support of Bay of Plenty Regional Council.

Registration forms are now available on line for the NZDFI/School of Forestry professional workshop and field trip on 'Developing a Eucalypt Resource' to be held 3rd & 4th November 2011 at the Marlborough Research Centre in Blenheim.

For more information go to [www.nzdfi.org.nz/workshop.php](http://www.nzdfi.org.nz/workshop.php)

## PASTORAL: ADAPTING TO CHANGE WITH LEGUMES FOR SUMMER DRY MARLBOROUGH HILL COUNTRY

Richard Hunter

RMH & Associates

Project Team: Professor Derek Moot, Richard Lucas (Senior Lecturer retired), Lincoln University; Pedro Evans, PDF Seeds; Bruce Clark, Kiwi Seeds Marl; Doug Avery, Chris Dawkins, Richard Gorman, Warwick Lissaman, Tony Turnbull, Paul Kemp and David Grigg, Marlborough Farmers Group; Colin King; Nicky Eade, Marlborough District Council; Beef & Lamb NZ Monitor Farm Marlborough (Mt Adde).

Since 2006 this programme was developed to demonstrate various farm management and animal grazing systems and to investigate their impacts, and to ensure the processes of annual legume seed establishment and their agronomic production values are successful. The periods from autumn establishment - flowering in spring and seed-set through summer - have been identified as critical if annual clover production is to add value to the difficult summer-dry, clay-bound soils and danthonia-dominant pastures found in Marlborough hill country.

Measurements for this period include, pasture composites and buried seed populations to identify and determine future clover production responses.

**Weld Pass:** This site was established in autumn 2007 and includes a range of annual clovers and perennial clover. This site was not fenced allowing sheep and cattle to graze at will, to demonstrate a grazing management system to identify annual clover persistence. *Carduus tenuiflorus* (Winged thistle) was cause for concern, shading establishing sub-clover species and placing intense grazing pressure on clovers not protected, exposing soils and causing resident and over-sown pastures species to decline.

**Grigg property:** Previous management developments on a 400-hectare block showed, by allowing subterranean clover to germinate (to at least five leaf stage of the clover plant, and then the use of cattle and ewes to graze grass cover off paddocks in early winter - May June - to 900-1000 kg DM; and at spring flush) that this would allow annual clovers to compete with other pasture grass species to provide a high quality legume base for lambing and lactating ewes.

A second site established in 2008 contained a range of annual clovers. This site was fenced and grazed with cattle and sheep in December and then again in May. Observations show that the overly wet soil conditions on this site may have also reduced plant persistence and clover production performance, leading to consistently high weed populations ranging from 40% to 72% cover. Applications of herbicides and timing provided difficulties in controlling weed species in clover associations.

**Dawkins property:** An area established autumn 2007 provided a demonstration site for Marlborough farmers to observe and provide discussion. The potential of this legume was clearly demonstrated. Its late flowering fits into a range of farming systems; lamb finishing, silage production, and the ability to provide a good nitrogen base for the establishment of winter-feed crops. This crop also showed that there are still critical grazing management strategies needed to be developed to ensure flowering and seed-set for best future production.

A second site established in 2008 contains a range of annual clovers. Establishment proved difficult, weed management after establishment proving even more difficult. Herbicide treatments and timing are issues that required further investigation. It was clear that an adequate double (in some triple) spray (herbicide), direct drilling process does provide best establishment from autumn sowings. It is also clearly demonstrated that these newly established plants need to progress to flowering and seed-set with little or no grazing hindrance. There are also some unknowns regarding insects such as the impact on annual germination and establishment of the red-legged earth mite and clover weevil.

Results from these trials can be found at [www.wineresearch.org.nz/projects.htm](http://www.wineresearch.org.nz/projects.htm)

**Conclusions:** The results show that the clover species sown do not reach full potential if continually grazed under set stock policies, persistence is greatly affected by soil moisture, and unsuitable timing of grazing will expose bare soil surfaces to the risk of infestation by other weed populations, hindering sown clover re-establishment and full potential production. Annual clover species appear to become site-specific, depending upon soil type and aspect. Other conditions such as insect population, dynamic on clover plants, are factors that need to be addressed specific to dryland climates as do the possible impacts from climate change.

This project also shows that if “best practice” grazing policies are not maintained, annual clover production will decline as a result of flower and seed-set, competition, and the increase in resident pasture species caused by over-grazing at critical annual clover growth periods autumn (five leaf stage) while the reduction of grass and other weed species during winter months (to 800-1000 kg DM) will result in greater longevity of these annual clover species.

Under Marlborough conditions, buried seed populations will identify and determine future clover production responses. Marlborough has conditions ideal for early annual clover varieties which can provide increased quality production before the onset of summer dry conditions.

The ability to ensure Marlborough farmers follow best practice for clover production benefits is the key challenge in order to maximise all benefits from the productive use of annual clovers.

## RESEARCH OUTPUT SUMMARY JULY 2010 – JUNE 2011 FOR PLANT & FOOD RESEARCH SCIENCE STAFF BASED AT THE MARLBOROUGH RESEARCH CENTRE

NB: For refereed papers, the paper is included if the MRC-based staff member is a co-author. However, for all other outputs, only those are included where the MRC staff member is the principal author.

