Australian Government
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Living Longer on the Land

Case studies of the Sustainable Farm Families Program in the Sugar and Cotton industries

Collaborative Partnership for Farm Health & Safety
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Case studies of the Sustainable Farm Families Program in the Sugar and Cotton industries

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May 2008

RIRDC Publication No 08/049
RIRDC Project No WDH-2J

ISBN 1 74151 638 0
ISSN 1440-6845

Living Longer on the Land: ***Case studies of the Sustainable farm family program in the Sugar and Cotton industries***
Publication No. 08/049
Project No. WDH -2J

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Printed in May 2008 by Union Offset

Foreword

The Joint Research Venture for Farm Health and Safety has placed high priority on the health, well-being and safety of farm families. In 2003 the Joint Venture provided funding to Western District Health Service and its collaborative partners to undertake a project to investigate farmer health within the broad-acre industries of Victoria, southern New South Wales and eastern South Australia for a period of three years. This funding was extended in 2005 to pilot an extension of the program to sugar and cotton producers. Sites for the cotton industry were Wee Waa (western New South Wales) and Dalby (Queensland) and for sugar were Ingham and Ayr (far north Queensland). The result of this program extension is Living Longer on the Land – Case studies of the Sustainable Farm Families Program in the sugar and cotton industry.

The key question of farm families' current health status was addressed through structured education programs coordinated over a two year period. Key deliverables of this research project included:

- the development of broad inter-sectoral collaboration between industry, universities, health services and farming populations
- research on health education
- the assessment and monitoring of farming health indicators
- program design and implementation.

The importance of this report is that it provides basic statistical information on the transfer and repeatability of the previously successful Sustainable Farm Families project (WDH-3A). It also provides qualitative and quantitative information on the health, well-being and safety of a group of cotton and sugar producers. This report will provide a useful basis for agricultural industries contemplating investment or formulating policy in the health, well-being and safety of their human resource – an important issue for agriculture's future. Farm families from the cotton and sugar industries have embraced this project and are now incorporating health, well-being and safety as important business indicators that affect their 'triple bottom line'.

Key outcomes from the project reveal:

- improvement in health indicators of farming members at risk of diseases throughout the program
- positive retention of knowledge gained through the education process
- overall improvement of the participants' health through measurable indicators
- recommendation of the program to other farming families by 100 per cent of participants.

This project was funded by the RIRDC-managed Joint Research Venture for Farm Health and Safety program whose membership includes RIRDC, Grains R&D Corporation, Cotton R&D Corporation, Sugar R&D Corporation, Australian Wool Innovation and Meat & Livestock Australia. Additional joint funding was provided by the Cotton R&D Corporation.

This report, an addition to RIRDC's diverse range of over 1800 research publications, forms part of our Joint Research Venture for Farm Health & Safety research and development program, which aims to coordinate and support research and development to develop, implement, monitor and evaluate safe systems of work on farms across all rural industries.

Most of our publications are available for viewing, downloading or purchasing online through our website:

- downloads at www.rirdc.gov.au/fullreports/index.html
- purchases at www.rirdc.gov.au/eshop

Peter O'Brien
Managing Director
Rural Industries Research and Development Corporation

Acknowledgments

The completion of the Sustainable Farm Families – building and extending our future project has taken a great deal of time and effort from all involved. The most important is those farming families who agreed to participate and be involved. The 63 farming participants played an integral part in the program and their dedication and goodwill to continue each year is to be commended.

Credit must be directed to the Joint Research Venture for Farm Health and Safety for its support and dedication to the promotion of rural farm health. Appreciation is expressed to the Western District Health Service board and chief executive officer, Jim Fletcher, for the organisational support and strategic vision in backing the Sustainable Farm Families – building and extending our future project. Acknowledgement is given to our collaborative partners the Cotton Research and Development Corporation, the Sugar Research and Development Corporation and La Trobe University, Bendigo Campus, for their encouragement and dedication in improving the health, well-being and safety of farm families.

The Sustainable Farm Families – building and extending our future project brought together a team of primary producers, health professionals, industry representatives and university academics that were committed to making the health of rural farming families a priority. We would like to thank personally all members for their dedication, patience and assistance in making the project the catalyst of new research and evidence-based practice that will assist in making the health of rural farming families a priority in Australia. In particular, Helen Dugdale, Les Robertson, Diana Maldonado, Ann Curran, Michelle McClure, staff at Western District Health Service in Corporate, Finance and Health Information Services, Jennifer Maggs, Oscar Brumby-Rendell, and the South West Primary Mental Health Team have all made important contributions in ensuring that the project ran smoothly.

The Sustainable Farm Families team would also like to acknowledge formally the dedication and efforts made by all steering committee members who were integral in the development, dissemination and ongoing joint management of the project. The cotton and sugar Sustainable Farm Families – building and extending our future program joined in with the current Sustainable Farm Families steering committee. Included were:

- Professor Bruce Wilson, RMIT University, Melbourne, Victoria
- Professor John Martin, La Trobe University, Bendigo, Victoria
- Ms Susan Leahey, Australian Women in Agriculture
- Ms Delwyn Seebeck, Victorian Farmers Federation
- Mr Warren Straw, Department of Primary Industries, Victoria
- Ms Victoria Mack, LandConnect Australia
- Ms Jane Fisher, Rural Industries Research Development Corporation
- Mr John Marriott, Farm Management 500, Victoria
- Ms Helen Dugdale, Cotton Research and Development Corporation
- Ms Diana Maldonado, Sugar Research and Development Corporation
- Mr Les Robertson, Sugar Research and Development Corporation
- Ms Cynthia Mrigate, Gardiner Foundation

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Executive Summary

What this report is about

The health and well-being of all Australians is an important factor in the social and economic success of the nation. All governments have made significant investments to improve the health status of both metropolitan and rural/remote populations. Current data reveals that the health status of people living in rural and remote populations is poorer than their city counterparts. They are more likely to be smokers, more likely to drink at higher risk levels and more likely to be overweight or obese and physically inactive (AIHW 2005). Whilst this highlights the health status of rural populations, we do not currently have an adequate understanding of the specific health status of rural *farming* populations. The Australian Bureau of Statistics classification system groups rural health populations on the basis of geographical location rather than by employment in an agricultural industry. Rural communities also have less access to medical and health services and they need to travel long distances on less than adequate roads to obtain health services (AIHW 1998). In addition, farming itself is listed as a particularly dangerous occupation.

This report tells the story of a health education program conceived by farmer associations, for farmers, which has been developed in association with health, industry, universities, training organisations and agricultural industries. These groups have worked together to develop and pilot the Sustainable Farming Families (SFF) program. This report discusses the extension of the SFF program to cotton and sugar farm families in New South Wales and Queensland.

The report provides an insight into the current health status of rural farming families within the sugar and cotton industry. It increases our understanding of what factors impact farming family health and identifies measures to improve farming family health, well-being and safety. Many of the specific strategies to improve farming family health were provided by the farmers themselves.

Who is the report targeted at?

The report is targeted at people interested in the impact of health and well-being of farming families in rural and remote Australia. This includes farming families, the farming workforce and agricultural industries, especially those involved in policy and resource allocation decisions. Research bodies including universities, health services and agricultural industries will find the information useful in future planning to effectively service the needs of Australian agriculture. Policy makers and government agencies will find this report of value in developing better policy to improve farmers' and rural health, and in allocating future funding for rural farming family populations. This report also gives the general reader a snapshot of the health status and needs of rural faming families and their attitude towards their own health.

Background to the SFF program

The basis for Sustainable Farm Families is proving to be versatile across a range of agricultural industries. It has been driven through the passion of two registered nurses, Susan Brumby and Stuart Willder, with an interest in farm family health and the future direction of farming throughout Australian agriculture. In association with university-based researchers and with strong organisational support from their health service, Western District Health Service, they developed the evidence-based health promotion program that is the SFF. The project was structured initially around a specific target group of farming families and covered many health issues including cardiovascular, diabetes, stress, gender specific issues, cancers, injury, farm safety and mental health. The program content reflected the primary health factors known to affect farming families and rural communities more generally and also planned to recognise the complex environment of farms as workplaces, homes and businesses. Given this complexity, farming families were key players in the shaping, feedback and further development of the program through discussion of shared issues and common problems.

The extension of the initial SFF broad acre project into the cotton and sugar industries has allowed the project to be tested in agricultural industries with different climatic, industrial and social issues. These issues can be more closely understood using the SFF framework.

The funding allocated by the RIRDC managed Joint Research Venture in Farm Health and Safety has been a key factor in the development and implementation of both the original SFF project and the extension of that work to cotton and sugar farming families.

Aims and Objectives

The initial aims and objectives of the SFF project were developed in response to the evidence that while there are health statistics regarding rural and metropolitan health, little is known about the health status of farming families (men, women and extended families). Our aim for the SFF-BAEOF project was to build on the four research objectives from the initial SFF project in broad acre farming and to create resources to implement the learning in other agricultural industries.

Specifically, our objectives for this program were to:

1. Design and deliver a training program that assists sugar and cotton farming families to identify strategies to enhance individual and family health and relevant OH&S practices.
2. Identify and track farming family health indicators for inclusion in farm management quality assurance processes.
3. Provide information on the relationship between family health, health as a social issue in rural communities and farm productivity.
4. Communicate, disseminate and develop project findings to farming families and the health and agricultural sectors.

Methods used

The goal was to develop and trial a program that enabled farmers to increase control over and improve their health, well-being and safety. Methods used within the program incorporated a wide range of evidence-based data collection and evaluative frameworks. Participants were recruited by collaborative partners from within both cotton and sugar research and development corporations. Structured evaluative frameworks were utilised to gather and interpret information under the guidance of Professor John Martin, Director of the Centre for Sustainable Regional Communities based at La Trobe University in Bendigo, Victoria.

The project's research and education activities included:

- a literature search based on farmer health (health promotion, extension and farmer education workshops)
- focus group discussion regarding attitudes to health well-being and safety
- structured annual workshops over two years using established learning models and theories
- pre and post knowledge questionnaires
- program process evaluation
- physical assessment process and data collation of health indicators
- demographic and self-reported surveys
- data analysis using Statistical Packaging Social Sciences (SPSS)
- action planning to address behaviour and lifestyle decisions
- case studies.

Using these assessment and data collection methods, the project team collated information on the physical health status of de-identified participants with statistical analysis of the data (derived from questionnaires/focus groups and observations) about their own health perceptions, their initiatives to improve their health, their business decisions, and other aspects of their lives. Output from this analysis has been used to prepare conference papers, produce published papers and to share with RIRDC and other bodies interested in the health, well-being and safety of farming families. The research has also been used to gather farmer feedback and to improve the program's content and delivery.

Results/Key Findings

The initial SFF project achieved some very important outcomes and research findings. These outcomes included:

- high retention rates of participants over set programs, considering environmental influencing factors including drought and floods
- retention of new knowledge gained over successive years by participants
- statistically significant reduction of clinical indicators which correlate to major diseases including cardiovascular disease and type 2 diabetes
- increased use of protective aids and equipment on farms
- positive lifestyle changes consistent with action planning by participants to commit to family holidays, and other stress reduction activities
- generation of further research into the health, well-being and safety of farming families
- three fully refereed conference papers published highlighting the positive health outcomes of the research with additional abstracts presented at numerous conferences
- recommendation of the program to other farming families by 100 per cent of participants.

Whilst part of the SFF program, SFF-BAEOF was designed to pilot the program with different industries in different geographical areas to see if the results were comparable. It was found that many of the key results from the SFF broad acre program were repeated in the cotton and sugar industries.

Implications for relevant stakeholders

Industry

The implications of this research for Australian agriculture are significant. Industry involvement from the Cotton and Sugar Research and Development Corporations has been a key factor in the coordination and success of this project. These two Corporations have also played a key role in the project steering committee and in the recruitment of the farmers participating in the program. Industry has also benefited from the association with this broad inter-sectoral collaboration in the development and implementation of the project. While the SFF program has been useful for the broad acre, dairy, cotton and sugar industries, it lays a foundation for similar projects in other agricultural industries.

Farming Communities

Significant community implications arising from the SFF project have occurred with many of the programs across the nation generating ongoing community activities around health, well-being and safety. Community involvement has generated the desire for programs beyond the present funding timeframes and encouraged future program development by other agricultural industry and health services. Positive community response has seen the initial program receive major awards in 2005 and 2006, the initiation of work safe programs, additional funds for health and well-being grants and general stores and supermarkets changing the foods they stock for healthier choices. All of these constitute part of the benefits of SFF to participating communities.

Policy Makers

The SFF research has seen an emerging interest from government and policy makers in gaining more understanding about farming health, well-being and the future of the family farm enterprise. This has resulted in additional funding to expand the action research, number of participants and training opportunities. The involvement of the Commonwealth Department of Health and Ageing, Victorian Department of Primary Industries, Victorian Farmers Federation and more recently the Victorian Department of Human Services, has generated a broader cross-section of institutions interested in the state of farming family health, together with training an increasing number of health professionals. On 31 July 2007 the Victorian Minister for Agriculture, Joe Helper, announced substantial funding from the state Department of Primary Industries for delivering the SFF program to over 1000 Victorian farmers in 2007-2009.

Others

Interest in the SFF program has been generated with key collaborative industry and sector partners coming together to continue the development of the SFF initiatives to improve the health, well-being and safety of farming families. This positive response from the wider Australian agricultural industry has been a key outcome for the SFF program. It is remarkable that a small rural health service has been able to draw on its grounded experience and develop this initiative to the stage where it now has such a prominent national and international focus.

Recommendations

These recommendations have implications for all levels of government, health, industry, local populations and individuals. An appropriate response will require government and industry to work collaboratively in assessing the specific policy implications of the project and to apply the resources necessary to bring significant benefits to the health and well-being of Australian farm families.

Key recommendations from this project mirror those of the broader SFF program and are:

1. The Australian government fund a national SFF program to establish regional partnerships with rural and regional health services.

2. The SFF program be included in the annual health promotion plan of rural and regional community health services with ongoing financial support from the Australian government.

3. Future SFF programs be structured around partnership arrangements with institutions and organisations in health, government, industry, education and community.

4. The evidence-based approach remains a cornerstone of the SFF project as it is adopted by rural and regional health services across Australia.

5. The Australian government work with the Western District Health Service to fund a five year program to implement the previous recommendations in the report.

1. Introduction

Media Release

This Media Release can also be viewed at www.srdc.gov.au

12 December 2006

Managing your most important asset – your family's health

As you prepare to wish friends and loved ones a happy and healthy New Year – take the time to stop and ask yourself what you'll do in 2007 to keep yourself and your own family healthy.

As one participant in the SRDC-supported Sustainable Farm Families Program put it; you need your health; without it you have no balance, no stability, no life.

With such positive reactions to the Sustainable Farm Families Program conducted in the Herbert and Burdekin in 2006, SRDC is keen to encourage others to find out about the links between sugar farming family health, farm related accidents and farm sustainability.

Margaret Linton, who participated in the workshop in 2006 said it was a real eye-opener, easy to follow, really beneficial and she'd definitely recommend it to others.

"The thing that surprised me the most was that the research they spoke to us about said that people in rural areas aren't as healthy as people living in the city – I really thought we'd be the healthier group," Margaret said.

"We talked a lot about different health issues and did a tour of a supermarket to learn more about nutrition and how to read labels on food," she said.

The SFF Program takes participants through an intensive health evaluation, education and training process and identifies potential risks to health and wellbeing.

The program is based on assisting sugar farmers and their family to identify strategies to enhance individual and family health, and Margaret said that the information was easy to follow and was put in everyday language, not medical terms.

Participants from the 2006 program are reminded to continue thinking about their family's health as they prepare for the festive season and to keep they eyes out for information about follow-up sessions in 2007.

SRDC is also gauging interest for future workshops in other regions and is encouraging people to register their interest as soon as possible.

And just in case you needed any more encouragement to take part, here are some more comments about the program from other sugarcane growers:

- "It gave me a better understanding how health impacts on business decisions and the financial performance of my own farm."
- "100% practical, 100% applicable and 100% understandable."
- "If you know, then you can act. Prevention is better than cure."
- "Most time any medical person has spent with me."
- "People are most important asset on a farm and people need good health to perform."
- "Without good health you are no good to your family or farm productivity. You and your health is the most important and only you can improve it."

The program is an initiative of Western District Health Service, Hamilton, Victoria and commenced in 2003 with a grant from the Rural Industries Research & Development Corporation's Joint Venture on Farm Health and Safety.

For more information, or to register your interest contact SRDC Investment Manager, Les Robertson via email lrobertson@srdc.gov.au or telephone 07 3225 9442 or Susan Brumby at Western District Health Service on 03 5551 8450. Visit http://www.sustainablefarmfamilies.org.au/sugar.htm

For more information contact Claire Power, Communications Manager, 07 3225 9444

Investing in Sugarcane Industry Innovation

The above media release arose from the completion of the first year of the Sustainable Farm Families sugar program held in Ayr, in Queensland's far north. Margaret Linton was a participant together with her husband Joe. Margaret and Joe completed the second year of the project in a group that returned 100 per cent of participants despite severe flooding rains in the area only days before the workshop was held.