### Refereed Papers – Published

- Mundy DC and Manning MA 2010. Ecology and management of grapevine trunk diseases in New Zealand: a review. *New Zealand Plant Protection Volume 63*, pgs 160-166, 2010.
- Mundy DC and Robertson SM 2010. Evaluation of single-node plantlets as a model system for grapevine trunk diseases. *New Zealand Plant Protection Volume 63*, pgs 167-173, 2010.
- Trought, MCT, Bennett, JS and Boldingh, H. 2011. Influence of pruning time, retained node number on grapevine yield, fruit composition and phenology of Marlborough Sauvignon blanc. *Australian Journal of Grape and Wine Research*. 17(2) 258-262
- Greven M, Neal S, West B, Green S, Clothier B. 2010 L'effet de l'assèchement partiel des racines (APR) sur les raisons du cépage Sauvignon a Marlborough Nouvelle Zélande. *Revue des CEnologues, Numéro spécial, Octobre 2010, No 137, 3 p*

### Conference Proceedings – Published

- Bennett J. Title Sauvignon blanc Research Report, Romeo Bragato conference Blenheim, 28 August 2010.
- Mundy D. Effects of trunk diseases on vine growth and productivity. Trunk disease workshop Romeo Bragato conference Blenheim, 27 August 2010.
- Trought M. Title Sauvignon blanc Research Report, Romeo Bragato conference Blenheim, 28 August 2010.
- Trought M. Chair of "Hot off the Press", student presentation workshop at Romeo Bragato conference Blenheim 26 August 2010.

### Workshop Chairs – Where the chairperson is listed in conference proceedings

- Trought – Hot off the press, Latest Research, Bragato Conference 2010

### Workshops and lectures – no printed proceedings (NZW Grape Days videos available online)

- Agnew R. Lecture on frost, to NMIT Viticulture & Winemaking diploma class. 10 August 2010
- Agnew R. 8 & 9 November – Presentations to four Sustainable Winegrowing meetings in Blenheim

titled Grape Futures programme and Canopy Management for reducing Botrytis. 8 & 9 November 2010.

- Agnew R, Mundy D, Raw V, Trought M, Sherman E, Grose C, Bennett J. Hosted a group of EIT students at the Marlborough Wine Research Centre presenting information on current research conducted by Plant and Food Research. 28 September 2010
- Bennett J. Fruit variability within a vineyard – influence of shoulders. NZW Grape Days - 14 June 2011 in Marlborough
- Bennett J. Fruit variability within a vineyard – influence of shoulders. NZW Grape Days - 16 June 2011 in Hawkes Bay
- Greven M. 5 September – ISVV presentation to ACMG staff and growers in Agen (France) 5 September 2010
- Greven M. 13 September – ISVV presentation in Bordeaux (France) titled: The success of New Zealand Sauvignon blanc and the need for irrigation. 13 September 2010
- Greven M. Influence of retained cane number on variability. NZW Grape Days - 14 June 2011 in Marlborough
- Greven M. Influence of retained cane number on variability. NZW Grape Days - 16 June 2011 in Hawkes Bay
- Mundy D. Lecture to the NMIT viticulture students on current research projects and how the New Zealand research funding and science system works with regard to wine research. 12 October 2010
- Mundy D. Invited speaker for the October meeting of the Marlborough Wood Workers Guild. Dion presented general information on wood structure and how grape vine trunk diseases rot vines. 12 October 2010
- Mundy D. Lecture to the NMIT viticulture students on Grapevine trunk diseases. 7 March 2011.
- Mundy D. Presentation to Central Otago grape growers on the results of the Trunk Health of New Zealand Vineyards, Golden Gate Lodge Conference Centre, Cromwell. 16 July 2010
- Raw V. Understanding Soil Variability. NZW Grape Days - 14 June 2011 in Marlborough
- Raw V. Understanding Soil Variability. NZW Grape Days - 16 June 2011 in Hawkes Bay
- Trought M. Mike gave a wide ranging presentation on P&F research to NMIT students 19 October 2010
- Trought M. Vineyard Variability. NZW Grape Days - 14 June in Marlborough
- Trought M. Vineyard Variability. NZW Grape Days - 16 June 2011 in Hawkes Bay

- Trought M. Within and between vine variability in leaf area: the influence of fruit variability . NZW Grape Days 14 June in Marlborough
- Trought M. Within and between vine variability in leaf area: the influence of fruit variability . NZW Grape Days 14 June in Marlborough
- Greven M. The influence of crop load on vine performance and fruit characteristics. A report prepared for New Zealand Winegrowers.SPTS No. 4674 September 2010
- Greven M. The influence of harvest defoliation on carbon and nitrogen balance of high yielding Sauvignon blanc vines. Progress report to New Zealand Winegrowers. SPTS No. 4919 December 2010