The full costs of farmer illness, injury and accidents are not known. Fragar and Franklin (2000) noted that the costs of farm injury and illness are probably not being borne by the industry; their impacts affect all of Australian society. The long term consequences of ill health or injury, such as disability, accident insurance, decreased production and poor psycho-social outcomes, in farming families in Australia are difficult to ascertain. Apart from the lack of formal research, even getting adequate data on farming families from official sources has been complicated by data-gathering practices. Prior to 1996, only one person per household was able to indicate that they were the farmer in the Australian census questionnaire. This has made comparing female farmer health with the rural population very difficult.

While the data is sketchy and incomplete, sufficient evidence has become available that indicates the health of farming families is at risk and likely to be worsening. The importance of a collaborative effort between governments in Australia to address the health issues of Australians living in rural and remote areas has already been acknowledged in the Healthy Horizons Framework (National Rural Health Policy Forum and the National Rural Health Alliance 1999). Health practitioners now recognise that social context plays an important role in determining occupational health and safety (OH&S) outcomes. Nowhere is this more relevant than for farming families. In Australia, according to the National Farmers Federation (2006), 99 per cent of farms are family owned – so the workplace is also the home place. The family is a business unit, yet it also has all the emotional dynamics that can arise in the family context. Building human capacity is a major factor in addressing the health, illness, injury and OH&S outcomes for rural people and farming families. In particular, the strength of social capital and community relationships (Doyle et al. 2006) is seen as pivotal to the maintenance of mental health in rural communities, yet it also has been eroded by recent changes to rural life and adverse climatic conditions (Commonwealth Department of Health and Aged Care 2000).

The issues arising from this combination of serious concerns about farm families' health are diverse and complex yet there is inadequate understanding of what is actually happening. This sets the scene for the Sustainable Farm Families (SFF) project. The 'Sustainable Farm Families – the human resource in the triple bottom line' project set out to integrate key farmer health issues with mainstream rural research, farm management analysis and quality assurance programs. Informed by a social model of health, the approach focused on farm families as the key site for intervention, recognising that health and rural sustainability is created where people live, work, love and play (Kickbusch 1989). The principles of 'triple bottom line' thinking were addressed through working with key industry groups and included incorporating farm family health indicators into farm management planning. This would enable health, safety and well-being and farm management issues to be addressed coherently, to broaden the impact of social and economic benefits by addressing rural social health issues alongside farm management.

Background to the SFF concept

The SFF concept is unique and versatile. It has taken shape from the driving passion of two registered nurses with an interest in farming family health and the future direction of farming throughout Australian agriculture. It is centred on direct engagement with farming families, informing them about their personal health situation while broadening their understanding of healthy living options and farm safety. It recognises that their health is essential for them to effectively utilise their economic and natural resources.

The initial SFF program was delivered to six groups of farming families over three years using a format that engaged them as active learners where they commit to healthy living and safe working practices. Its activities encompassed an annual workshop, newsletters, industry association involvement, pre and post knowledge questionnaires, personal action plans and measurement of clinical indicators. The underlying message has been to increase awareness of the importance of a healthy human resource in 'triple bottom line' thinking and to focus equally on financial, natural and human resources – all essential for farming success. The project motto was: "No point in a better bottom line if you're not there to enjoy it."

Funded through the Joint Research Venture for Farm Health and Safety, managed by the Rural Industries Research and Development Corporation (RIRDC) and led by Western District Health Service (WDHS), the SFF program identified the need for strong inter-sectoral collaboration. Partnerships were developed with Royal Melbourne Institute of Technology (RMIT) University, Farm Management 500 (a farmer benchmarking group), LandConnect Australia (a training organisation), Victorian Farmers Federation, the Victorian Department of Primary Industry and Australian Women in Agriculture. The funding was provided to develop, implement and evaluate a three year program to address farming family health issues amongst broad acre farmers in Victoria, South Australia and New South Wales.

Observing the success of the initial program, WDHS was approached by RIRDC to extend the project to other agricultural industries. Incorporating the sugar and cotton industries was viewed as a relevant option considering the support these industries provide to the Joint Research Venture for Farm Health and Safety and the key support of both Les Robertson of the Sugar Research and Development Corporation (SRDC) and Helen Dugdale of the Cotton Research and Development Corporation (CRDC). Sustainable Farm Families – building and extending our future (SFF-BAEOF) is the extension of SFF to sugar and cotton farm families.

Background to the industries

Sugar

Processing of sugarcane into raw sugar is one of Australia's largest and most important rural industries. Australia is a low-cost producer and major exporter, with an annual production of more than 5 million tonnes of sugar. About 20 per cent of the sugar industry's production is sold on the domestic market. Depending on the world sugar price, the industry generates direct revenue of approximately $1.5 billion to $2 billion (Canegrowers Australia 2006).

The industry is comprised of about 5000 business enterprises that supply cane to 27 sugar mills. About 94 per cent of Australia's sugar cane is grown in the state of Queensland (see Figure 1.1). During the season, most mills crush an average of 10,000 tonnes of cane daily and employ around 150 people.

Australian cane farms range in size from about 20 to 300 hectares (with the average size about 75 hectares) and are mainly family owned and operated. The total area of land growing sugar cane in Australia is about 400,000 hectares (Australian Sugar Milling Council 2007).

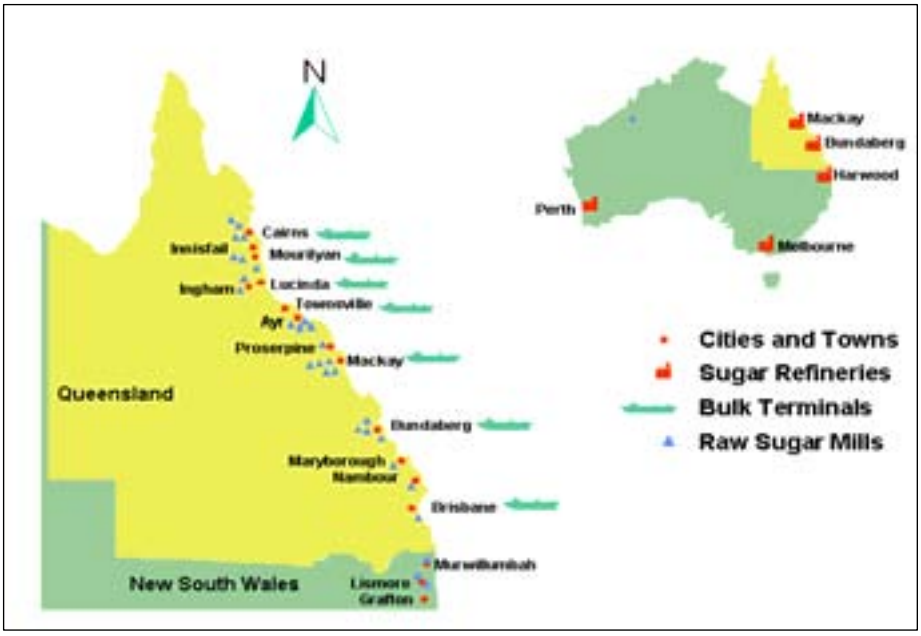


Figure 1.1: Location of key sugar cane infrastructure in Australia (Source: SRDC)

Selection of sugar sites

Given that 94 per cent of Australian sugar cane production is in Queensland, two regions of the state were selected by the SRDC to conduct the trials: the Herbert region based in Ingham and the Burdekin region based in Ayr. These two regions are among the biggest sugar producing areas in Australia. Growers from the two regions were invited to participate in the SFF program and the workshops which were held.

The health and safety of the people who work in the sugarcane industry and live on the farms is imperative to maintaining a healthy and sustainable industry. SRDC works in partnership with industry, government, research and development partners and associated rural communities to underpin a vibrant sugarcane industry. SRDC investment in the SFF program is aimed at raising awareness of the importance of good health and enabling farmers to create strategies and changes in their lives to achieve good health.

Cotton

Australian cotton farms are typically 500 to 2,000 hectares in area, highly mechanised and technologically sophisticated (CRDC 2004), generating approximately $1 billion per year in export revenue (Cotton Australia). Cotton is one of Australia's largest rural export earners and helps underpin the viability of many rural communities. This is evidenced in the growth in cotton areas and townships over the last 40 years.

Most cotton farms are owned and operated by family farmers that may also graze sheep and cattle and grow other crops. Approximately two-thirds of Australia's cotton is grown in NSW (Figure 1.2) with the remainder produced in Queensland with 85 per cent being grown under irrigation (ACIC 2007). In 2004-05 Australia yielded a world record 2,038kg/ha (9.2 cotton bales per hectare). This figure was three times the world average of 732 kg/ha. The next highest yielding countries were Syria (1,571 kg/ha), Mexico (1,312kg/ha) and Turkey (1,289 kg/ha) (Cotton Australia).

Figure 1.2: Location of Australian cotton infrastructure

Selection of cotton sites

The SFF-BAEOF cotton project commenced in 2006 during a period of drought, decreased water allocations, lower cotton prices and higher production costs.

The CRDC funded two workshops in the cotton regions as pilot programs to see how useful and successful they would be to cotton farming families. Wee Waa (see Plate 1.1) and Dalby were chosen as they were considered central to the New South Wales and Queensland cotton regions, respectively.

They were also well populated with cotton growers, which meant that getting farmers to participate might not be as difficult in these regions as it might be in other regions with fewer cotton farmers.

Plate 1.1: SFF-BAEOF participants from the Wee Waa program

The CRDC was also interested to know, given that these two towns have health facilities, whether farmers actually avail themselves of these services. If not, why not? What sort of health services do they require? The CRDC wanted to give cotton families exposure to other health professionals and to knowledge that they may not otherwise have received. That is, providing farmers with advice from an outside health professional rather than from one who lives in their community and is known socially to the farm families.

2. Objectives

Sustainable Farm Families – building and extending our future (SFF-BAEOF) aimed to expand the original SFF project into other industries, thereby establishing the basis for farming family health research in these industries. The SFF-BAEOF project also aimed to initiate training and development opportunities for rural health professionals working in other parts of Australia.

The two overarching assumptions of the SFF approach are:

- *Farming families that understand and believe in a holistic approach to health and well-being will adopt farming practices that enhance their health and safety, leading to successful farming outcomes.*
- *Health and safety issues affect all farmers, however, the way in which farmers in particular industries address these issues will be different* (in terms of SFF-BAEOF being an extension to the SFF project, this was our methodological assumption).

The aims of the SFF-BAEOF project were to:

- develop interagency agreement, project management, facilitator guidelines and 'train the trainer' strategies for SFF with other rural health services in relation to the sugar and cotton industries
- validate the SFF process as it is applied in other agricultural industries
- conduct a seeding program for other rural industries (e.g. sugar and cotton) and evaluate the extension and transferability of the learning to these industries.

Specifically, our objectives for the SFF-BAEOF were to:

1. Design and deliver a training program that assists sugar and cotton farming families to identify strategies to enhance individual and family health and relevant OH&S practices.
2. Identify and track farming family health indicators for inclusion in farm management quality assurance processes.
3. Provide information on the relationship between family health, health as a social issue in rural communities and farm productivity.
4. Communicate, disseminate and develop project findings to farming families and the health and agricultural sectors.

The key strategies employed to achieve these objectives included a training program delivered to farming families that discussed health, well-being, safety and injury in rural and farming populations, individual health assessments and assistance in formulating an individual health improvement plan. This project was seen to complement farming industry initiatives relating to farming occupational health and safety (OH&S), consistent with the assumption that as a farmer's health and well-being is enhanced the number of OH&S incidents is reduced.

Outcomes of the proposed research are:

- to build capacity in rural disciplines, health and industry associations addressing farming family health, well-being and farm safety, identifying key generic cross-sectoral issues relating to farming business success
- to extend the positive outcomes of the SFF project in wool, meat and cropping to other agricultural industries (i.e. sugar, cotton)
- to extend and develop this research into other agricultural industries involved in the Joint Venture for Farm Health and Safety (i.e. sugar, cotton)
- to contribute to the research of, and be acknowledged by, the National Centre of Farm Data and Injury
- to include farmers representing Australian Women in Agriculture (AWIA), relevant industry associations (i.e. cane growers, cotton growers) and farmer groups

- to add value to the original project by linking in other agricultural industry bodies (e.g. Gardiner Foundation, United Dairy Farming Families, West Vic Dairy) who have funded SFF workshops in their industries which will also contribute to the evidence base of the SFF project.

The following deliverables of the proposed research were received:

- a fully developed and validated workshop-based participant manual that can be used across agricultural industries
- notes, teaching materials and resources (which have been further developed with the Victorian Department of Human Services Train-the-trainer program) for health promotion professionals to support the participant manual
- industry specific application, particularly in relation to farmer health and safety (e.g. auger injury on broad acre farm versus auger injury on dairy farm using same machinery for different applications)
- evaluation reports of pre and post knowledge over the life of project
- evaluation report of the transferability of this health promotion program across agricultural industries
- information on farmer knowledge and understanding of health, well-being and farmer safety
- farm injury statistics completed in line with the Farm Injury Optimal Dataset from the National Farm Injury Data Centre.

The deliverables to the Joint Research Venture of Farm Health and Safety and collaborative partners included:

- a farm family health awareness and improvement program
- provision of information relating to farm family health and sustainable farming
- training materials including a family health and well-being action plan for farmers
- a training module that can be used across a range of farming industries
- communication of research findings through conference papers and articles in industry magazines, journals and radio
- a user-friendly template to identify personal health issues to fit into a farming business plan, which would also be available on CD Rom.

Given the objectives of this project, this report is much more than just information about research findings. The action and development work implied in the first and fourth objectives has been a central driver of the project and an important part of this report is telling that story:

- How did the workshops with farm families work?
- What kind of information was presented to them?
- How was the educative work integrated with the information gathering and the research strategy?

While the focus of program design was on the workshops, these were supplemented by other important activities. Not least amongst these was the expectation that participants would choose to undertake particular ‘actions’ designed to improve their health, that these would be public within the group, and that they would be asked to report on them.

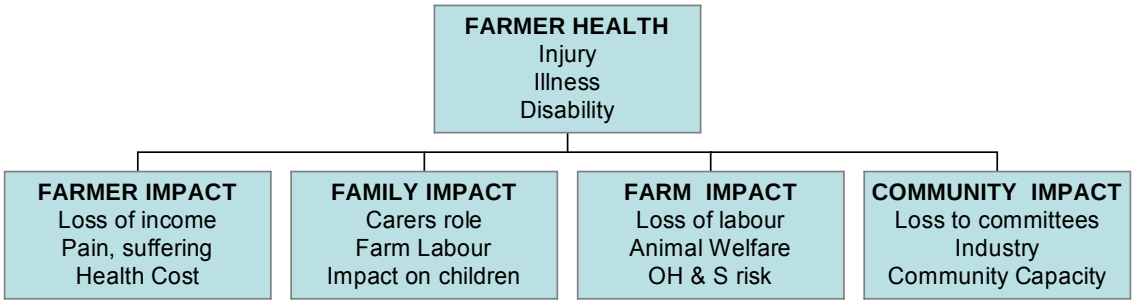
In considering this complexity of objectives and activities, it becomes apparent that this is very much an action research project in which development is undertaken alongside research, and research then informs future action. The report attempts to capture each of these dimensions. The program design was informed not only by the available research, but also by a range of theories related to adult learning and to evaluation. Before presenting the major findings, the next chapter provides some account of the underlying theory and design of the program.

3. Theory and methodology

Sustainable Farm Families concepts and development

The framework underpinning this project was based on the assumption that a farmer's health has a four pronged impact on the health of their family unit, their farm and ultimately the local community (Figure 3.1). It is important to note that most farms in Australia are still family owned and operated (National Farmers' Federation 2006) with health, well-being and safety having a huge impact on family and workplace lives.

Figure 3.1: Relationship showing impact of poor health and injury on farmers, families, farms and communities (Source: Brumby 2005)



Applying the conceptual framework to the development of teaching strategies and evaluative frameworks was a central part of the project. This framework has been fundamental in enabling the project to develop the innovative basis of its success. In planning the extension of the project, the knowledge and experience of the WDHS project leaders was enhanced through learning about educational processes, research activities and design of educational materials. The extension to the sugar and cotton industry involved key linkages from both industries' groups to formulate plans to facilitate the rollout to four key communities.

Ethics approval for the SFF-BAEOF cotton and sugar project was granted under an extension as per National Health Medical Research Council guidelines through South West Health Care Ethics Committee (2003). The SFF-BAEOF project, like the earlier SFF project, was to be available for people who had farmed for more than five years and were aged between 18 and 75 years. It was open to any member of a farming family business and the participants were to be self-selecting, typically through networks such as the Canegrowers (the representative body for Australian sugarcane growers), Cotton Growers Association, WinCott, Women in Sugar and the SRDC Regional Workshops. The CRDC also undertook personal visits (see Plate 3.1) and presentations to groups in Wee Waa and Dalby. The opportunity to participate was also advertised in local newspapers.