#### Client Reports – Published (release to public domain dependant on client)

- Agnew R.H. Australian travel report to the New Zealand Horticultural Advancement Trust, SPTS No. 4463 August
- data to predict regional vineyard yield – Progress report. New Zealand Winegrowers (NZW08-212) SPTS No. 5139. Feb 2011
- Trought MCT. Predicting regional and sub-regional grapevine yields in Marlborough. New Zealand Winegrowers SPTS No. 4765. November 2010
- Agnew, R.H. Soil variability and Pinot noir: A report prepared for New Zealand Winegrowers Project No NZW08-204. Plant & Food Research Client Report: 25473. Contract No: 22653 ; SPTS Track No: 4184, November 2010
- Bennett J. The influence of vineyard site and fruit exposure on methoxypyrazine synthesis in Sauvignon blanc grape berries. A report prepared for New Zealand Winegrowers. SPTS No. 5456. May 2011.
- Bennett J. Methoxypyrazine progress report for New Zealand Winegrowers. SPTS No. 5280. March 2011.
- Bennett JS and Trought MCT. Previous season pruning and yield effects on current season yield of Sauvignon blanc. Part 4 of 5 related reports for New Zealand Winegrowers (NZW08-212) SPTS No. 5495. May 2011
- Bennett J, Greven M, Trought M, Parker A, Hoffmann R, Kularsiri D. The Influence of training and cropload on grapevine yield and fruit composition. A report prepared for New Zealand Winegrowers. SPTS No. 4597 October 2010
- Greven M. The effect of harvest defoliation on carbon and nitrogen balance of high yielding Sauvignon blanc vines. Report to New Zealand Winegrowers. SPTS No. 5592 June 2011
- Greven M. The influence of harvest defoliation on carbon and nitrogen balance of high yielding Sauvignon blanc vines. Progress report to New Zealand Winegrowers. SPTS No. 5356 April 2011
- Greven M. The influence of canopy management and architecture of Sauvignon blanc grapevines on fruit and vegetative development. A report prepared for New Zealand Winegrowers.SPTS No. 5138 February 2011
- Mundy D, Agnew R, Sherman E and McLauchlan A. Changing bunch shape. End of year report for BASE. SPTS No. 5598. June 2011
- Mundy D. Does stress express trunk disease. A progress report prepared for MAF Sustainable Farming Fund and Marlborough Wine Research Centre Trust SPTS No. 5578 June 2011.
- Mundy D, Agnew R, Raw V, Jia Y 2011 Technical report for “Changing bunch architecture for sustainable botrytis control” A report prepared for SFF and Marlborough Wine Research Centre. SPTS No. 5004. January 2011
- Mundy D. Does stress express trunk disease - A progress report prepared for MAF Sustainable Farming Fund and Marlborough Wine Research Centre Trust SPTS No. 5127 March 2011.
- Neal S. Fruit yield management of Sauvignon blanc: The use of mechanical thinning. New Zealand Winegrowers SPTS No. 5482 May 2011.
- Neal S, Mundy D, Trought M, Pecchenino D, McLauchlan A. Yield and fruit composition responses of Sauvignon blanc to mechanical thinning: end of year report. A report prepared for New Zealand Winegrowers. SPTS No. 4779 November 2010.
- Raw V. Layering of spatial information to aid decision making, Internal Plant & Food Research report. SPTS No. 5705 June 2011.
- Sherman E, Vasconcelos MC, Haycock S, Robertson S, Grose C, Agnew R, Trought M, Hedderley D, Hall A, Greven M, Raw V, Neal S. Impact of vine vigour and crop load on accumulation of key flavours and flavour precursors in Pinot noir grapes. A report prepared for New Zealand Winegrowers. SPTS No. 4860 December 2010.
- Trought M. Predicting grapevine yields: a review. Part 1 of 5 related reports for New Zealand Winegrowers (NZW08-212) SPTS No. 5494. May 2011
- Trought MCT. Using meteorological data to predict grapevine yield and yield components in Marlborough. Part 2 of 5 related reports for New Zealand Winegrowers (NZW08-212) SPTS No. 5499. May 2011
- Trought MCT and Hall A. Predicting Hawke’s bay grapevine yield and bunch weight. Part 3 of 5 related reports for New Zealand Winegrowers (NZW08-212) SPTS No. 5501. May 2011



- Trought MCT Parker A Hall A and Agnew R. Predicting the flowering date of Marlborough Sauvignon blanc. Part 5 of 5 related reports for New Zealand Winegrowers (NZW08-212) SPTS No. 5497. May 2011
- Trought MCT. Using meteorological

#### Reports to the MRC Board – Published in MRC Annual Report 2011

- Agnew R, Raw V. Marlborough meteorological services.
- Agnew R. Student Support from Marlborough Research Centre Trust
- Mundy D, Raw V, Sherman E, Robertson S, Trunk health of New Zealand vineyards
- Mundy D, Agnew R, Raw V, Jia Y. Changing bunch architecture for sustainable botrytis control
- Neal S, Trought M. Plant Materials - Rootstock evaluation for premium Sauvignon blanc wine. SPTS No. 5561 June 2011
- Raw V, Agnew R. Vinefax information services. SPTS No. 5567 June 2011

#### Popular Articles – Published in various industry magazines

- Agnew. Met Report. Winepress, official magazine of Wine Marlborough. July 2010 to June 2011, Winepress 194-204. (11 monthly articles)
- Agnew R, Raw V. Soil variability and its effect on Pinot noir grape production. Popular article for New Zealand Winegrowers. SPTS No. 4879. November 2010
- Bennett J, Greven M. 2011. Influence of training systems and crop load on yield and fruit. Winepress 203 May 2011: 18-21.
- Bennett J, Greven M, Parker A 2011. The influence of training systems and crop load on grapevine yield and fruit composition. New Zealand WineGrower 14(5): 59-62.
- Bennett J, Greven M, Parker A. Influence of training systems and crop load on grapevine yield and fruit composition. New Zealand Winegrower, 14 (3), December 2010/January 2011, 71-73.
- Bennett J. Understanding the accumulation of fruit based green aromatic methoxypyrazine compounds in Marlborough Sauvignon blanc grape berries. Newsletter article for New Zealand Winegrowers. SPTS No. 5279. March 2011
- Bennett J, 2011. Pinot noir bunch shoulders – What is their effect? Winepress 203 July 2011: 10-11.

- Greven M, Neal S, Bolding H, Tustin S, Vasconcelos C 2011. Effect of training systems and post-harvest defoliation on storage reserves and productivity of high yielding Sauvignon Blanc wines. New Zealand WineGrower 14(6): 60-62
- Marc Greven, Carmo Vasconcelos, Sue Neal, Delphine Goffette, Tremain Hatch and Kay Clapperton. 2010 Harvest Defoliation affects the carbon and nitrogen balance of Marlborough Sauvignon blanc vines. New Zealand Winegrower, 14 (1), August/September 2010, 129-131.
- Greven M. The influence of training systems and crop load on grapevine yield and fruit composition. SPTS No. 4780. Popular article for New Zealand Winegrower magazine. November 2010
- Grose C, Sherman E. Designer vines research. Winepress 203 May 2011: 25.
- Mundy D, Manning M 2011. Grapevine trunk disease in New Zealand. New Zealand WineGrower 14(5): 59
- Mundy D, Manning M 2011. Information about grapevine trunk disease in New Zealand. New Zealand WineGrower 14(6): 62-63.
- Mundy D. Changing bunch architecture for sustainable botrytis bunch rot control. Popular article for New Zealand Winegrowers. SPTS No. 5118. March 2011.
- Neal S, Mundy D, Trought M, Pecchenino D 2011. Yield and fruit composition responses of Sauvignon Blanc to mechanical thinning. New Zealand WineGrower 14(5): 56-57. SPTS No. 4953. December 2010.
- Sherman E. Influence of crop thinning on fruit composition in Pinot noir grapes. New Zealand Winegrowers article. SPTS No. 4948 December 2010
- Trought MCT. Designer grapevines for world premium wine. Popular article for New Zealand Winegrowers. SPTS No. 4650. September 2010.
- Trought MCT. Soils Sunshine and Serendipity: The success of New Zealand Sauvignon blanc. SPTS No. 4691. October 2010.
- Trought M. Sauvignon blanc fruit yield management Newsletter Update. SPTS No. 5253. February 2011.
- Trought M. Predicting grapevine yields and yield components from meteorological data- Popular article for New Zealand Winegrowers. SPTS No. 5503. May 2011.