Plate 3.1: Entrance to cotton property

A great deal of planning, consultation and development occurred in the design and delivery of the initial SFF project. One benefit of this phase was the strengthening of the focus on rural farming family *health*. This provided an opportunity to address the broader issues of health and well-being. By involving the whole farming family unit the project was able to address health, safety and well-being issues suffered by both men and women and multiple family members.

In developing the SFF project, many theories and principles were used to inform and formulate its innovative approach. The development of the education program had to be appropriate for rural men and

women who have differing levels of education and comprehension. Azjen and Fishbein's (1980) theory of 'reasoned action and planned behaviour' guides the learning experienced by participants in the SFF. Azjen and Fishbein's theory suggests that participants' behaviour changes occur through:

- the sharing of values and beliefs about the health of the farming peer group
- a common commitment to individual physical and knowledge assessment
- sharing with their peers how best to influence health outcomes
- better understanding of the consequences of poor health and safety behaviour of farming families.

The complexity of the issues to be addressed in this program, and the relevance of drawing on several intersecting theoretical perspectives, was considerable. The contributions of the various partners and access to health, research, industry and educational expertise were all essential to the construction of a program that would engage the participants, provide appropriate frameworks for learning, foster real change in practices and allow the collection of relevant research data.

This approach to learning is appropriate for farming families learning together as it allows particular focus on issues such as farm health and safety, the role of good farm practices and the effects on the farming family unit. This process has allowed participants to use the experience and support of their peers to make informed choices and identify behaviours that affect farming family health.

The training and delivery model was based on Kolb's (1984) adult learning model (Figure 3.2) which allows participants to follow a systematic approach to identify and comprehend new information. Kolb's model is based on the understanding that adults learn best when they reflect on their own experiences, acquire new concepts, and actively experiment with new ways of working, which then become part of their experience base. This model is supported with videos, graphs, statistics and reflection on one's own practice.

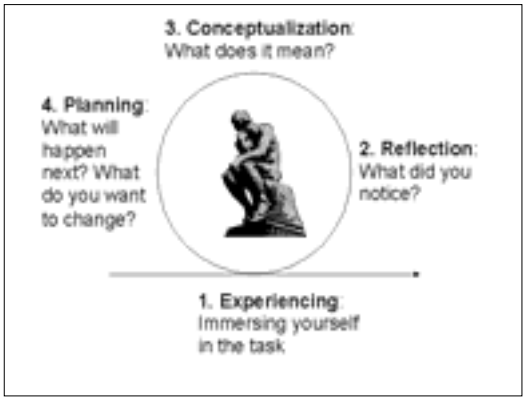


Figure 3.2: Adult learning model (Source: Kolb 1984)

In this adult learning process, the relationship with the leaders of the learning process is important. It has been an important strength of the SFF project that the delivery team has included male and female health professionals with expertise in women's and men's rural health. The project leaders have remained committed to the project throughout its life, thus offering continued support to participants and building trust that has enabled ongoing learning for all participants. Support from the key collaborative partners has also assisted in providing continuous support for participants.

The SFF workshop has been evaluated using Kirkpatrick's (1998) training evaluation framework. This approach to evaluation includes four levels and is carried out over a number of years:

- positive experience – evaluate reaction of participants
- conceptual understanding – evaluate learning of participants
- can the learning's make a difference – evaluate behaviours of participants
- demonstrable outcomes – evaluate results of the workshop.

Rogers' (1983) research on the diffusion of innovation has also helped to understand how new ideas and practices are adopted in groups. His work, which included adoption of innovation among farming communities, defines diffusion as 'the process by which innovation is communicated through certain channels over time by members of a social system'. The initial SFF project involved a number of key groups to assist in the early adoption of the health and safety practices advocated in the program. Importantly, a central group has been the farmers who have participated in this program and still meet regularly (through Farm Management 500) to discuss farming matters, with an agenda which now includes health, well-being and safety. The Farm Management 500 group was chosen for the initial SFF research because they are regarded as innovators in farm management and can be considered as such in Rogers' typology. The rationale in working with this group was to obtain evidence on the relationship between health, farm related accidents and farm business sustainability. Early adopters were targeted to refine the

workshop approach, identify issues and engage in a collaboration which could extend across the three years of the initial health and well-being program. As discussed later in this report, the results suggest that participants think first about their own health, that of their family and then their farming business in following through on the impact of the program.

Data gathering methods

From the outset, a variety of data were important in this project. These included physical health data, as well as self-reported perceptions of health status and of social and family context. Other data related to the learning process itself, and the different methods which were employed in the program. Data gathering methodologies that were utilised within the initial SFF project were again incorporated into SFF-BAEOF, the extension phase including the sugar and cotton industry.

The early evidence from the SFF project demonstrates that the motivation of a farming family to adopt healthy living and safe farming practices is a function of their understanding of the consequences on their business success of *not* adopting healthy living and safe OH&S practices. Through focus group discussions with farmers we explored the similarities and differences within and between agricultural and other industries, comparing farming family health, safety and well-being. This involved the initial two-day workshops in Year 1 with farmers and a one-day workshop in Year 2. We collected qualitative and quantitative data from the sugar and cotton agricultural industries as part of the SFF-BAEOF workshop program, to understand farming family health, safety and well-being issues impacting on the acceptance of these practices.

Demographic and health information

All participants were assigned a SFF identifier number, which allowed for all information to remain anonymous. Prior to the commencement of the workshop demographic information including age, gender, ethnic background, health conditions and health behaviours were collected using the Victorian Department of Human Service Coordination Tools (see Appendices 5, 6, and 7). These tools draw from the health promotion literature and practice reviews. As well as incorporating key consumer information (including social, psychological, medical and physical data) the tools are useful in determining risk, triggering referrals and identifying the need for further assessment. A copy of the service coordination tools is available at website http://www.dhs.vic.gov.au/health/pcps/coordination/sctt2006.htm.

Sustainable Farm Families workshops

This was the centrepiece of the SFF-BAEOF program (Plate 3.2). At the commencement of the program, a two day workshop approximately 2 months later was conducted, followed by a one day workshop approximately 12 months later. The workshops were clearly significant interventions in themselves, but they also served as key markers in the collection of other data on the participating families and their circumstances.

Plate 3.2: Participants in the cotton program

Workshops were used to enlighten farmers about the factors that affect farm family health, health and safety and farming business (see Appendix 3 for sample workshop program). They served also as an opportunity to undertake the initial health assessment and to monitor health status over time. A variety of aids were used, including table group discussions, video, medical models, supermarket tours and label reading, medical equipment, powerpoint presentations, specific health promotion literature and the developed SFF participant manual. These workshops were evaluated using Kirkpatrick's (1998) evaluation methods. A copy of the evaluation questionnaires is located in Appendix 10.

Health assessments

The physical health assessment process involved the assessment and collation of physical data derived from each participant in the project (see Appendix 4). Under ethical guidelines, information and biometric measurements were collated in a private and confidential format. Each participant had numerous measurements assessed as per guidelines from the NHMRC for indicators such as fasting cholesterol and blood glucose, weight for height, body mass index, waist-to-hip ratio, blood pressure and pulse. Following interpretation of these readings and with reference to ethical guidelines and standards for acceptable results, individuals were referred for relevant further assessment or intervention. Individuals also underwent a one-on-one physical assessment in which a discussion of their initial assessment was given along with further evaluation of other physical and social indicators. The collation of this data was stored under privacy legislation in a completed health record safely stored by the lead agency.

Focus groups

Focus groups (Plate 3.3) were used throughout the workshops across the two years to assist the participating families to identify farm family health issues. As this project is as much about consciousness raising as about understanding the relationship between farm family health, farm related accidents and farm sustainability, focus groups were an important vehicle for eliciting information and developing understanding. Responses from focus groups were collated and analysis undertaken in conjunction with the research partners.

Plate 3.3: Participating farmers working in table groups as part of focus group reflection

Farm safety surveys

These surveys (see Appendix 8) collected information about farming practice, use of sunscreen, personal protective equipment, roll-over protection and power take-off guards on tractors, first aid qualifications and use of helmets. They also recorded any self-reported farm injury that had occurred over the previous 12 months.

Following discussions with Professor Lyn Fragar, from the Australian Centre for Agriculture Health and Safety, we have adapted our survey research to be consistent with the Farm Injury Optimal Dataset Version 1.2. Data was collected in line with current research already undertaken by the National Farm Injury Data Centre.

Pre and post knowledge surveys

Knowledge surveys (see Appendix 9) were given to participants at the commencement and completion of each workshop (Plate 3.4) and were a mixture of recognition questions (multi-choice), true/false and short answer recall questions (Kay 2002).

Plate 3.4: Participants completing pre and post knowledge questionnaires

Testing the change in knowledge of the participants was assessed by fitting a generalised linear model with binomial distribution and logit link. Where this method failed to predict a result (converge), Fisher's exact test was used. All statistical analyses were performed using GenStat® (GenStat Committee 2003). This analysis was performed by an independent biometrician working with the Department of Primary Industries Pastoral and Veterinary Institute at Hamilton, Victoria.

Workshop evaluation

Following each workshop, session participants were requested to complete an evaluation form to assess the session activity and their satisfaction with the program (see Appendix 10). This required reflection on the information provided, learning techniques, the degree of active learning, assessment of the resource kit, and the application of learning to their life and farm. A four point scale was used (anchored at 'strongly agree', 'agree', 'disagree' and 'strongly disagree'), together with the opportunity for open comments. Feedback on the venue, food and information dissemination was also gathered.

Participant action planning

Within one month of completing the SFF-BAEOF workshop, action plan templates (see Appendix 11) were sent to participants. The templates requested information on the areas/actions that participants would like to address, the methods of how they were going to address these and how they would report back on their progress the following year. The choices for actions were analysed according to theme at the conclusion of the program. At the following year workshop, after the health assessment had been undertaken, all participants rated themselves according to the SFF action plan scale (see Appendix 12), a behaviourally-anchored scale developed specifically for this project. These results were documented in the health records and also analysed using SPSS to identify how participants had changed over the life of the program.

Impact evaluation

This included undertaking pre and post knowledge questionnaires and changes in individual behaviour and intentions through the action planning process. An example for both men and women is included in the pre and post questionnaire (see Appendix 9) and also the participant action planning (see Appendix11).

Outcome evaluation

This measured the longer term effects of the project and the changes in health indicators particularly. It addressed questions such as: Has the number of overweight people decreased? Was there a change in the number of participants with high total cholesterol? Were the changes maintained over the life of the SFF-BAEOF project? Were more people wearing personal protective equipment following participation in the project? Basically it asked the question 'Did the SFF-BAEOF project work?' This sequence of intended outcomes is illustrated in the Table 3.1.

Table 3.1: Sequence of intended outcomes from the SFF and SFF-BAEOF projects (Boymal et al 2007)

Participation in SFF project	Behaviour changes	Changes in clinical indicators	Changes in morbidity and mortality	Benefits of these changes
	Self-report	Measured at baseline and after 12 months	Projected changes	Estimated benefits
	• Eating healthier food • More exercise • Safer farming work practices • Health follow up checks	• Obesity-related indicators: o Waist circumference o Body mass index o Waist-to-hip ratio o Percentage of fat in body mass • Blood sugar level • Blood pressure o Systolic o Diastolic • Cholesterol levels • Pulse rate • General health score (not measured in year 2)	Reduced risk of • Cardio-vascular event • Death due to cardio-vascular event • Diabetes **In addition, there are likely to be reductions in** • ***Farming accidents*** • ***Cancer*** • ***Anxiety and Depression***	• Increased Quality Adjusted Life Years • Downstream cost savings

Source: Boymal et al. 2007

Table 3.2 provides a summary of the data gathering schedule over the life of the project. This includes a listing of the surveys, the physical assessments, and supplementary activities such as the action plans and focus groups. The information from all of these sources has been recorded and used in the preparation of this report, and parts of it were used for the related RIRDC project WDH-3A on the economic evaluation of the program (Boymal et al. 2007).

Table 3.2: Table of methods used throughout the SFF-BAEOF program – survey, assessment and action plans undertaken

Sustainable Farm Families Methodological Tools	**Year 1**	**Year 2**
1. SFF workshop education	2 days	2 days
2. Health assessment	✓	✓
3. Demographics	✓	✓
4. Health conditions and behaviours	✓	✓
5. Kessler K 10		✓
6. Farm safety survey	✓	✓
7. Pre knowledge questionnaire	✓	✓
8. Post knowledge questionnaire	✓	✓
9. Workshop evaluation	✓	✓
10. Participant action planning	✓	✓
11. Action plan achievement		✓
12. Business decisions survey		✓
13. Focus groups	✓	✓

4. Objective 1: Design and delivery of the Sustainable Farm Families program for sugar and cotton farmers

Development and recruitment

The development of the SFF-BAEOF cotton and sugar project was built on the success of the initial SFF broad acre project funded by RIRDC Joint Research Venture for Farm Safety which was in the end stages of its second year of development. The extension into the cotton and sugar industries saw the collaboration with both industries' research and development corporations, the CRDC and the SRDC, to assist in the facilitation and subsequent rollout to two selected regions within each industry.

As was apparent with the success of the SFF project in the broad acre industry, the extension into other agricultural industries would depend on broadening the partnership. There would also need to be a continuing focus on adult learning principles in training program design and evaluation. The philosophical underpinning of the members in the partnership was to develop a program that would best suit the needs of cotton and sugar farming families, whilst not detracting from the framework and processes in the original SFF project.

Recruitment of participants was coordinated with both the CRDC and SRDC. This involvement was one of the main reasons for the success of the SFF-BAEOF program. Total numbers and recruitment strategies were influenced within both the cotton and sugar industries by climatic factors both years. Initial recruitment saw the influence of a major drought in western New South Wales and northern Queensland in the first year. Despite this, recruitment numbers were achieved within the cotton industry and with a slight reduction in numbers in one of the two key sugar industries.

Sugar

The program was promoted through industry publications such as *SRDC Update* and eNews, SRDC's Regional Workshop series, and SRDC networks (including particularly Women in Sugar groups in both the selected regions) and the regional Canegrowers companies. Women in Sugar groups were chosen because their membership consists of women with an interest in the sugar industry, who gather together for training and educational purposes, for self-help and self-development, to support their families and communities and for networking activities which complement the SFF project.

Cotton

The first workshop was held at a very busy time of year for cotton growers, so it was, at first, quite difficult to convince people to participate. However, once they saw the SFF recruitment presentation and heard first hand about what was involved, they could understand the benefits of participating in the workshop program.

Invitations were sent to email lists of the Australian Cotton Growers Research Association, the Cotton Growers Association and WinCott (Women in Cotton). Success stories were sent to the Australian Cottongrower Magazine, and CRDC *Spotlight*. Radio interviews were also undertaken. Personal visits and presentations to groups were made in Wee Waa and Dalby by a CRDC coordinator.

This groundwork was essential to the success of the project, providing a strong foundation for a collaborative approach which brought together sugar and cotton industries, health services, and university researchers, to improve the health of farming populations. Early responses were that recruitment was enhanced as participants received a full 30-minute physical assessment within the program. This was reinforced when participants were asked why they came along to the first session and the majority answered that the physical assessment was a major reason for them attending the program.

Ethics approval was obtained from the South West Health Care Ethics Committee and granted as an extension to the initial SFF broad acre project and continued with specific recommendations. The Committee stipulated that a referral be made for all participants with fasting cholesterol levels greater than 5.5 mmols to their general practitioner and to use the Heart Foundation's (2002) minimal requirements for exercise. The formation of a health record for each participant with the safe storage of these records was also recommended by the Committee. These records are stored securely at the WDHS in Hamilton, Victoria. All participants provided a signed consent form which is kept with their medical record.

Reasons for participating

At the start of the program, the farmers were asked a number of questions including:

- Why were they participating?
- What did they believe were the primary health issues for farming families?
- What were farm families' attitudes to health?
- Where did they access health information?

Their reasons for participating can be grouped into five categories:

a) Obtaining a free health check
b) Opportunity to learn about their health
c) Broader concern for farmer health
d) Family and farming industry group encouragement (pressure) to participate
e) Motivation and a wake up call

These results were consistent with the initial SFF broad acre research and appeared to follow trends in other agricultural industries exposed to the farm families programs.

The opportunity of a free health check and information on health (Plate 4.1) was the most commonly cited reason for participating. Farmers recognised that it was important to understand their current health status and agreed that follow up contact with their health professional might be required. They also felt that complexity and delays in accessing health services (in rural areas in particular) created apathy or indifference to having regular health checks. This common trend (related to access to health services) appeared to have no border differences and participants highlighted that access was significantly affected in rural and remote areas. In one instance within the sugar industry, participants highlighted that if they wished to access a general practitioner they were only permitted to ring over a 30 minute period in the morning for an available appointment. If there were no available appointments they would simply have to ring again the next morning. Another issue was that bulk billing was not freely available to farming families in both cotton and sugar regions.