#### Fact Sheets – Published

- Greven M. Irrigation in Marlborough Sauvignon blanc. Fact sheet for New Zealand Winegrowers. SPTS No. 4850. November 2010

# THE SCIENCE LAB OF MARLBOROUGH



A small laboratory fitted out with state-of-the-art equipment and tucked away inside the Marlborough Research Centre campus at Grovetown is providing the scientific testing and analysis on which most of the South Island's export wine industry relies for its market certification.

At the same time, the multi-million dollar Marlborough aquaculture industry looks to this small science team for the bacterial testing and analysis on which this sensitive sector depends for its on-going health and viability.

The two industries are cornerstones of the Marlborough regional economy and they rely on the Marlborough arm of the highly respected Cawthron Institute of Nelson to help maintain their high standards.

The Cawthron Institute opened a small laboratory at the Marlborough Research Centre in November of the research centre's establishment year, 1984.

The original crop research has given way to viticulture and aquaculture reflecting the radically changed landscape of Marlborough's primary sector over the last quarter century and, this year, the Cawthron opened a dedicated export wine laboratory at its Grovetown base.

This enables the industry to receive its export market certification, for the European Union and other export markets, without sending samples out of the region to Auckland or Wellington.

"It made sense to set up the new lab here in the Marlborough region given that this is where the volume is. We have a close and

constructive relationship with the wine companies and their winemakers and a fundamental part of that success is that we are right here and they can talk to us – we're literally on their doorstep," says Cawthron's Blenheim laboratory supervisor Sam Murray.

Cawthron's lab team measure the sugars, the alcohol, the acidity and the sulphur dioxide levels required in the comprehensive range of tests imposed by the EU export certification regime as well as the specific test requirements of individual export markets like Brazil.

Cawthron has a long history in export certification and the new purpose-built laboratory has IANZ accreditations and MAF (NZ Food Safety Authority) approval.

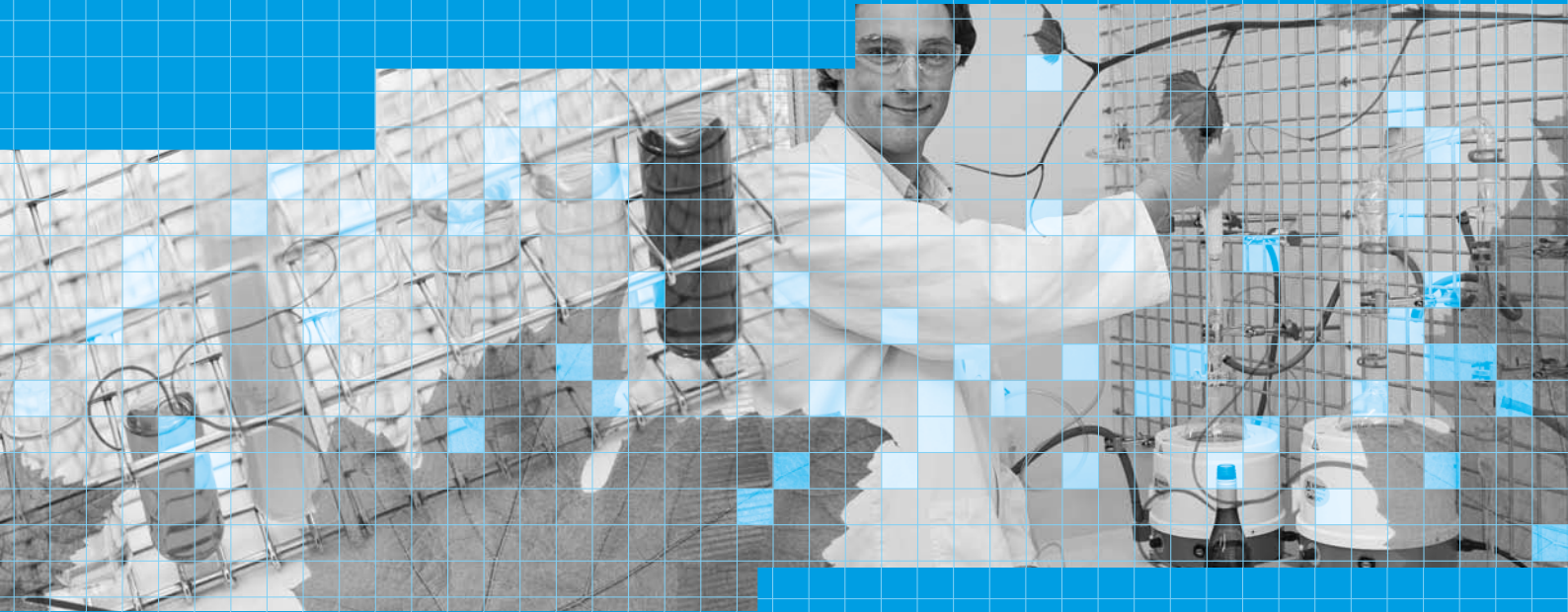
"We're a highly specialised service and we're proud that we're delivering to internationally recognised standards; the integrity of our results is guaranteed," says Sam.