Plate 4.1: Providing information on healthy and good tasting food was an important aspect to the SFF-BAEOF program and learnings

Participants reported that it was important for them to learn about their own health status. Managing stress was a recurring theme and was cited often as a reason for participating in the program. They were keen to be part of a project which would run over several years, which would enable them to learn about health and to begin to make a difference in their family health status. Cotton and sugar farmers recognised the issues related to the area in which they live, in particular the issues surrounding continuous outdoor work and the extremes of heat exposure. Issues relating to climatic indicators were highlighted and we, as researchers, were privy to this – experiencing the difficulties surrounding extreme heat, drought and floods while delivering the program. Other concerns of participants related to the lack of ability to undertake physical exercise due to the weather conditions and high incidence of snakes and wild boar when going for a walk.

Some men commented that their partner's interest in family health was the reason they attended. Their farm industry connection or consultant also influenced their decision to attend (more men attended than women). Most participants mentioned a regional research and development contact as being a key motivator for their attendance. The sugar industry in the Ingham region was noted to have a high involvement of one particular family, with its extended family members making up a great proportion of the numbers. This supported the fact that a family program promoted greater influence than individual attendance by one family member.

The common influence of women on the broad acre farms to recruit and influence male partners to attend the program was replicated in the cotton and sugar program. Men did not believe there were many issues relating to them at the outset of the program but became more conversant and passionate throughout the sessions.

The learning process for program deliverers

The program deliverers (Brumby and Willder) are registered nurses with Masters in Health Management and Nursing and Certificate IV Workplace Training and Assessment qualifications, respectively. Working with LaTrobe's Centre for Sustainable Regional Communities (Martin has a Masters Degree in Adult and Continuing Education and a Graduate Certificate in Higher Education), the WDHS developed the theoretical bases for the SFF program and, by extension, the SFF-BAEOF project.

Using Kolb's (1984) experiential theory of adult learning, each workshop topic was introduced by using his iterative learning cycle. Kolb identified the following phases in a cycle of adult learning:

- *Reflection and discussion* – What do I think about the issue?
- *Conceptualisation and adding the facts* – What do these facts mean to my family, my farm business and me?
- *Actions* – What will I decide to do with this new information?
- *Personal experiences* – How does this become part of my personal experience?

For example, in the workshop on cardio-vascular disease, the participants were asked to address the following questions in small groups:

- What do you believe are the major causes of heart disease?
- How has heart disease affected you, your family and friends?
- How do you feel about the treatment of heart disease?
- What can you and your family do with this new information?

In the action planning part of the workshop, program participants were invited to identify strategies that they could adopt to prevent themselves succumbing to the disease.

Using the key learnings from the initial SFF broad acre project, the education process was revisited and evaluated using feedback and session evaluations to improve the delivery within the cotton and sugar industries. With the support of the local cotton and sugar industry personnel, changes were made to the presentations in relation to using local area health statistics, cancer data, key health issues and health concerns. Nurse educators also learned about the local sugar industry from participating farmers (Plate 4.2).

Plate 4.2: Sustainable Farm Families nurse educators learning about the sugar industry from a participant

Developing a comprehensive learning program also took into consideration the level of language to be used and the challenge of catering for different modes of learning by including videos, tactile touch for anatomical models, assimilation with day to day analogies and the use of picture and reference material. Table group discussions were an important part of the education process with all participants being seated in groupings of four to five. These 'table groups' were asked to consider questions throughout each session as a group. This process allowed time for reflection, sharing, learning from others and reinforcement of key learnings relevant to the family and individual. This process followed the adult learning model proposed by Kolb (1984). Throughout the training, participants were encouraged to reflect on their learning and to develop a personal action plan using learning logs and personal diary entries to monitor their performance.

Practical issues such as choosing a venue and setting dates also became a challenge, because of factors such as seasonal pressures, room requirements and the need to have close proximity to a supermarket. These issues were reviewed constantly in the first year, and again in planning dates for the subsequent year. Specific factors which arose from the design of this program included:

- the venue and ease of access
- breakfast provision and amount of food required
- childcare and transportation to and from school
- ability to set room up in café style
- access to parking
- air conditioning or heating
- comfort of venue
- other community events in progress
- other demands of the farmers' time
- adequate breaks and refreshments
- access to supermarket in walking distance of venue
- availability of break out rooms and rooms for private physical assessments.

Running this program in rural Australia highlighted the lack of facilities to run such programs. Facilities used included motel conference rooms, community facilities (e.g. CFA offices, local government offices) industry accommodation, conference rooms and the like.

Program design

The success of the first workshop was clearly very important, as it would set the tone for marketing subsequent programs. As a two day commitment, it asked for a substantial investment of time by the farmers.

The program design was intended to address the issues of participant motivation as well as delivering appropriate health education and data collection. At the outset of each program the facilitators had to ensure all the appropriate paperwork had been returned by participants. The initial reception involved allocation of relevant paperwork and a unique four digit identification code to de-identify the participant in preparation for statistical analysis; these codes were used subsequently for all research data collection exercises, and for

recording and analysing data. Personal health records were kept in a WDHS medical record subject to the normal conventions for privacy and confidentiality.

Participants were taken individually for a brief physical assessment where standard measurements and blood sampling were captured and noted in the participant's health record. Participants were then given a brief interpretation of their results and a booking for a full 30 minute assessment was made so as to complete the physical assessment in private (typically at the end of the first day of the workshop). Following the initial assessment all participants were offered breakfast and given the opportunity to complete the pre-workshop knowledge questionnaire.

The first session was a structured focus group session (Plates 4.3 and 4.4) where they were asked to reflect on the reason they were here and what they hoped to get out of the program. Data was collected at this point in the way of comments and reflective thoughts of participants to aid in the collation of data on the motivation of farming families to attend to family health issues. This served also as the 'ice breaker', leading into the more formal educative sessions which constituted the major part of the workshop. These are detailed below.

Plates 4.3 and 4.4: Focus group sessions Year 1 and Year 2

State of rural health

The 'State of Rural Health' is the first topic opening up discussion on the relative health status of rural versus metropolitan populations. Table group discussions aided in the reflection and review of what participants think is the state of rural health. At times this session was a little confronting, as many farmers believed they had a better health status than metropolitan populations. However, many issues such as stoicism, long working hours, and poor physical resources emerged in the table group discussions, leading to vigorous debate about how to improve rural health. This session is a very good beginning to the workshop program as it generates educational and thought provoking discussions that participants had not expected. The most recent health statistics from each region is incorporated into each program and local area information relating to morbidity and mortality within each region is used.

Cardiovascular disease 'Getting to the heart of things'

This session is designed to give participants the facts regarding one of the biggest killers of men and women in Australia. The session design gives the participants an initial opportunity to share what they know about heart disease and then to discuss this more fully in their table groups, after they have been presented with the facts. Video support is used, and models are shared to support the delivery of content highlighting the biology, prevention and treatment phases of heart disease. Each session always concluded with participants considering questions about what this means for themselves, their families and their farms. Once again local area health statistics relating to cardiovascular disease were incorporated into this session to aid in the focus on local data and health indicators.

Cancer 'You can beat it'

This session begins with reflection on what the participants currently understand about the cause of cancer followed by a presentation on current research and its implications, especially as it relates to farming families. Once again videos, graphic displays and education materials are used to support the learning (Plate 4.5). Participants are encouraged to document relevant issues in their Resource Manual and reflect on

these within their table groups. Local, regional and national health statistics are used to promote discussion about the variability and incidence of cancer.

Plate 4.5: What is this for? Looking down a colonoscope as part of the 'You Can Beat It' session

Farm health and safety 'Where you live and play'

This session discusses the risks and attitudes associated with farm life and the hazards encountered on many family farms. It explores the responsibility that this implies for farmers as employers and the responsibility of employees. It is scheduled late on the first day to allow time for the participants to gain confidence in the presenters before they are asked to tackle the safety issues of real concern on their farm.

This session is very confronting. It uses pictures of people who have suffered injuries on farms and discusses the impact that this has on children and family members. Focus is made on local industries and the common injuries suffered within their workplace. Table group discussion is intense and this session provides a real awakening for many farming family units. Each session concludes, again, with questions about what it means for them, their family (and in this case employees and visitors) and for their farm. How can farm accidents and injury be prevented? If they occur, how do you, or would you, access rehabilitation? What is reasonable compensation? It was noted that significant progress and positive workplace attitudes were present in many of the cotton growers who participated and that much work related to farm safety had already been undertaken.

Gender benders

The gender benders topics were an integral part of the program with a particular focus on health issues that relate to each sex. Men and women are different and the gender sessions were purposely delivered in single sex sessions to aid the facilitation of the education process. The discussion of topics within these sessions aimed to inform and empower individuals to become more aware of health issues that affect their gender in an environment that was less threatening than it would have been if discussed in front of the other sex (Plate 3.6).

Plate 4.6: Women using models to assess changes in breast tissue

Women's session

The focus within the women's session included:

- breast health and the issues relating to breast cancer detection and treatment
- continence and the health of the pelvic floor and urinary system
- the role of preventative screening for cervical cancer through PAP smears
- menopause, including discussion on attitudes toward same.

Men's session

The focus within the men's session included:

- "The problem with men" (video) and why men consistently suffer poor health outcomes
- prostate problems including prostatitis, benign prostatic hypertrophy and prostate cancer
- erectile dysfunction and its incidence, treatment and prevention.

An interesting outcome from these sessions in the first year was that all participants indicated that information about the other sex would be beneficial; as such, they agreed that the sessions be swapped for the other sex within the structure of the second year workshop.

Nutrition and diet

Nutrition and diet was incorporated into the Year 1 program because it has such a prominent impact in other disease processes such as heart disease and cancers. The focus on nutrition was to develop capacity amongst participants to understand the facts about diet and nutrition. Participants were informed about the recommended nutrition levels of fat and fibre within the diet along with information about food claims and the use of these in marketing food products. Participants were taken to a supermarket (Plates 4.7 and 4.8) and asked to assess the nutritional value of the common food products they consumed within their home setting. This process allowed for practical education on the value of food products and the possibility of education relating to a better choice of products.

Plates 4.7 and 4.8: Food label reading and part of the supermarket tours in each location

Stress and relaxation

The topic of stress and stress management focuses on the common issues relating to daily farming activity and the stressors that influence farming family lives. The aim of this session was to highlight the issues relating to stress and how we can better identify and manage this in our lives. The session particularly focused on signs and symptoms frequently experienced when suffering from stress and how the body exhibits these symptoms.

Practical exercises included a deep breathing exercise and a short meditation. These were performed by all participants. Other strategies that might assist in the early recognition and management of stress were also discussed (for example physical activity, planned holidays).

Action planning

The action planning process was one of the most important parts of the program and a session introducing this completed the first year of the program. Throughout the first two days, there was frequent opportunity for reflection on the topics that were presented, and on how these related to the participants' family business. This reflection process encouraged participants to identify ways and means by which the new information could be used to improve the health of the individual, family or farm. During the final session of the first year workshop, participants were encouraged to think about the information presented and to choose three actions related to this information that they would like to address over the next twelve months.

All participants are sent a reminder form (see Appendix 11) six weeks following the first workshop. They were asked to complete the form, outlining their 'action plan', and to return it to the researchers. At the start of the second workshop, approximately twelve months later, the action plans were revisited and participants were required to present their actions to the group and give a rating of how they went in achieving these actions. The return rates for these templates were very high.

The Resource Manual

A resource manual was developed by a working group with expertise in adult learning, health promotion, social science, rural health and farming expertise. The resource manuals were presented in 2-ring A4 folders, tabbed and indexed, with a small number of colour plates and references and offered a simple means of adding additional information if required (Table 4.1).

Table 4.1: Resource manual chapters used in the SFF-BAEOF program

Resource Manual Chapters	Covered Year 1	Covered Year 2
Introduction	✓	
1. Rural Health	✓	
2. Getting to the heart of things	✓	
3. Cancer	✓	
4. Farm Health and Safety	✓	
5. You are what you eat (Diet and Nutrition)	✓	
6. Stress Less	✓	
7. *Men's Health	✓	✓
8. *Women's Health	✓	✓
9. Mental Health		✓
10. Diabetes, Physical Activity		✓
11. Business Decisions & Health		✓
12. Action planning	✓	✓

* when gender sessions swapped

During each workshop, an evaluation was undertaken of each session as well as the program overall to identify areas of improvement. This evaluation process has continued throughout the life of the program and adjustments have been made to subsequent programs. The final version of the Resource Manual from the SFF program was the foundation for the SFF – BAEOF program.

Additional information from the Cancer Council, Worksafe, Primary Mental Health Team, National Heart Foundation, National Continence Foundation, Papscreen and Breastscreen was provided in the manual.

Each chapter followed the format of:

A. Introduction to topic
B. The facts
C. Taking control

In addition, each chapter included sections where participants could write their thoughts and make notes on their assessment about their own risks, opportunities for change and action planning. The chapters were formatted following the workshop program with active learning logs throughout the manual and also included references and resources at the end.

For example, the chapter on 'Cancer' had the following sections:

A. Introduction to topic and discussion
   In your table groups discuss: What do you believe are the major cancers affecting males and females in rural Australia?
   Write them in your resource kit.

B. The facts
   Information about risk factors, types of commonly occurring cancers in rural populations
C. Taking control
   In your table groups discuss: In what ways can farming families reduce the risk factors for cancer? Write them in your resource kit.
   For you own reference, identify your specific risks and way you can address or prevent them.

One-on-one physical assessment

One of the most successful facets of the project, and the most influential in gaining attendance, was the physical assessment process undertaken by all participants with a nurse educator. Further exploration of this through focus group discussions found that a proportion of individuals felt that a full and detailed physical assessment was one thing that their health service failed to deliver. The rationale for the one-on-one assessment during the SFF program is that knowing and understanding their relevant risks empowers people to change lifestyle and risk behaviours and to seek treatment and intervention. Many of the participants felt that they were not fully aware of the implications of their personal results.

The physical assessment process began with an initial screening of participants on their arrival; they had been asked to fast for a minimum of ten hours to aid in the accuracy of the testing procedures. All the physical assessment testing equipment was internally quality tested with regular control testing and calibration procedures undertaken prior to each workshop. All participants were also re-measured each year with the same equipment to limit measurement inaccuracies. The initial screening included the following privately recorded tests:

- fasting total cholesterol and blood sugar using Accutrend and Medisense calibrated meters
- weight and height measurement
- body mass index
- body fat percentage using hand held Omron Bodylogic meters
- blood pressure and pulse
- waist and hip measurement using National Heart Foundation measurement guidelines.

This was a confidential process. The results were recorded in the participant's health record, and in the participant's resource manual for their own reference. Although confidential, most participants would openly share this data with their table group and friends with no fear of retribution.

The second step involved a full 30-minute physical assessment, mostly on the afternoon of the first day and in the morning of the second day of the program (or at the end of the day in Year 2). Bookings were made prior to their breakfast on the first day.

Specific topics and discussions undertaken in this assessment process included:

- evaluation and discussion of initial physical assessment results
- allergies and current medications
- familial history and incidence of disease
- neurological assessment
- skin assessment
- cardiovascular assessment
- respiratory assessment
- gastrointestinal assessment and risk for upper and lower GI disorders
- urological assessment for relevant risk and disorders
- sexual history and assessment for disorders
- social history.

The 30-minute assessment was undertaken in a private room and findings were recorded in the health record collated for each participant. Extensive discussions with each participant were made regarding the results and any need that might have arisen for referral to other allied and medical practitioners. Under ethical guidelines a full referral was made using relevant documented health information to each participant's chosen general practitioner or designated health professional. All participants who required referral for health indicators outside the ethically approved levels were sent a copy of the referral letter to

reinforce the need for follow-up and to empower individuals to address the health indicator with relevant health professionals.

Year 2 program

The second workshop (held approximately twelve months after the first) was designed as a one-day workshop that would gather more health measurements, reinforce the health learnings from the first workshop, and introduce new information adding to the emphasis on personal responsibility for action. As with the first workshop program, it began with a repeat of the fasting blood tests and the initial physical assessment. Again, these readings were recorded in both the participant's medical record and in their resource manual. A repeat of the one-on-one physical assessment was undertaken at the conclusion of the day.

Revisit Year 1 learnings

To assist participants in refocusing their thoughts on the first workshop, held twelve months earlier, the first session revisited the learning's briefly from that first workshop. Participants were also given a brief overview of the topics covered and the key learning's that were discussed at that time.

Action plan reports (through focus group discussion)

Participants began the Year 2 workshop with discussions on their learning from the program and how it had influenced their farming family lives over the past twelve months. Participants were asked to share the action plans (see Appendix 11) which they had developed after the first workshop in their table groups, and then to present this to the whole group. They were asked to rate their results using a scale of achievement as part of building the evidence base for the SFF program as shown in Appendix 12.

This part of the discussion was always interesting as it generated humour, some poignant moments, and people were always very supportive of each other. These sessions required substantial trust amongst participants and were an important means of reinforcing many of the key themes of the workshop. Feedback was amusing at times, and also confronting when people shared significant incidents or learnings with each other.

Mental health

Discussions and feedback from participants in Year 1 indicated a particular need for further information on mental health and well-being, anxiety and depression and to build on the learnings from the Year 1 stress session. As a result, anxiety and depression was included in the Year 2 workshop and, with assistance from the Primary Mental Health Team based in south west Victoria, an additional chapter written for the SFF Resource Manual. The issue of mental health was rated as a low priority by male participants in the Year 1 survey, yet during focus group discussions in the Year 1 workshop, an overwhelming number of participants recognised that mental health was indeed a problem experienced by farming families.

The presentation on mental health covered the signs and symptoms experienced by people with anxiety and depression and the workshop discussed how these can influence farming family life. Strategies for preventing and managing these issues, such as cognitive behaviour therapy, were discussed with the group. Issues relating to suicide and its prevention were discussed also.

Plate 4.9: Participants enjoying lunch (not a BBQ!)

Gender topics reversed

Following feedback from participants, the gender specific topics were offered again in the second year. However, this time, the session on female health was presented to the men, and vice versa. These sessions were presented in the same format as in Year 1 with a female presenter discussing female topics and a male presenter presenting male topics.

Diabetes

The topic of diabetes is a unique and important topic with particular relevance to farming families and the general population. With the incidence of diabetes increasing, and especially given the number of people with undiagnosed diabetes, this topic was particularly relevant to the participants. Information was provided on the signs and symptoms of diabetes, how to prevent it and how to manage it. Participants were reminded about the nutritional issues, and the importance of genetic influence in relation to this disease.

Physical activity

Physical activity was discussed in the second year workshop to empower participants to think of ways to manage and prevent many of the lifestyle related diseases (Plate 4.10). Participants were sent a pedometer several weeks prior to the workshop and were requested to measure the amount of steps taken over a week and record this. This data was shared and discussed following the presentation on physical activity, together with a reflection on the opportunities which farming activities provide for physical activity. Particular attention was given to the value of different forms of exercise and the benefits to the body including strength, flexibility and endurance.

Plate 4.10: Jogging on the spot to learn about taking one's pulse

Business decision-making

Participants were asked to complete a survey (see Appendix 13) prior to the workshop on their perceptions of the relationship between health and farming business decision-making, and the different kinds of changes that they had made to their farm management practices, as a consequence of this project. This session was an opportunity for sharing the data from these surveys, and for exploring its meaning and its implications for further action.

Evaluation of the program

Program (process) evaluation was undertaken with every workshop (see Appendix 10) and the program was modified in line with this feedback. The resource manual was also evaluated following each workshop and adjusted accordingly. In the early workshops, key areas of modification were in:

- improving the provision of pre-program information
- meeting the request for the gender topics to be made available to the other sex
- providing more information on mental health.

Pre and post knowledge

The pre and post session questionnaires (see Appendix 9) were used to evaluate the knowledge of all participants at the beginning of each workshop. Questions were asked about their basic understanding of disease processes, risk factors, rural health facts and lifestyle questions. Following the two days of workshop presentations and discussions in the first program, the participants were asked to complete the questionnaire again, to assess the gains in their level of understanding and knowledge. Modified questionnaires were repeated at the start and end of the subsequent workshop in Year 2 to assess the retention of knowledge and their pre-knowledge in relation to the new topics that were to be introduced in the specific workshop program.

Testing the change in knowledge of the participants was assessed by fitting a generalised linear model with binomial distribution and logit link. Where this method failed to predict a result (converge), Fisher's exact test was then used. All statistical analyses were performed using GenStat® (GenStat Committee 2003).

Steering group development

The SFF steering group continued from the previous SFF programs with the addition of the aim of assisting in the direction and provision of support for this project (see the terms of reference for the steering group in Appendix 1). The steering group met on a quarterly basis and representatives from within the cotton and sugar industry were invited to attend or link into the meetings via teleconference. Agendas and minutes were circulated to key members prior to meetings as well as finance reports.

Key discussion topics in the steering group meetings included:

- budget analysis (WDHS Finance Manager would attend half yearly to answer any queries regarding financial management and to deliver a financial report)
- program rollout
- key results
- recruitment
- training and development
- future development and linkage with other key industries
- grant applications.

Steering group members were encouraged to participate in the programs, with a view to increasing understanding of the role of industry and health cross-collaboration. This worked reasonable well with the Research Program Coordinator from the CRDC attending the Wee Waa and Dalby groups. The SRDC also sent their research and development Investment Manager to part of the Ayr program. This assisted greatly in the understanding of the program within the industry. The steering group has been instrumental in the further development of the project into other agricultural industries throughout Australia, giving the SFF project a comprehensive national reputation as an innovative program.

Early on in the life of SFF, the steering group undertook a strategic planning day. In Figure 4.1 success is clearly defined – farming businesses with healthier bottom lines and farmers being more able to enjoy it. The challenges to overcome and possible strategies to use are listed in the inner and outer rings, respectively. This framework continues to be a guide to the SFF project and had relevance to the SFF-BAEOF project.

Figure 4.1: A guiding framework for the SFF project – 'Taking SFF further' May 2005

Engaging health services

Part of SFF-BAEOF project was to engage with local health services, work with nurses and develop capacity and interest in the SFF program. This met with mixed success.

Cotton

In Year 1, a local community health nurse from Wee Waa (from the Hunter New England Health Service) was able to participate and as a result attended further training in Hamilton. She was instrumental in assisting a further rollout of the program in Walgett and Burren Junction, funded through the Department of Health and Ageing in 2006. In 2007, a change of position meant that she was unable to attend the second year of the program and was also limited in her ability to put any of her SFF training into use by running or leading her own program. Once again the thin resources in rural health meant that making the SFF program available to local rural health services was challenging.

In Dalby, two community health nurses from the Dalby Community/Allied Health section of Queensland Health attended the Year 1 two day workshop (Plate 4.11). These nurses were well suited to the program and had a good understanding of primary health issues. Positive responses were received, but these were tempered with indications about lack of time to implement such a program and difficulty in finding resources. Both nurses, due to time constraints, were unable to attend the Year 2 workshops. During this time Queensland Health has also undergone significant change and restructuring.

Plate 4.11: Community health nurses from Dalby Health Services attending the cotton workshop

Sugar

Contact had been made previously with a rural health nurse from the Burdekin Centre for Rural Health based in Ayr who had a long interest in the SFF program having heard a presentation at the National Rural Health Alliance Conference in Alice Springs in 2005. When the SFF program went to Ayr, support was given in the form of attendance, a visit from the SFF project team to the Centre and an agreement to ongoing discussion and collaboration. Unfortunately, a significant and serious illness made the nurse unable to attend the Year 2 workshop. However, a visit from the Centre manager and other interested staff occurred over lunch and there was also a meeting with the SRDC research and development Investment Manager. Since then, further training has occurred with a staff member from the Burdekin Centre for Rural Health being supported to attend Train-the-trainer programs in Hamilton through the Reaching the Remote program funded by the federal Department of Health and Ageing. At the time of this report there was discussion regarding running another program in the Burdekin. Again, resourcing is the challenge with a submission being made back to the SRDC to look at partial assistance.

Conclusion

This chapter has reported on the process adopted to develop and govern the implementation of the SFF project into additional industries. Comprehensive research has been undertaken on both theoretical and health issues to ensure that a workshop program has been designed and delivered in accord with the program objectives. In summary, the chapter demonstrates the following key learnings and principles:

- The program has been developed through a strong partnership with key industry, health and education organisations. This marshalling of key expertise has been central to the effectiveness of the program, and to attracting and retaining participants.
- Considerable care has been taken in program design, so as to maximise the quality of the program content, and of the pedagogy with which it has been delivered.
- A significant investment has been made in data collection, both in relation to the key research questions on farm families' health and associated issues, and to the health data from the perspective of the participants.

5. Objective 2: Identify and track farming family health indicators

In total 63 people participated in the SFF-BAEOF program run in four towns within the cotton and sugar industries. Cotton programs were delivered in Wee Waa (New South Wales) and Dalby (Queensland) with the sugar programs coordinated in the towns of Ayr and Ingham (both in northern Queensland).

Over the two years, a substantial amount of data was collected on a range of personal (Plate 5.1), farm and program evaluation indicators. One of the remarkable aspects of the project has been the relatively high retention of participants (85 per cent) and their willing response to surveys and other forms of data collection between the annual workshops. However, analysis of the data has not been without challenges: what particular framing provides the best option for examining the data, and determining the most useful insights into the various aspects of farm families' health, and for recommending appropriate policy and programmatic initiatives.

Plate 5.1: Undertaking the initial physical assessment (photo from the SFF broad acre program)

The purpose of this chapter is to present the results on farm families' health indicators. This data was observed as an integral part of the program with participants regularly comparing their own data within social networks. Participants also found the de-identified presentation of group data given to each group at the conclusion of each year to be valuable in assessing a snapshot picture of their collective health.

Retention rates over the SFF-BAEOF program

The project was successful in retaining the involvement of participants, given the challenges and unpredictable demands of farming. Project demands were high, and participants were required to give up a total of four full days, plus travel time, and to complete a number of surveys between workshops. Apart from the perceived value of the program itself, retention was supported by the active role which the industries and WDHS played in contacting participants to follow up on missing information, and in providing information through newsletters and the SFF website (www.sustainablefarmfamilies.org.au). Attendance over the life of the SFF-BAEOF program is set out in Table 5.1. There are varying samples sizes for data as some participants returned paper work for both years but may have missed a workshop.

Table 5.1: Participant attendance at both SFF-BAEOF workshops

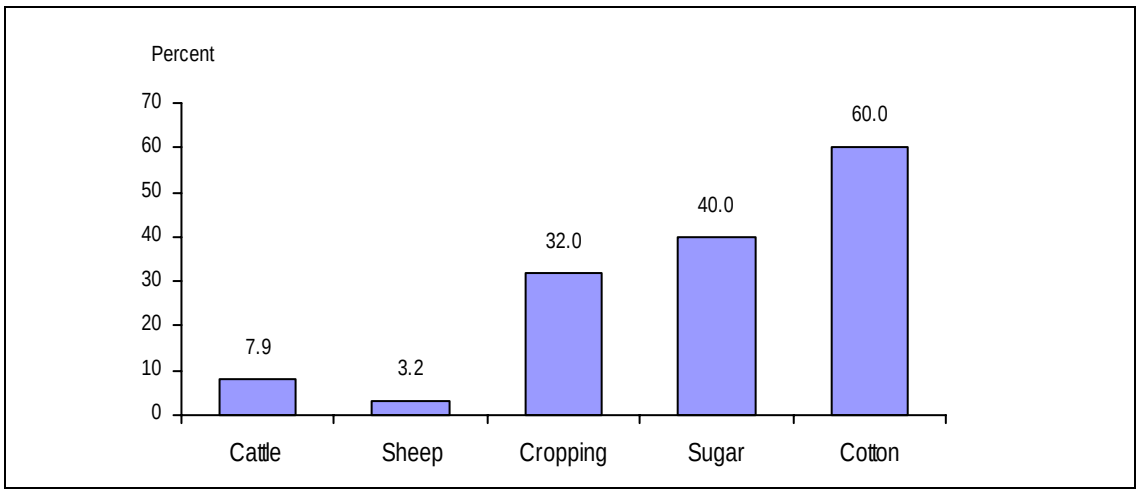
Industry	Workshop 1 2006	Completed both workshops 1 & 2	Returned paper work for both workshops
Cotton and Sugar participants	63	54 (85%)	55 (87%)
Cotton participants	38	*33 (86.8%)	32 (58%)
Sugar participants	25	*21 (84%)	23 (92%)

* Full self-reported data, physical assessments and attendance at two workshops

Health of farm families

The SFF-BAEOF participants came from cotton and sugar farms, some of which had other cropping operations including two or three differing enterprises. Farm survey data was used to form an overall picture of the characteristics of the participants as seen in Figure 5.1.

Figure 5.1: Type of agriculture activities undertaken by SFF-BAEOF participants



Baseline health indicators

Data was collected at a baseline (Year 1) and again 12 months later on key personal health indicators including weight, waist and hip measures, body mass index, waist-to-hip ratio, fasting blood glucose and cholesterol levels and blood pressure (Table 5.2). These measures indicated that the aggregate health status of the sugar and cotton farmer participants was poorer than they perceived for themselves. Interestingly there were some differences noted in the mean between the original SFF broad acre program and sugar and cotton farmers in areas such as fasting cholesterol, blood glucose levels and body mass index (BMI) (Table 5.2). Of note is the same mean age but difference in gender representation and fasting blood glucose. The cotton and sugar participants have been bolded as they form the basis of this report.

Table 5.2: Average baseline characteristics of SFF-BAEOF participants, compared with SFF broad acre participants

Variable	SFF-BAEOF (sugar and cotton) Number of participants (n = 63)	Percentage of participants	SFF broad acre program Number of participants (n = 128)	Percentage of participants
Male	**28**	**45%**	69	54%
Female	**35**	**55%**	59	46%
Born in Australia	**56**	**89%**	121	95%
Current smoker	**4**	**6%**	5	4%
Previous smoker	**16**	**25%**	28	22%
Variable	**Mean**	**Standard deviation**	**Mean**	**Standard deviation**
Age (years)	**47**	**11.27**	47	8.79
Body mass index (kg/m^2)	**27.48**	**5.21**	26.06	3.44
Total cholesterol (mmol/L)	**4.6**	**0.92**	5.49	1.10
Waist circumference (cm)	**93.03**	**13.33**	91.18	10.79
Blood sugar level (mmol/L)	**5.33**	**0.68**	4.88	0.63
Blood pressure (systolic) (mm Hg)	**127.21**	**16.54**	126.28	15.13
Blood pressure (diastolic) (mm Hg)	**80.75**	**9.08**	79.34	9.08
Pulse rate (beats per minute)	**77**	**9.09**	72.89	9.26

Farmers' perceptions of own health conditions

Before the first workshop participants were asked to self-assess their current health status (Table 5.3). Interestingly, fewer farm families reported that their health was either 'Excellent/Very Good' or 'Fair/Poor' than had been found in a national population sample in 2002. Half of the SFF-BAEOF participants rated themselves as being in 'Excellent/Very Good' health, which was lower than all Australians.

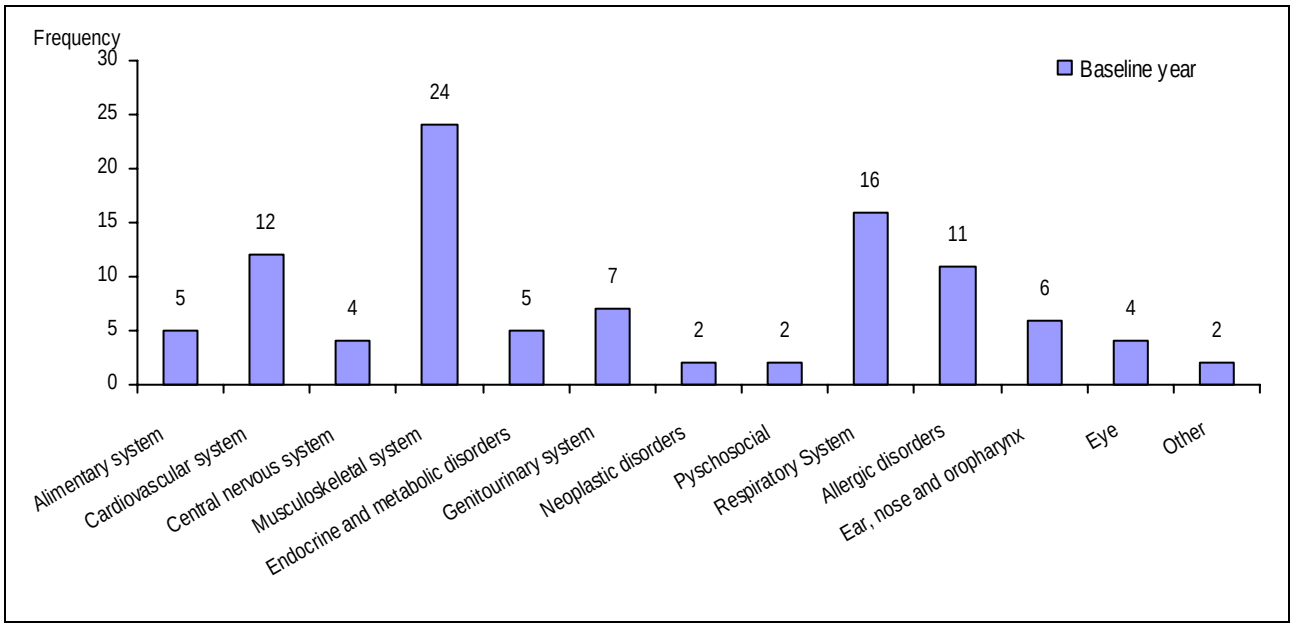
Table 5.3: Self-assessed health status of SFF-BAEOF participants at baseline, compared with SFF broad acre farmers and all Australia

Self-assessed health status	SFF-BAEOF sugar and cotton[a] farmers		SFF broad acre farmers[b]		All Australia[c]	
	Females	**Males**	Females	Males	Females	Males
Excellent/Very Good	**51.4%**	**51.8%**	47.15%	46.6%	59.8%	58.6%
Good	**40.0%**	**44.4%**	47.15%	43.1%	24.4%	25.4%
Fair/Poor	**8.6%**	**3.7%**	5.7%	10.3%	15.8%	16.0%

Notes: [a] For cotton and sugar farmers: data includes 25 years or over only [b] For SFF broad acre farmers: data includes 19 years or over only [c] For all Australia: data includes 18 years or over only (source: General Social Survey 2002, Australia' (Cat. No. 4159.0.55.006), ABS

Participants were asked to report on specific health conditions which they might have experienced. Of the participants, 51 reported outstanding conditions which are listed below (Figure 5.2). There were a broad range of conditions reported, although musculoskeletal and respiratory conditions (included asthma, emphysema, seasonal asthma, hayfever, COPD) were clearly the most common. This finding was similar to that seen in the SFF broad acre program.