That's backed up with fast turnaround, personalised service and good technical support to the clients.

The close proximity has saved freight costs for the industry and winegrowers have the assurance of instant access to a high level of expertise.

"It's a fantastic service as it speeds up our wine export certification process. This new local option delivers fast reliable results which is advantageous when we're trying to meet tight export deadlines. I think we all appreciate the personalised local service and the 'can-do-on time' attitude – it's terrific."

– Ben Glover, Chief Winemaker, Wither Hills.



The laboratory with its team of five scientists is already handling thousands of samples a year.

While wine and aquaculture make up almost 90 percent of that work, the Cawthron team is also testing food products and plant samples, water for drinking, from bores or from swimming pools, dealing with local businesses and consultancies, even individuals who bring problems to the front door seeking solutions in science.

“We’re very accessible to the community as well as to local business and the big players. That’s been an important part of our success in establishing a longstanding Nelson-based facility here in Marlborough,” Sam says.

The longstanding commitment to the regional economy means that the Cawthron base at the Marlborough Research Centre campus is well known as the region’s science laboratory.

“Cawthron has been a long-term tenant and the nature of its work means it’s a natural fit for the Research Centre. The Trust has greatly valued its efforts to maintain a presence in Marlborough, even during difficult economic times. The expertise of its scientists contributes enormously to our region,” says Marlborough Research Centre Trust Executive Officer Gerald Hope.

In the year that the Cawthron Institute also celebrates its 90 years of scientific endeavour, its role in the top-of-the-south primary sector is as strong as it has ever been – its key role in the shellfish aquaculture and seafood safety research programmes now enhanced by its export wine testing capacity in Marlborough.

**“THE  
EXPERTISE  
OF ITS  
SCIENTISTS  
CONTRIBUTES  
ENORMOUSLY  
TO OUR  
REGION.”**

GERALD HOPE  
MARLBOROUGH RESEARCH CENTRE TRUST  
EXECUTIVE OFFICER





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FINANCIAL  
**REPORTS**  
FOR THE YEAR ENDED 30 JUNE 2011

<b>Trustees</b>	John Marris Edwin Pitts Bernie Rowe
<b>Executive Officer</b>	Gerald Hope
<b>Nature of Business</b>	Administration of research projects
<b>Location</b>	85 Budge Street Blenheim
<b>Auditors</b>	Angela Wood Chartered Accountant PO Box 777 Blenheim
<b>Chartered Accountants</b>	Winstanley Kerridge Chartered Accountants Ltd PO Box 349 Blenheim 7240 Contact - Vaughan Harris
<b>Solicitors</b>	Gascoigne Wicks PO Box 2 Blenheim
<b>Bankers</b>	Bank of New Zealand 92-94 Market Street Blenheim

# DIRECTORY

# MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

ANNUAL REPORT FOR THE YEAR ENDED 30 JUNE 2011

	2011 \$	2010 \$
<b>Rowley Vineyard Operations</b>		
<b>REVENUE</b>		
Grape Sales	-	124,632
<b>RAW MATERIALS USED</b>		
Vineyard Personnel Costs	63,943	41,183
Vineyard Operating Costs	29,423	27,144
Harvesting	8,861	3,542
Vineyard Administration	5,014	982
Vineyard Rent, Rates and Insurance	28,595	26,781
Vineyard Development	-	1,317
Winemaking	71,139	-
Transfer of Vineyard WIP	(206,975)	-
Total	-	100,949
<b>GROSS SURPLUS FROM TRADING</b>	-	\$23,683

NOTE: This Statement is to be read in conjunction with the Notes to the Financial Statements and Auditor's Report





# MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

ANNUAL REPORT FOR THE YEAR ENDED 30 JUNE 2011

	2011 \$	2010 \$
<b>Budge Street Property Account</b>		
<b>REVENUE</b>		
Tenant Rentals	104,688	86,796
Tenant Charges	75,607	75,482
Theatre Charges	2,982	1,922
Total Sales	183,277	164,200
<b>LESS COST OF SALES</b>		
Repairs and Maintenance	8,092	8,716
Tenant Costs	68,260	73,878
Depreciation	61,521	63,603
Total	137,873	146,197
<b>GROSS SURPLUS FROM TRADING</b>	<b>\$45,404</b>	<b>\$18,003</b>

NOTE: This Statement is to be read in conjunction with the Notes to the Financial Statements and Auditor's Report



# MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

ANNUAL REPORT FOR THE YEAR ENDED 30 JUNE 2011

	2011 \$	2010 \$
<b>Grovetown Park Property Account</b>		
<b>REVENUE</b>		
Tenant Rentals	134,979	113,746
Tenant Charges	69,060	66,755
Total Sales	<u>204,039</u>	<u>180,501</u>
<b>LESS COST OF SALES</b>		
Repairs and Maintenance	8,295	11,659
Tenant Costs	62,915	56,430
Depreciation	11,840	8,119
Total	<u>83,050</u>	<u>76,208</u>
<b>GROSS SURPLUS FROM TRADING</b>	<b>\$120,989</b>	<b>\$104,293</b>

NOTE: This Statement is to be read in conjunction with the Notes to the Financial Statements and Auditor's Report



# MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

ANNUAL REPORT FOR THE YEAR ENDED 30 JUNE 2011

	2011 \$	2010 \$
<b>OPERATING SURPLUSES TRANSFERRED</b>		
Rowley Vineyard Operations	-	23,683
Budge Street Property Account	45,404	18,003
Grovetown Park Property Account	120,989	104,293
<b>TOTAL</b>	<b>166,393</b>	<b>145,979</b>
<b>OTHER INCOME</b>		
Marlborough District Council	131,600	131,600
Liquorland Scholarship	-	6,757
Drylands Forestry Projects Grants	284,011	141,729
SFF Project Funding	8,750	103,284
Vinefax Subscriptions Received	32,988	38,500
Interest Received	36,555	34,689
<b>Total Income</b>	<b>660,297</b>	<b>602,538</b>
<b>Operating Expenses</b>		
Audit Fees	3,500	3,500
Administration Costs	11,886	30,596
Office Expenses	12,272	13,200
Operating Costs	20,068	17,955
Personnel	115,084	112,683
Insurances	3,363	4,162
<b>Total Operating Expenses</b>	<b>166,173</b>	<b>182,096</b>
<b>Operating Surplus</b>	<b>494,124</b>	<b>420,442</b>
<b>Grants</b>		
Grants - RMH & Associates	45,000	35,000
Grants - Plant Foods Research	29,900	20,000
SFF Funded Projects	23,750	127,333
Grant - Drylands Forestry Project	219,840	141,729
P&F Research - Met Information Grant	23,325	20,460
Other Grants	10,000	16,907
Vinefax	28,330	25,000
<b>Total Grants</b>	<b>380,145</b>	<b>386,429</b>
<b>Net Surplus Before Depreciation</b>	<b>113,979</b>	<b>34,013</b>
Less Depreciation Adjustments		
Depreciation as per Schedule	22,411	16,189
<b>NET SURPLUS</b>	<b>\$91,568</b>	<b>\$17,824</b>

NOTE: This Statement is to be read in conjunction with the Notes to the Financial Statements and Auditor's Report



# MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

ANNUAL REPORT FOR THE YEAR ENDED 30 JUNE 2011

	2011 \$	2010 \$
<b>CURRENT ASSETS</b>		
BNZ - Ready Money Account	14,610	45,928
BNZ Current Account	19,598	-
BNZ On Call	76,438	80,622
Accounts Receivable	204,468	194,044
Income Accruals	8,735	18,801
Vineyard WIP	206,975	-
<b>Total Current Assets</b>	<u>530,824</u>	<u>339,395</u>
<b>NON-CURRENT ASSETS</b>		
Fixed Assets as per Schedule	4,487,237	3,663,051
<b>Investments</b>		
Kiwibank Term Deposits	44	623,610
BNZ Term Deposits	600,000	-
<b>Total Investments</b>	<u>600,044</u>	<u>623,610</u>
<b>Total Non-Current Assets</b>	<u>5,087,281</u>	<u>4,286,661</u>
<b>TOTAL ASSETS</b>	<u>5,618,105</u>	<u>4,626,056</u>
<b>CURRENT LIABILITIES</b>		
GST Due for payment	344	10,060
Accounts Payable	123,330	152,973
Accrued Expenses	4,257	3,000
Advance Funding	143,968	79,993
<b>Total Current Liabilities</b>	<u>271,899</u>	<u>246,026</u>
<b>TOTAL LIABILITIES</b>	<u>271,899</u>	<u>246,026</u>
<b>NET ASSETS</b>	<u>\$5,346,206</u>	<u>\$4,380,030</u>

NOTE: This Statement is to be read in conjunction with the Notes to the Financial Statements and Auditor's Report





# MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

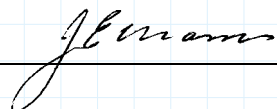
ANNUAL REPORT FOR THE YEAR ENDED 30 JUNE 2011

	2011 \$	2010 \$
Represented by;		
<b>EQUITY</b>		
<b>Reserves</b>		
Research Reserve	8,000	8,000
Revaluation Reserve	1,728,346	853,738
<b>Total Reserves</b>	<u>1,736,346</u>	<u>861,738</u>
<b>Retained Earnings</b>		
Opening Balance	3,518,292	3,500,468
Surplus transferred	91,568	17,824
<b>Total Retained Earnings</b>	<u>3,609,860</u>	<u>3,518,292</u>
<b>TOTAL EQUITY</b>	<u>\$5,346,206</u>	<u>\$4,380,030</u>


The accompanying notes form part of these Financial Statements and should be read in conjunction with the reports contained herein.

For and on behalf of the Trustees;

Trustee



Trustee



Date 18 October, 2011

NOTE: This Statement is to be read in conjunction with the Notes to the Financial Statements and Auditor's Report



# MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

ANNUAL REPORT FOR THE YEAR ENDED 30 JUNE 2011

Asset	Purchase Date	Cost Price	Book Value 01/07/2010	Additions Disposals	--- Depreciation --- Mth Rate	Accum Deprec \$	30/06/2011	Book Value 30/06/2011
<b>LAND &amp; BUILDINGS</b>								
Grovetown Park SH1		1,468,008	1,367,540	38,333		10,333	110,801	1,395,540
Grovetown Park/Budge Street - Revaluation	Jun 2011			874,608	1 0.0%DV			874,608
Research Centre - Budge Street		2,508,093	1,998,612		12	54,760	564,241	1,943,852
<b>TOTAL LAND &amp; BUILDINGS</b>		<b>3,976,101</b>	<b>3,366,152</b>	<b>912,941</b>		<b>65,093</b>	<b>675,042</b>	<b>4,214,000</b>
<b>PLANT &amp; EQUIPMENT</b>								
Research Centre - Budge Street		106,446	51,717	5,404		7,705	62,434	49,416
Rowley Vineyard		11,916	2,403	1,613		521	10,034	3,495
<b>TOTAL PLANT &amp; EQUIPMENT</b>		<b>118,362</b>	<b>54,120</b>	<b>7,017</b>		<b>8,226</b>	<b>72,468</b>	<b>52,911</b>
<b>MOTOR VEHICLES</b>								
Rowley Vineyard		32,826	25,486		12	3,066	10,406	22,420
<b>TOTAL MOTOR VEHICLES</b>		<b>32,826</b>	<b>25,486</b>			<b>3,066</b>	<b>10,406</b>	<b>22,420</b>
<b>FURNITURE &amp; FITTINGS</b>								
Grovetown Park - SH1		33,376	9,936		12	1,483	24,923	8,453
Research Centre - Budge Street		21,198	5,941		12	1,100	16,357	4,841
<b>TOTAL FURNITURE &amp; FITTINGS</b>		<b>54,574</b>	<b>15,877</b>			<b>2,583</b>	<b>41,280</b>	<b>13,294</b>
<b>VINEYARD</b>								
Development expenditure		296,988	196,299		12	16,001	116,690	180,298
Irrigation	Nov 2002	12,073	3,675		12 14.4%DV	529	8,927	3,146
Netting		9,128	1,442		12	274	7,960	1,168
<b>TOTAL VINEYARD</b>		<b>318,189</b>	<b>201,416</b>			<b>16,804</b>	<b>133,577</b>	<b>184,612</b>
<b>TOTAL</b>		<b>4,500,052</b>	<b>3,663,051</b>	<b>919,958</b>		<b>95,772</b>	<b>932,773</b>	<b>4,487,237</b>

NOTE: This Statement is to be read in conjunction with the Notes to the Financial Statements and Auditor's Report

# MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

ANNUAL REPORT FOR THE YEAR ENDED 30 JUNE 2011

## 1. STATEMENT OF ACCOUNTING POLICIES

The financial statements here presented are for the entity Marlborough Research Centre of Excellence Trust, a charitable trust registered under the Charitable Trusts Act 1957. Marlborough Research Centre of Excellence Trust is a reporting entity under the Financial Reporting Act 1993. These Financial Statements have been prepared in accordance with generally accepted accounting practice. The accounting principles recognised as appropriate for the measurement and reporting of earnings and financial position on an historical cost basis have been used, with the exception of certain items for which specific accounting policies have been identified.

### (a) Changes in Accounting Policies

There have been no changes in accounting policies. All policies have been applied on bases consistent with those used in previous years.

### (b) Differential Reporting

Marlborough Research Centre Trust qualifies for Differential Reporting because:

- 
- it is not publicly accountable, and
- it is deemed to be 'not large' due to the following criteria -
  - \* the gross turnover is less than \$20 million, and
  - \* total assets are less than \$10 million, and
  - \* there are less than 50 fulltime employees.

Marlborough Research Centre Trust has taken advantage of all available differential reporting exemptions.

### (c) Income Tax

The trust is not subject to income tax as it is a charity registered with the Charities Commission.

### (d) Receivables

Receivables are stated at their estimated realisable value. Bad debts are written off in the year in which they are identified.

### (e) Fixed Assets

Fixed Assets have been included at cost less accumulated depreciation. Details of fixed assets are set out in the attached Fixed Asset Register.

### (f) Depreciation

Depreciation has been charged on a cost price or diminishing value basis, in accordance with the method and rates currently approved by the Inland Revenue Department.

### (g) Inventories

Inventories are recorded at cost.

*NOTE: This Statement is to be read in conjunction with the Notes to the Financial Statements and Auditor's Report*



# MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

ANNUAL REPORT FOR THE YEAR ENDED 30 JUNE 2011

## (h) Goods & Services Tax

The Statement of Financial Performance and Statement of Cashflows (where included) have been prepared so that all components are stated exclusive of GST. All items in the Statement of Financial Position are stated exclusive of GST, with the exception of account receivables and payables.

## 2. AUDIT

These financial statements have been subject to audit, please refer to Auditor's Report.

## 3. INVESTMENTS

Interest has been accrued at balance date. Investments are as follows:

Account No	Interest Rate	Maturity Date	Balance 30.6.11	Balance 30.6.10
<b>Bank of New Zealand</b>				
3123	3.45%	22/07/2011	50,000	0
3124	5.30%	01/11/2011	100,000	0
3125	5.30%	01/11/2011	100,000	0
3126	5.30%	01/11/2011	50,000	0
3127	4.60%	08/10/2011	200,000	0
3128	4.60%	05/10/2011	100,000	0
162599-025	3.00%	On call	76,438	80,622
<b>Kiwibank</b>				
00	0.00%	Current	44	45
<b>Kiwibank No 1</b>	5.00%	28/01/2011		309,765
<b>Kiwibank No 2</b>	5.30%	01/04/2011	0	313,800
			\$676,482	\$704,232

NOTE: This Statement is to be read in conjunction with the Notes to the Financial Statements and Auditor's Report





# MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST

ANNUAL REPORT FOR THE YEAR ENDED 30 JUNE 2011

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## 4. FIXED ASSETS

Land and improvements were revalued by Valuation NZ as at 1 September 2002, the Grovetown Park land and buildings in June 2011 and Budge Street in June 2011.

The Trust has not depreciated the buildings portion of the property revaluation. It is the view of the Trustees that such depreciation is not material.

Depreciation rates used are:

Grovetown Park buildings and amenities - 2% to 3% cost price, or 3% to 21.6% diminishing value.

Budge Street buildings and amenities - 2% to 30% diminishing value.

Plant and equipment - 12% to 48% diminishing value.

Motor vehicles - 12% to 20% diminishing value.

Furniture and Fittings - 12% to 80.4% diminishing value.

Vineyard - 6% to 39.6% diminishing value.

## 5. EVENTS SUBSEQUENT TO BALANCE DATE

There have been no events subsequent to balance date which impact on the results disclosed in these financial statements sufficiently to warrant inclusion in these notes.

## 6. CONTINGENT LIABILITIES

At balance date there are no known contingent liabilities. Marlborough Research Centre Trust has not granted any securities in respect of liabilities payable by any other party whatsoever.