Figure 5.2: Distribution of self-reported health conditions of SFF-BAEOF participants



A high proportion of SFF-BAEOF farmers also reported a **moderate to severe incidence of pain** (43 per cent of women and 28 per cent of men, as shown in Table 5.4) even though 91 per cent of women and 96 per cent of men had reported that their health was 'Good' to 'Excellent' (Table 5.3). This suggests that participating farmers accept pain as a normal part of their existence. This finding is also in line with what was observed for SFF broad acre participants.

Table 5.4: Baseline distribution of degree of bodily pain by gender of people that attended both SFF-BAEOF workshops, compared with SFF broad acre farmers

How much bodily pain during the past 4 weeks?	SFF-BAEOF sugar and cotton farmers[a](n = 55)		SFF broad acre farmers[b] (n = 106)	
	Females (n = 30)	**Males (n = 25)**	Females (n = 47)	Males (n = 59)
None	**23.3%**	**20.0%**	40.4%	22.0%
Very Mild	**33.3%**	**52.0%**	44.7%	47.5%
Moderate	**40.0%**	**20.0%**	12.8%	27.1%
Severe/very severe	**3.3%**	**8.0%**	2.1%	3.4%

Notes: [a] For cotton and sugar farmers: data includes 25 years or over only [b] For broad acre farmers: data includes 19 years or over only

Alcohol and smoking

Alcohol, though widely used and enjoyed in Australian society, is a depressant drug. It is thought that a low level of consumption, particularly of red wine, may offer some health benefits. In low quantities it causes people to become less inhibited, in higher doses it can cause unconsciousness and even death. Alcohol consumption certainly increases the risk of injury, violence, depression and death through accidents and unconsciousness. With chronic overuse it increases the risk of heart, stroke and vascular diseases, liver cirrhosis and some cancers (World Health Organization 2004). Alcohol consumption in the SFF-BAEOF

program was higher in men than women, particularly in the 'Weekly' or 'Drinking more than twice a week' categories (Table 5.5). This was consistent with the finding from the SFF broad acre program with low levels of non-drinking present. Drinking at a short term risky level is identified by the National Health Medical Research Council (2001) as more than 6 standard drinks for men and more than 4 standards drinks for women in any one occasion. Of SFF-BAEOF participants, 42 per cent of men and 15 per cent of women indicated they did this monthly or more. Data from the 2004-05 National Health Survey (ABS 2006) shows that among people aged 18 years and over, 48 per cent of males and 30 per cent of females consumed alcohol at risky/high risk levels in the short term on at least one occasion in the last 12 months.

Table 5.5: Baseline distribution of how often SFF-BAEOF participants have a drink containing alcohol, compared with SFF broad acre farmers

How often do you have a drink containing alcohol?	SFF-BAEOF sugar and cotton farmers[a] (n = 63)		SFF broad acre farmers[b] (n = 128)	
	Females (n = 35)	Males (n = 28)	Females (n = 58)	Males (n = 70)
Never have a drink containing alcohol	**8.6%**	**3.6%**	10.35%	7.1%
Monthly	**40.0%**	**25.0%**	24.15%	7.1%
Weekly	**11.4%**	**14.3%**	17.2%	25.7%
Drinking more than twice a week	**40.0%**	**57.1%**	51.2%	60%

Notes: [a] For cotton and sugar farmers: data includes 25 years or over only [b] For broad acre farmers: data includes 19 years or over only

Alcohol has muscle relaxant and sedating properties and when considering the impact of moderate to very severe chronic pain (Table 5.4), it is possible that pain contributes to a higher level of drinking. Alcohol can help with the management of pain due to its ability to depress the central nervous system and slow it down, delivering a certain amount of pain relief. The period of the SFF-BAEOF program was also a period of significant stressors in relation to climate and market factors.

The SFF-BAEOF smoking rate was low in comparison to the Australian average. This has been a general theme throughout the SFF programs and studies of farmers done overseas; whilst smoking rates are high in rural populations they are lower in farming populations. The smoking rates for SFF-BAEOF and SFF broad acre participants are listed in Table 5.2.

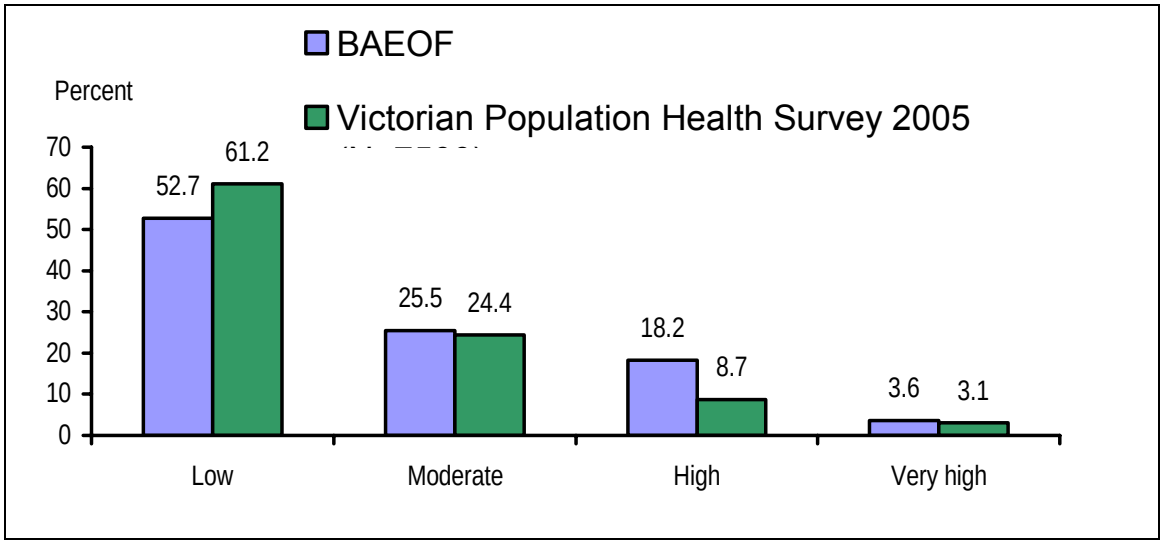
Psychological distress

The Kessler Psychological Distress Scale 10 (K10) is used as a measure of non-specific psychological distress. The focus of the K10 (Kessler et al. 2002) is to measure psychological distress and does not include any questions to identify psychosis, as this is difficult using a brief questionnaire (see Appendix 7).

A very high level of psychological distress, as shown by the K10 score, may indicate a need for professional help. The K10 is scored between 0 and 50, with categories of 0-15, 16-21, 22-29 and 30-50 corresponding to low, low-moderate, moderate-high and very-high levels of psychological distress, respectively. The K10 instrument has been used for ABS health surveys and in a number of Australian states including the Victorian Population Health Survey 2005 (available from the Victorian Government Health Information website: http://www.health.vic.gov.au/healthstatus/vphs_current.htm).

Whilst the numbers shown in Figure 5.3 are very small, there is a noticeable difference between the SFF-BAEOF participants compared to the Victorian Population Health Survey in the 'High' category indicating some psychological distress. Some of these participants were referred to counsellors or back to their general practitioner and provided with strategies to assist in the short term.

Figure 5.3: SFF-BAEOF participant Kessler 10 scores of psychological distress compared with the Victorian Population Health Survey 2005



Referrals

Following the baseline workshop, 44 participants (70 per cent) were provided with a referral to seek further assessment. Only one person refused a referral. Health professionals referred to were general practitioners, dieticians, counsellors, and women's health nurses.

Referral needs varied amongst the participants and within regions. This was attributed to availability of both allied health services and medical services. Referral indicators were linked to ethics guidelines and thus many of the referrals were made to general practitioners for issues such as elevated cholesterol and blood glucose readings. Referral needs in the baseline year included cardiovascular risk factors (38 per cent), diabetes risk factors (31 per cent), obesity (16 per cent), skin conditions or lesions (21 per cent) and sexual and reproductive matters (18 per cent). Some people were referred for more than one reason and may have received referrals to more than one health professional. In Year 2, 27 referrals were made to general practitioners and counselling with one participant refusing referral.

Participants received a copy of their referrals which were sent to the health professional of their choice. This proved to be a very important aspect of the program, as it became apparent in subsequent workshops that many of these referrals had led to diagnoses of early cancer, referral for specialist advice, surgical interventions and initiation or change of medication.

Changes in health indicators over the two years

The emphasis on systematic collection of health data enabled careful monitoring of changes in health status in relation to the key health indicators. While this data was, in one sense, an important source of insight into the effectiveness of the SFF program, it was important also in terms of providing insights into the capacity for this kind of health education to make a constructive intervention into improving the health of farm families.

Amongst the SFF-BAEOF participants, a pattern of risk emerged. The numbers of participants at risk in terms of particular clinical indicators are shown in Table 5.6. These indicators are used to determine risk for diseases such as cardiovascular disease and diabetes and more recently, cancer.

Table 5.6: SFF-BAEOF participants at risk in base year in terms of particular clinical indicators

Clinical indicator	Number of participants in base year at risk
Body mass index ≥ 25	35 (55%)
Total cholesterol level ≥ 5.5 mmol/L	10 (16%)
Total blood sugar level ≥ 5.5 mmol/L	19 (30%)
Waist circumference Women > 88 cm Men > 102 cm	16 (25%)
Blood pressure (systolic) (mm Hg) ≥140	16 (25%)
Blood pressure (diastolic) (mm Hg) ≥90	16 (25%)

Between the baseline and Year 2 measurements, there was improvement, some significant, in the key indicators for all participants as a group (Table 5.7) and also for those participants at risk in the base year (Table 5.8). However there was also statistically significant increase in total fasting cholesterol level of all participants (Table 5.7).

Table 5.7: Mean change in clinical parameters from baseline to Year 2 for all participants that attended both programs (n = 53)

Clinical indicator	Year 2 Mean(± Standard Error)	
Body mass index ≥ 25	+0.0134(0.141)	↑
Total cholesterol	+0.349(.0948) **	↑
Total blood sugar	-.022(.0680)	↓
Waist Circumference Women	-1.379(.0646) *	↓
Waist circumference Men	-0.502(0.497)	↓
Blood pressure (systolic) (mm Hg)	-4.00(1.546) *	↓
Blood pressure (diastolic) (mm Hg)	-1.796(1.257)	↓

Significance values *** p ≤ 0.001, ** p ≤ 0.01, *p ≤ 0.05. Based on two-tailed significance tests.

Changes were achieved in those clinical indicators which relate in particular to cardiovascular disease, diabetes, hypertension, coronary heart disease and syndrome X. However, it is noted that whilst there was improvement in the indicators, not all were statistically significant.

Table 5.8: Mean change in clinical parameters and risk parameters from baseline to Year 2 for those SFF-BAEOF participants at risk in baseline year

Clinical indicators	Year 2 Mean(± Standard Error)
Body mass index ≥ 25 (n = 35)	- 0.132 (0.193)
Total cholesterol level ≥ 5.5 mmol/L (n = 10)	- 0.126 (0.189)
Total blood sugar level ≥ 5.5 mmol/L (n = 19)	- 0.396 (0.11) **
Waist circumference Women >88cms (n = 10)	-2.091(.948)
Waist circumference Men > 102 cm (n = 6)	-1.50(1.478)
Blood pressure (systolic) (mm Hg) ≥140 (n = 12)	-13.769 (2.121) ***
Blood pressure (diastolic) (mm Hg) ≥90 (n = 13)	-6.538 (2.071) **

Significance values *** p ≤ 0.001, ** p ≤ 0.01, *p ≤ 0.05. Based on two-tailed significance tests.

The statistical tests indicate that the gains on some of these indicators were significant. It would appear that providing participants with a combination of detailed information on their own health status, together with health education in a supportive and sustained environment (over two years) has established the conditions under which people can make improvements to their health status. However, it is noted that whilst the numbers were smaller in this SFF-BAEOF program, the changes were not the same as experienced in the three year SFF broad acre program.

Farm health and safety

The issue of the occupational health aspects of farming was addressed in the SFF-BAEOF project through a farm health and safety survey (see Appendix 8). The initial version of the survey was developed for the SFF project, and refined over the course of the program with assistance from the Australian Centre for Agricultural Health and Safety based at Moree. Additional questions were also added relating to wearing of motor bike helmets. The link between personal hygiene and possible chemical contamination in the home was also addressed in the workshops (Plate 5.2).

Plate 5.2: Checking out how clean our hands are for residues or chemicals

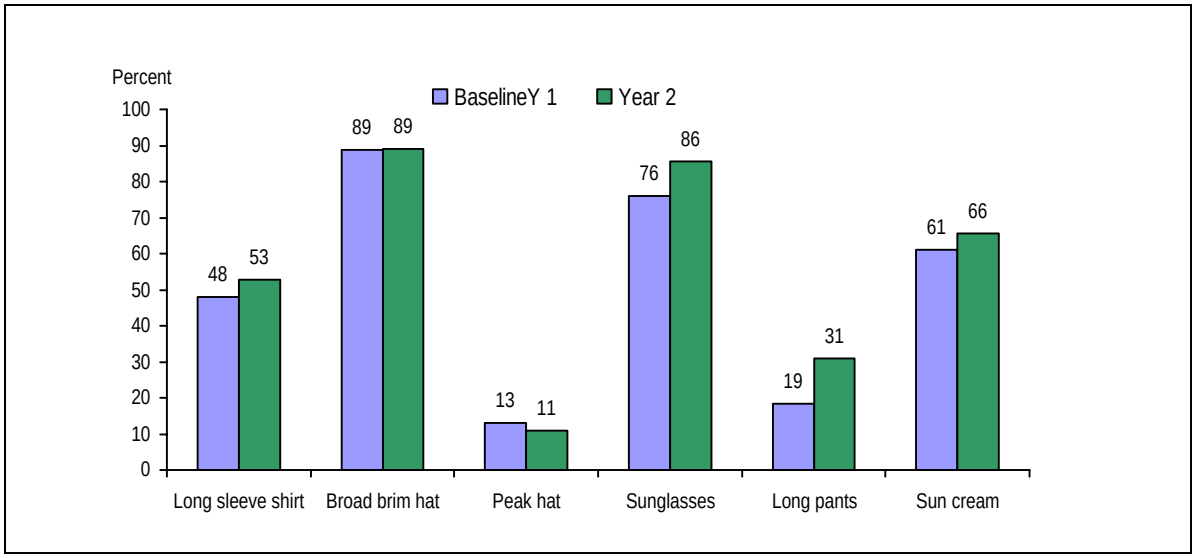
Farm injury

In the base line year and Year 2, participants were asked in they had incurred a farm injury in the previous 12 months and used the survey from the Australian Centre for Agricultural Health and Safety (ACAHS) to assess this information (see Appendix 8). In total, 11 SFF-BAEOF participants had incurred a farm injury in the base line year and 7 in the second year.

Sun protection

Participants were asked to report the number of sun protection items worn in both years (Figure 5.4).

Figure 5.4: Distribution of sun protective items worn by SFF-BAEOF participants in baseline (Year 1) and Year 2 (n = 55)

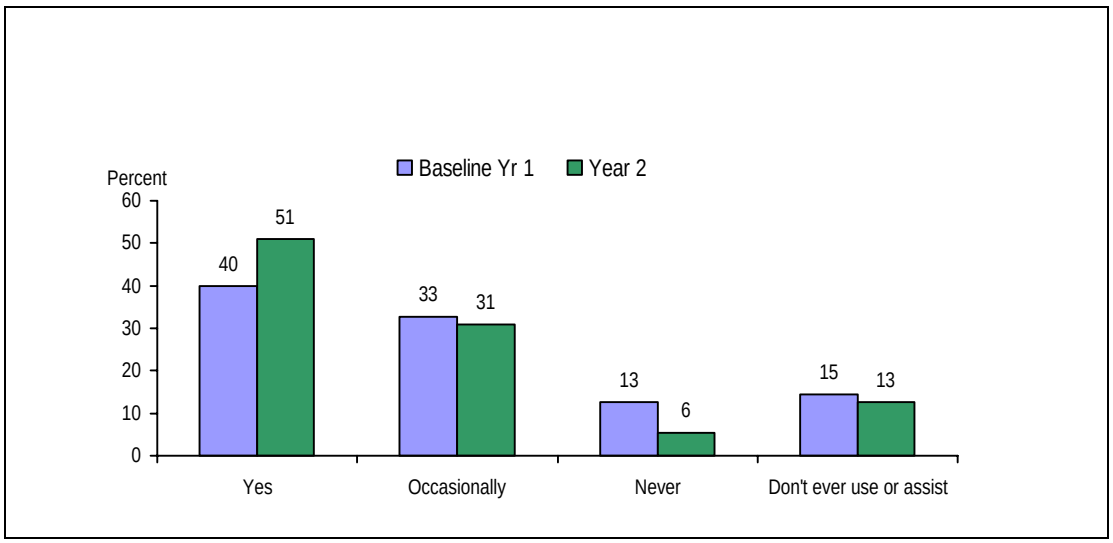


To compare the average use of total sun protection items between baseline (Year 1) and Year 2, a Wilcoxon Signed Ranks Test was also employed. This showed that there was a significant increase in the use of total sun protection items in the sugar and cotton industries after the Sustainable Farm Families program in their respective areas ($p = .010$).