## 7. CAPITAL COMMITMENTS

As at balance date there are no known capital commitments. (2010 Nil)



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PO Box 777 E: wood@woodca.co.nz  
Blenheim 7240

## INDEPENDENT AUDITOR'S REPORT

### To the Beneficiaries of Marlborough Research Centre of Excellence Trust

#### Report on the Financial Statements

I have audited the financial statements of Marlborough Research Centre of Excellence Trust on the attached pages, which comprise the Statement of Financial Position as at 30 June 2011, and the Statement of Comprehensive Income, Statement of Changes in Equity and Cash Flow Statement for the year then ended, and a summary of significant accounting policies and other explanatory information.

#### Trustees' Responsibility for the Financial Statements

The Trustees are responsible for the preparation and fair presentation of these financial statements in accordance with generally accepted accounting practice in New Zealand and for such internal control as the Trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's Responsibilities

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with International Standards on Auditing (New Zealand). Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Other than in my capacity as auditor I have no relationship with, or interests in, Marlborough Research Centre of Excellence Trust.

#### Opinion

In my opinion the financial statements on the attached pages present fairly, in all material respects, the financial position of Marlborough Research Centre of Excellence Trust as at 30 June 2011 and its financial performance for the year then ended in accordance with generally accepted accounting practice in New Zealand and International Financial Reporting Standards.

A handwritten signature in black ink that reads 'Angela Wood'.

Angela Wood  
Chartered Accountant  
Blenheim

7 October 2011

CHARTERED  
ACCOUNTANTS 

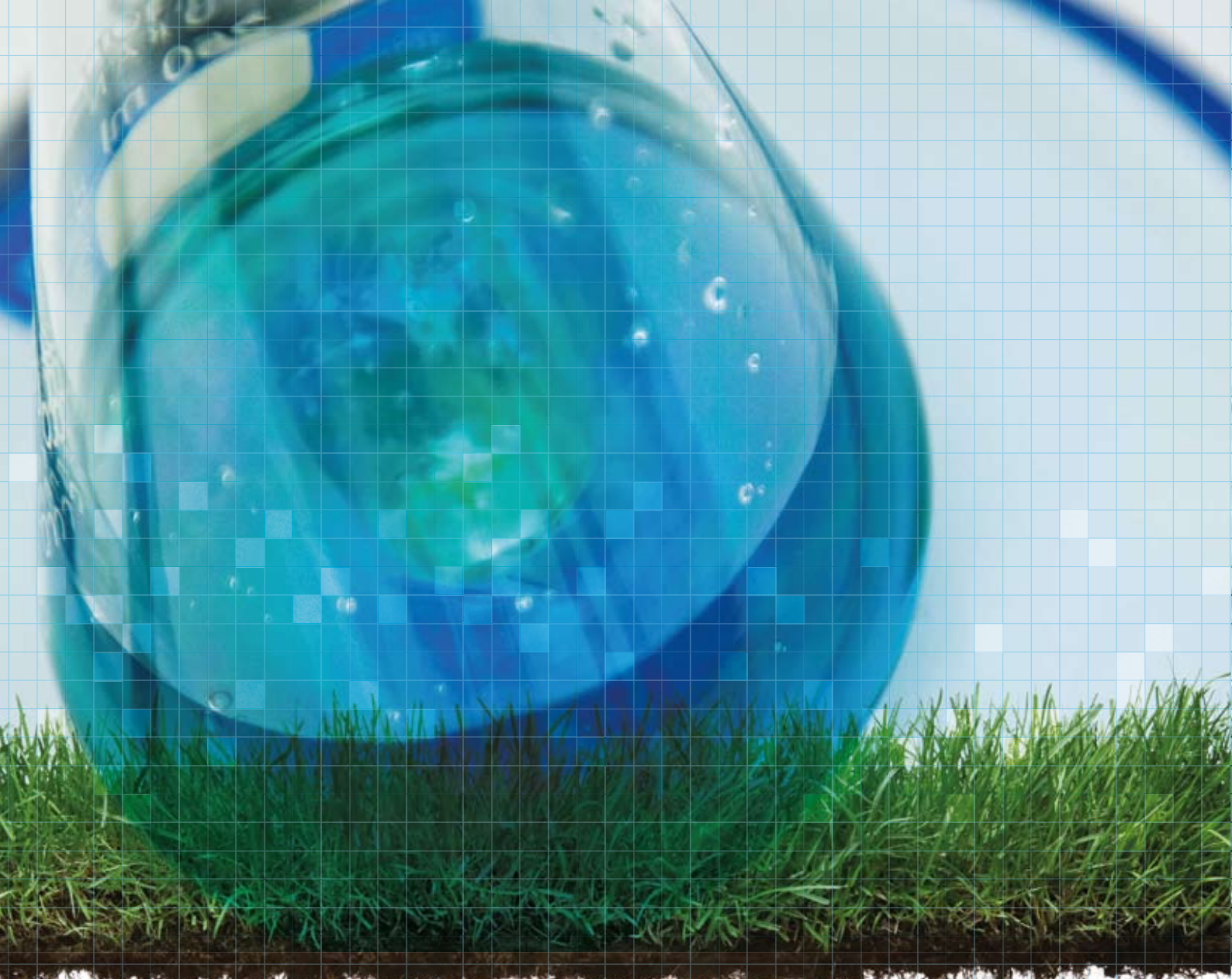
NOTE: This Statement is to be read in conjunction with the Notes to the Financial Statements and Auditor's Report



**“Predicting what lies ahead for the primary production sector as the recession works through agribusiness is a difficult and sometimes frustrating exercise. However the Marlborough region has seen many changes in crop type and land based resource use in the past 170 years. It would not be unrealistic to see different land use become evident in the near future as farmers search out innovative solutions to maintain and improve business profitability.”**

Gerald Hope  
Executive Officer





**MARLBOROUGH RESEARCH CENTRE of EXCELLENCE TRUST**  
**MARLBOROUGH WINE RESEARCH CENTRE**

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