Protective equipment

Participants were also asked if they used protective gear when using workshop or outdoor equipment such as power tools, post hole driver/auger, lawn mower or assisting in the use of these (Figure 5.5).

Figure 5.5: Do you use protective equipment when operating machinery? (n=55)



To compare the average use of total protective equipment worn between baseline and Year 2, a Wilcoxon Signed Ranks Test was employed. This showed that there was significant increase in the use of total protective equipment used in the sugar and cotton industries after the Sustainable Farm Families program in their respective areas ($p = .046$).

Wearing of helmets

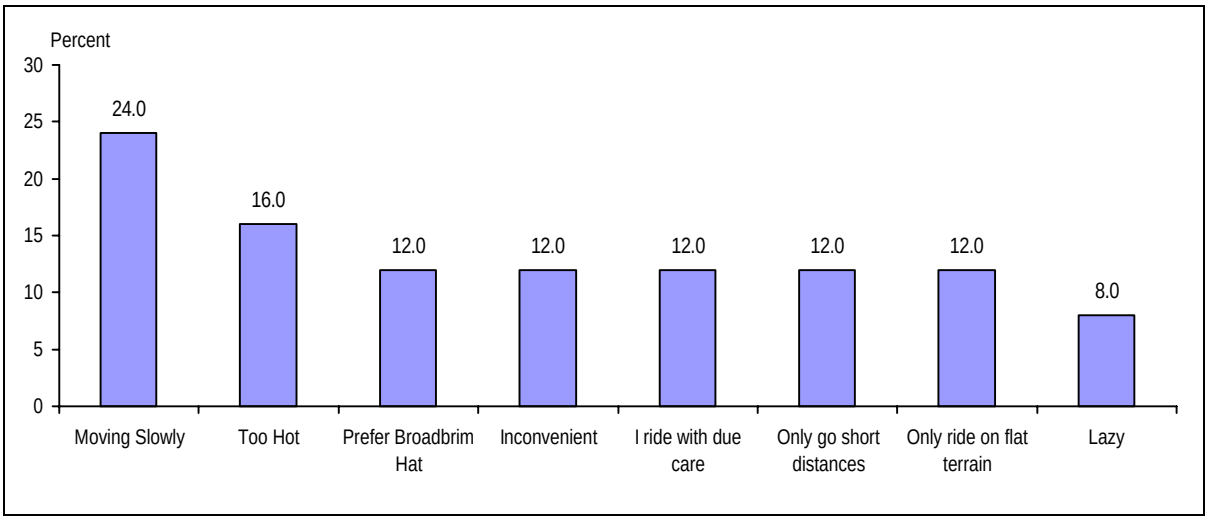
Participants were also asked whether or not they wore a motorbike helmet when driving or riding on a motorbike or ATV. Table 5.9 shows the responses from the base line year for SFF-BAEOF participants and the final year results from the SFF broad acre program.

Table 5.9: Use of motorcycle helmets by SFF-BAEOF participants, compared with SFF broad acre participants

When riding on a motor bike or ATV do you wear a motor cycle helmet?	SFF-BAEOF sugar and cotton farmers (n = 63)		SFF broad acre farmers (n = 121)	
	Females (N=35)	Males (N=28)	Females N =51	Males (N=70)
Yes all the time	**9.7%**	**0%**	7.8%	7.1%
Usually	**3.2%**	**12.5%**	5.9%	7.1%
Occasionally	**6.5%**	**8.3%**	11.8%	25.7%
No	**45.2%**	**58.3%**	25.5%	60%
Never ride or never a passenger	**35.4%**	**20.8%**	49%	9.8%

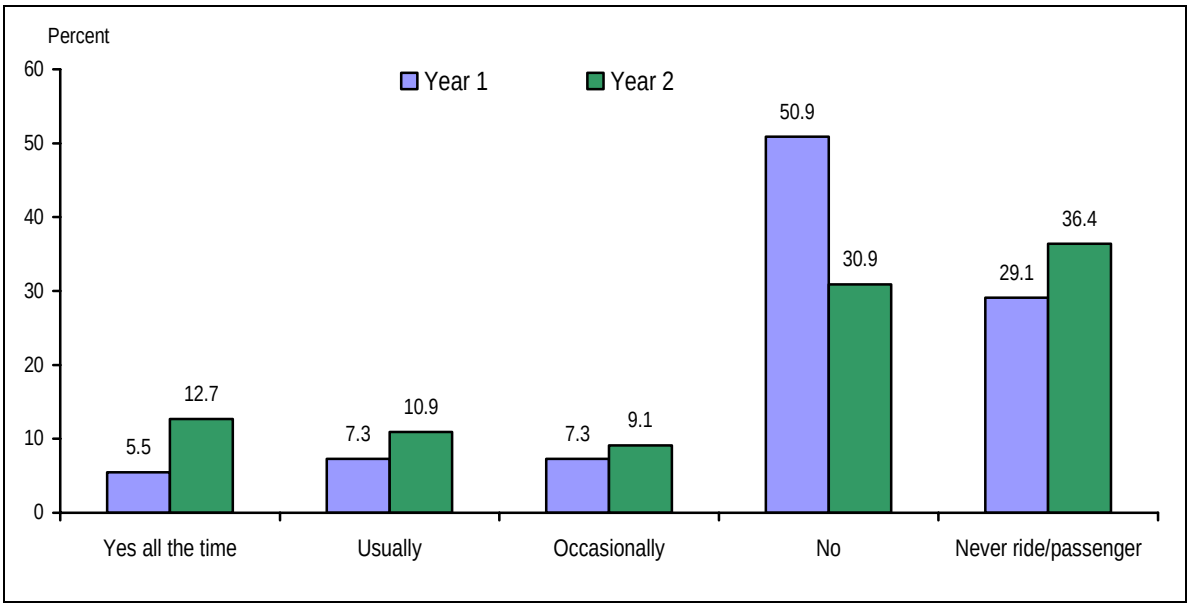
Further analysis reviewed the reasons why people chose not to wear helmets. There was some difference between the sexes in the percentages of those that ride motor bikes, with it being less common for women to do so. Those that did ride a motor bike or ATV were asked the reason for not wearing a helmet. Their responses are illustrated in Figure 5.6.

Figure 5.6: Reasons cited by SFF-BAEOF participants for not wearing a helmet



These reasons were discussed extensively in focus groups with much discussion about the heaviness of helmets and getting hot, with some mention of lack of sun protection and the affecting of peripheral vision and hearing. Improvement was noted in helmet use between baseline (Year 1) and Year 2 (Figure 5.7).

Figure 5.7: Do you wear a helmet when on a motorbike or ATV? Distribution of helmet use from baseline (Year 1) and Year 2 of those who participated in both years (n=55)

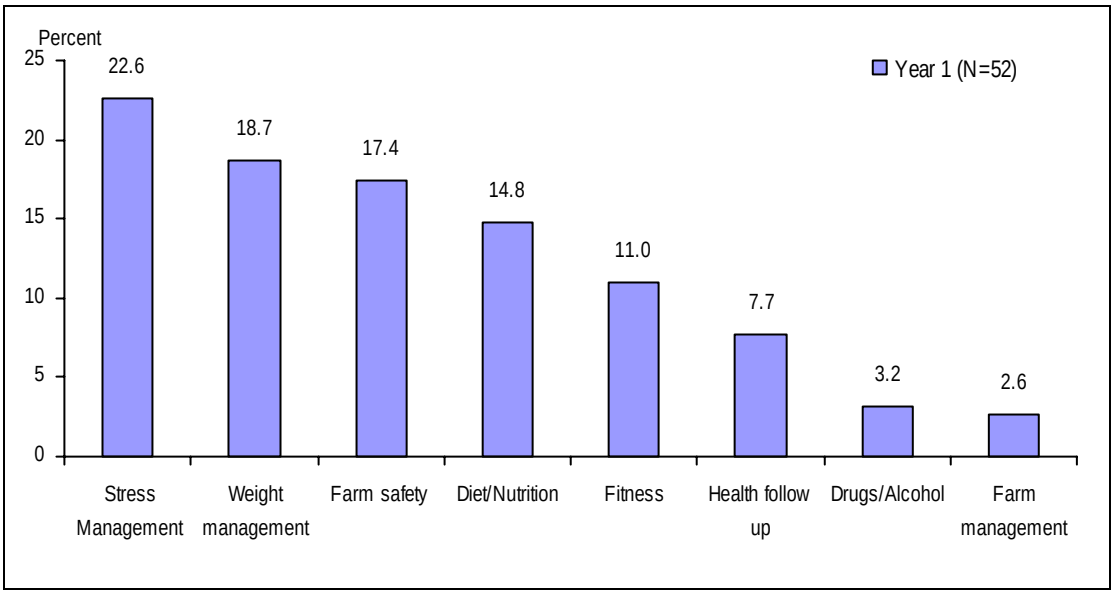


Farming family action planning

As indicated in the outline of the overall program in Chapter 3, 'action plans' were an important part of the program (see Appendix 11). Following the first workshop, participants were requested to write up to three specific actions of their choice to work on for the following twelve months and to report back on the following year. At the start of the second year workshops, as part of the reporting process, participants were asked to rate their achievement on each action using the SFF action plan scale (see Appendix 12) which linked actual behaviour and results (see also the section on action planning).

In Year 1, action plans were submitted by 62 out of 63 participants. This gave rise to 183 action plan targets, which is an average of 3 per person. Of the 62 that submitted action plans, 55 returned in the second year to give action plan ratings. Of the 55 returning participants, 52 gave an action plan rating. The same 52 participants have been used in both graphs (Figures 5.8 and 5.9). Figure 5.8 shows the distribution of action plan targets for Year 1.

Figure 5.8: Distribution of action plan target areas for Year 1 SFF-BAEOF participants



Note: data includes 25 years or over only

The most popular action plan targets chosen by SFF-BAEOF participants in decreasing order are reduce stress, manage or reduce weight, improve farm safety, improve diet and nutrition, increase physical

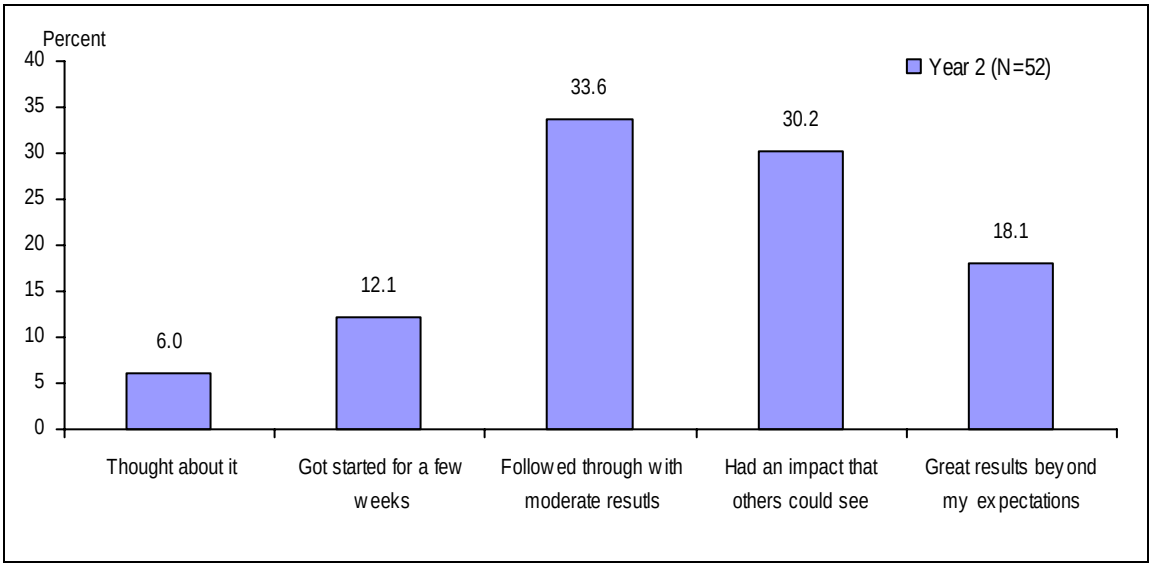
activity and monitor health through following up on referrals issues. Interestingly, the same top choices have been consistent over all the farmer groups to date.

Figure 5.8 highlights the participants' chosen actions. It can be seen that there are links with the clinical indicators, suggesting that the participants were aware of areas they needed to address. It also reflects the farmers' priorities. Men and women from the same farm could set different personal goals, adopt different actions and have different outcomes.

Assessment of action plans

Results in Figure 5.9 illustrate how participants rated their own achievements. This was particularly pleasing for the project and most participants spoke and reflected on their experiences and learning over the previous 12 months. Some of these actions included making changes in diet for both themselves and the whole family, taking a holiday or break, increasing the fibre in their diet, reducing weight and increasing fitness, riding a bike and having family support to undertake this. Other participants improved farm safety by undertaking a farm safety audit, wearing more sun protection (which was evident in the self-reported farm safety survey) and improving safety orientation for employees.

Figure 5.9: Distribution of results for the SFF-BAEOF action plan targets



These results (Figure 5.9), in themselves, are very much the participants' own perceptions of how much they did, whereas the clinical data provides stronger evidence about the program's impact on clinical indicators. However, the significance of such positive perceptions – about people's capacity to change their lifestyles and to exercise choices which have important consequences for their health, well-being and safety – should not be underestimated.

6. Objective 3: Provide information on the relationship between farm health, health as a social issue and farm productivity

The opportunity provided for people to talk in table groups was a very important part of the overall success of the SFF and SFF-BAEOF programs. These discussions offered participants the opportunity to informally share their experiences and concerns about health. This gave them the confidence to ask questions and to share perspectives which might otherwise have remained buried. The sessions typically included an opportunity for table group members to report to the whole workshop on the key themes or point of interest. They also provided information about each participant's circumstances, enabling the facilitators to better connect the delivery of information with their health concerns.

Perhaps more importantly, the workshops offered the opportunity to promote a more general discussion about health, and the 'triple bottom line'. The program's key underlying message was that there is little point in improving farm productivity if farm families were not able to enjoy the benefits of their labours. This served to reinforce the message that farmers and farm families needed to take their health seriously as a lifestyle issue, and not just as a matter of individual mortality.

The focus groups also allowed for regular discussion about various issues and the links between farm family health, health as a social issue in rural communities and farm productivity. In the baseline year, this was limited mostly to the more personal and community aspects of rural communities. In the second year, a specific component of the program focused on the relationship between health and farm business decision-making.

Primary health issues for farming families

The primary health issues for farming families were:

- stress
- the ageing of the farm workforce
- occupational health and safety and the farm as a workplace
- farmer attitudes and beliefs about health, well-being and exercise
- diet, alcohol abuse and chronic conditions
- access to health services and specialists.

Stress was mentioned numerous times by SFF-BAEOF participants although, similarly to the SFF broad acre project, they were unable to articulate the causes of the stress. More 'money' or 'rain' were seen to be solutions to stress. Many were aware of the connection between stress, depression and anxiety and the need for a program like this to address this important issue. Participants acknowledged that most people were reluctant to seek help when they were stressed and that there were issues about confidentiality and anonymity in the community.

Farmers recognised that farming itself was a primary health issue for both the farmers and the family. It is a varied and demanding job with a heavy workload that impacts on family life – unless farmers actually leave the farm, they are always working. Maintaining a balanced life style, with choices such as getting away from the farm or engaging in other physical activity or leisure activities, is important for respite from the demands of farm work.

SFF-BAEOF participants recognised that they were an ageing workforce and that continuing to work the farm predisposed them and their family to accidents and injury. They were interested in their own health indicators and the need to develop strategies to cope as they aged. Chronic problems and conditions such as back pain, skin cancer, hearing problems, and cardiovascular disease were mentioned.

Many issues were raised relating to OH&S on farms. Participants were conscious of the physical activity of farming, and the need to stay fit and healthy. Agricultural chemicals, children in the work place, tiredness, the need to maintain safe working practices (especially when it came to protection from the sun) and working with chemicals and farm machinery were other aspects of farm OH&S that arose in discussions. Manual handling was also raised as an important health and safety issue, as was fatigue, as many participants work off the farm to supplement their income and are often tired and prone to accidents. Many participants were concerned about children in the workplace, and the added risks of remote and rural living such as snakes, wild pigs and mosquito-borne disease.

There were wide ranging discussions on how farmers' attitudes and beliefs impacted on their health and well-being. Participants recognised that their diet was not as good as it could be (Plate 6.1). Having access to a range of fresh fruit and vegetables was an issue for many. While their relative isolation meant they were less tempted to access highly processed 'fast food' it also limited their access to healthy foods.

Plate 6.1: Highlighting the value of fresh and healthy foods

Participants also recognised that lack of access to primary health care was a major issue for farming families. It was difficult for them to get away from the farm for lengthy periods to visit specialists in regional or capital cities. Waiting for appointments was a source of frustration and many had given up doing so. There were certain towns within the project that were better serviced than others. In some cases clinics would only make appointments on the day and so farmers could not get an appointment. This caused significant trouble for participants. In one location, it was also noted that for the previous two to three years there had been an empty shop with a window display saying a bulk billing medical clinic was going to open there, but the place had remained unopened.

Farming family attitudes to health

When asked about farming family attitudes to health, SFF-BAEOF participants typically referred to:

- a reactive attitude – health problems were just a fact of life
- an assumption that most people think they are healthy
- a limited trust in health services
- an inability to afford health services.

Some of the attitudes articulated by participants were: 'work comes first', and 'most people think they are healthy' and that that there is always a delay in accessing health services as they can't pre-book (this was a recurring theme from the Ayr participants). A common view from many participants was that rural living was healthy because 'We live in a healthy environment'.

Participants felt that farmers' attitudes to health were improving and that there was an increasing awareness of OH&S issues on farms, driven by their specific industries and certainly work done by Australian Centre for Agricultural Health and Safety was mentioned. The corporate nature of some of the cotton farms also played a positive role in OH&S awareness.

Farmers suggested that in relation to their health, a crisis management attitude prevailed – 'Take action only when it happens'. They did not have a health maintenance strategy (like they might have for their farm machinery). Insufficient attention was paid to prevention of ill health and some participants suggested that being self-employed somehow made health less important.

Information access

When asked how they access health information, participants cited a number of options:

- different forms of media, including the internet
- social networks, friends, word of mouth
- local services – chemist, community health
- their general practitioner – to a lesser extent.

Participants commented that distance made them reluctant to seek information, and lack of choice in health services was also an issue. The internet was cited as being used – 'Googling it' – along with books and magazines. As farmer groups are partners in the SFF program, it is not surprising that farmer support groups should be identified as a key source of information. In particular the CRDC and its work in relation to OH&S issues and the Canegrowers were sources of information. In fulfilling their role in gaining farmer support for SFF-BAEOF, both the CRDC and SRDC initiated preliminary discussions with group members around the health of farming families. These discussions reflected the important role these groups play in educating farmers about healthy living choices for their families.

Health and farm business decisions

In the second year of the program, participants were asked to complete a farm business survey (see Appendix 13) which explored the relationship between farm business decision-making and health. Their responses were explored in more depth during the workshop (Plate 6.2). This is an important dimension of the project; while the personal health and quality of life of farmers is important in itself, health status clearly has implications for a farmer's productivity and for the economic performance of the farm. Viewed from a collective performance, even the data gathered in this project indicates the very serious status of farmers' health, and its potential consequences for the economic performance of the agricultural sector.

A farmer's perception of their health status interacts with their business decision-making in diverse ways. For example, their degree of confidence in their health could affect decisions which they might make about either practical issues such as work priorities or larger questions about type of business in which to invest for the future. On the other hand, the farm business itself can influence their health quite directly and hence their capacity to make decisions. This might occur through its impact on physical health (from pesticides, for example) or through stress (from the drought, perhaps).

Plate 6.2: Farming families were engaged in deep reflection on the impact of farming business decisions and health

One important issue that emerged was the way in which the problem of health and farm business decision making was framed. For example, the responses in the workshops demonstrated considerable ambiguity about even what constituted a business decision.

In the focus group discussions, many participants asserted that farm business decision-making was a holistic process and resisted examining closely the specific relevance of health issues. This feedback reflected a number of factors which influenced farmers' responses.

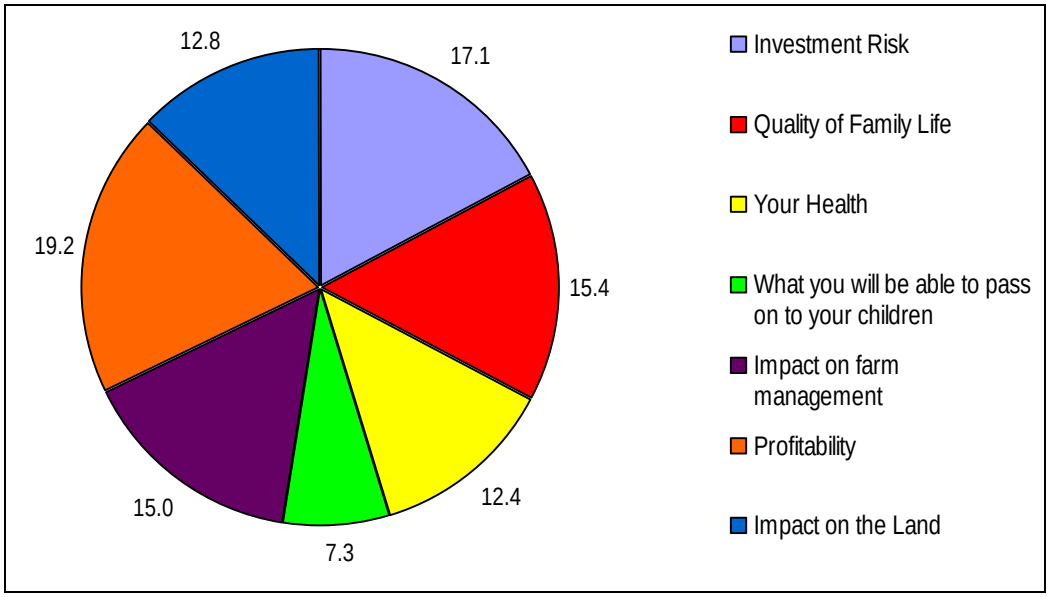
These included the extent to which farmers collapsed any distinction between home or domestic life, the farm and their formal workplace. For those who would identify with the first of these distinctions, the fluidity and interconnectedness of all parts of their lives, made it much more difficult for them to separate

out any one part of their lives on the farm from any other part. They could recognise, perhaps, the implication of building a new shed or deciding to invest in new equipment or one type of farming business rather than another. However, more specific decisions about immediate work priorities, work processes and division of labour, or taking time off, were regarded very much as part of the everyday life of farm management.

In the workshops, discussions regarding the relationship between business decisions and health, well-being and safety reinforced their learnings through the SFF-BAEOF program. The program did make participants think differently about managing work on the farm.

However, questions remain about the degree of importance which farming families themselves place on their health, and how it affects their business decision-making. In analysing the farm business survey results, the participants' overall responses indicated, at first glance, that they did not consider their health status to be an important influence on the decisions that they made (Figure 6.1). Only 12.4 per cent reported that they considered health as one of the main factors considered when making decisions about significant change, although Figure 6.1 does indicate that no one factor had a major preponderant influence.

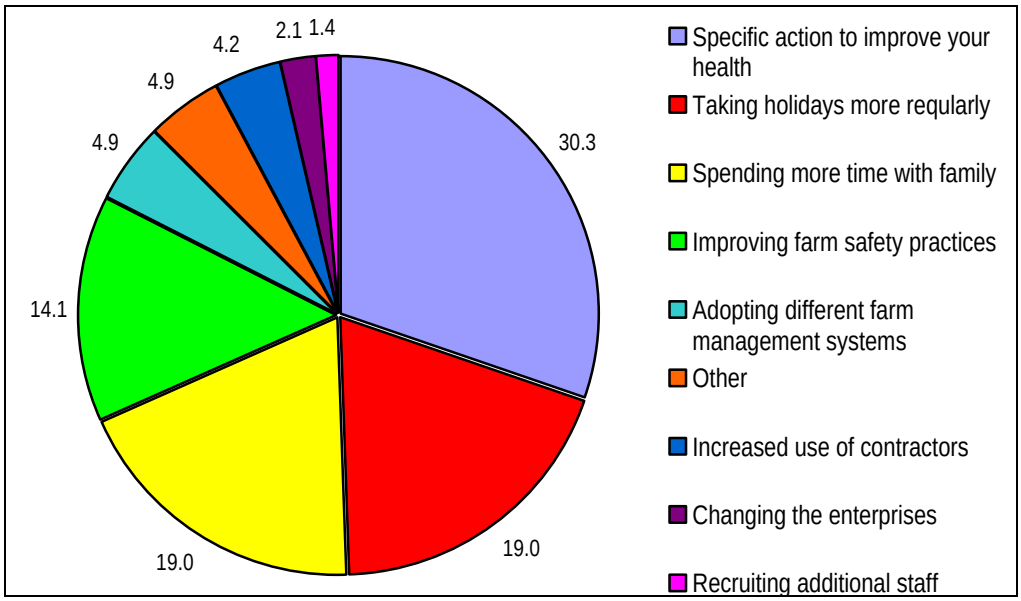
Figure 6.1: Factors that SFF-BAEOF participants consider when making decisions about significant change



'Quality of family life', 'Your health' and 'What you will be able to pass onto your children' accounted for 35 per cent of responses. 'Investment risk' and 'Profitability' totalled 36 per cent of responses. Figure 6.1 is a good example of the overlap of the business and social context in which farming families operate and emphasises the importance in recognising this when working with farming families.

Figure 6.2 shows SFF-BAEOF responses to the question: '*Has the SFF program prompted you to think differently about managing the work on the farm?*' Of the SFF-BAEOF participants, 30 per cent indicated 'Specific action to improve their health', 19 per cent chose 'Spending more time with family', 19 per cent chose 'Taking holidays more regularly' and 14 per cent nominated 'Improving farm safety practices'.

Figure 6.2: Has the SFF-BAEOF program prompted you to think differently about managing work on the farm?



These results confirm the holistic view taken by participants of the relationship between the farm as work and the farm as home, that so many referred to in the focus groups. It reinforces the message that to work with farm families, a consideration of *both* the business context and the social family context is vital. Ignoring one or the other misses the significant overlap of home, workplace and family relationships.

Of SFF-BAEOF participants, 92 per cent felt that improving their health would help them make better business decisions. Further exploration of this was undertaken with the farm business survey (see Appendix 13) which asked participants to rank which aspects of improving their health and safety make a real difference to their business decision- making. A preferential voting method known as the Borda count was used to collate the results. (The Borda count was introduced in the late eighteenth century by Jean-Charles de Borda and gives a factor score to each preference. When this is completed for each preference the final scores are added up for each of the five options. The option with the highest score is the highest ranked.) This method is used today in a variety of situations, such as preferential voting and some sporting events (Pomerol & Romerao 2000). In Table 6.1, we can see that 'Less concern about stress' is the highest ranked factor in the business decisions survey and 'Better farm safety practices' is the lowest.

Table 6.1: Reponses when SFF-BAEOF participants were asked to rank which aspects of improving health and safety make a real difference to their business decisions

Factor	Score	Rank
Which aspects of improving your health and safety make a real difference to your business decisions?		
Better physical fitness	180	2
Less concern about stress	181	1
Better diet	125	3
Better farm safety practices	110	5
Better understanding of the impact of poor health	123	4

Concern about stress came through strongly in all the business sessions, as well as the general health sessions. In focus group discussions, methods to actively reduce stress and improve farm family health and business outcomes were explored. In identifying what would assist in achieving less stress, participants

indicated a number of strategies. They had made alterations to workload including changing farm crop cycles, altering picking rosters, managing fatigue better and ensuring employees take 4 weeks leave.

Conclusion

The SFF-BAEOF objectives focused clearly on understanding the ways in which health is important in the social aspects of farming and in business decision-making. It has revealed a complex relationship, shaped by many farming families' simultaneous experience of their farms or corporate farms as both home and workplace. This underscores the importance of initiatives which address the poor health status of farmers, as the data presented in the earlier chapters of this report would indicate clearly that health can have a very negative effect on farmers' quality of life.

At the same time, many farmers have clearly benefited from participation in industry organisations and grower groups which have enabled them to develop a much more focused analysis of the farms as businesses. The continued growth of the SFF programs as outlined in the next chapter could make a significant contribution to assisting farmers to recognise and act on the mutual importance of the relationship between health and farm business decision-making. However, the challenge of engaging with health services and industry simultaneously and developing the understanding of this particular target group needs to be addressed.

This data indicates clearly that participating cotton and sugar farmers had taken a quite different approach to both managing their own health, and to farm safety practices as a result of the doing the SFF-BAEOF program. In the focus groups, the participants' discussion reflected the survey results where farmers indicated that they could see the relevance of their health in assisting better business decisions.

7. Objective 4: Communicate, disseminate and develop project findings

Communication of research findings through conference papers and articles in industry magazines, journals and radio occurred throughout the program and were considered pivotal in communicating the findings to participants and linking partners together across sectors. This was seen as important to the success of the program, and also by the partners, in raising the importance of health, well-being and health and safety in the various agricultural, health, government and industry sectors.

A communication strategy was developed by the steering group and target market was confirmed as follows:

- **Target Market 1:** CRDC and SRDC growers who have participated in the SFF-BAEOF project – the champions of the project
- **Target Market 2:** stakeholders such as RIRDC, La Trobe University, SRDC, CRDC, AWIA – through reports, recognition in media, steering group meetings minutes, etc.
- **Target Market 3:** greater community – reports to the local newspapers together with journals, magazines, Canegrowers, and Cotton growers' newsletters, RIRDC updates, Rural Press, etc.

As the project developed, it was felt that one of the gaps within the workshop program was the small involvement of local health services in the early stages. Given the background of the project team, significant effort was placed in raising the issues into health and agriculture rather than the traditional health and safety which focussed mainly on occupational health and safety. Time was devoted to communicating the programs early findings and the high interest from farming families in health, well-being and farm safety.

For the SFF-BAEOF project, significant attempts were made to engage with local health services and were met with differing responses. The challenge was to convince them of the benefit of the SFF program in a state where they knew little about it. However, it is pleasing to note that expansion has occurred through additional funding from the Department of Health and Ageing Reaching the Remote program (see below) resulting in additional programs around the Walgett and Burren Junction area and Georgetown and Mount Surprise in far north Queensland. This has also included training up an additional three staff in Queensland (two from Frontier Services and one from the Burdekin Centre for Rural Health). Due to ongoing resourcing constraints, further management was difficult to obtain from New South Wales, with a position change for the trained SFF staff member and nursing staff from the Walgett Health Service being required back on the ward when unexpected staff leave occurred the day of the workshops.

Papers presented at conferences

- 9th National Rural Health Conference, Albury, March 2007
  Early Intervention in Farming Family Health: Making informed life choices for sustainable family farming
- Australian Pacific Extension Network, Beechworth, March 2006
  The Sustainable Farm Families Project: Changing Farmer Attitudes to Health
  (see Appendix 14 for the conference abstract)
- Department of Human Services, Rural Health, Ballarat, April 2006
  Sustainable Farm Families Project: Striking it Lucky or Effective Health Promotion?
- Australian Area Remote Nurses National Conference, Brisbane, October 2006,
  The Sustainable Farm Families Project: Extending the future through rural health professionals

Industry workshops

- Joint Research Venture for Farm Health and Safety, September 2006
  'Scoping Farm Health and Safety Research Ideas for Rural Australia',overview of Sustainable Farm Families program
- Geoffrey Gardiner Foundation Reception, Parliament House, February 2006
- Sheepvention, Hamilton
  Sustainable Farm families – the human resource in the triple bottom line

Media – print articles and radio

There has been extensive coverage of the SFF project in local media where the workshop program has been conducted (examples are shown in Appendix 15). Radio interviews were done at Dalby and also by the CRDC Helen Dugdale. Stories and articles were sent to the Cottongrower, the CRDC *Spotlight*, the SRDC Update and eNews by the SRDC.

International interest

In 2006 Principal Investigator Susan Brumby was awarded a Victorian Travelling Fellowship to further understand the triggers and opportunities for improving farming family health in Victoria. As part of the fellowship, sharing the experiences of Sustainable Farm Families was included. Presentations were given to the following:

- National Farm Medicine Center, Marshfield, Wisconsin, USA
- Iowa Center for Agricultural Safety and Health, University of Iowa, Iowa City, Iowa, USA
- ADAS Pwllpeiran, Cwmystwyth, Wales
- 16th International Congress of Agricultural Medicine and Rural Health Lodi, Italy – plenary session presentation Healthy Farmers Healthy Food: SFF Project

Website

The Sustainable Farm Families website (www.sustainablefarmfamilies) commenced March 2006 and includes all projects listed above. As of August 2007, there were 153,322 successful server requests (hits) on the SFF page (Figure 7.1). Two annual newsletters (see Appendix 16) were sent to SFF-BAEOF participating farmers and these were also made available on the SFF website.

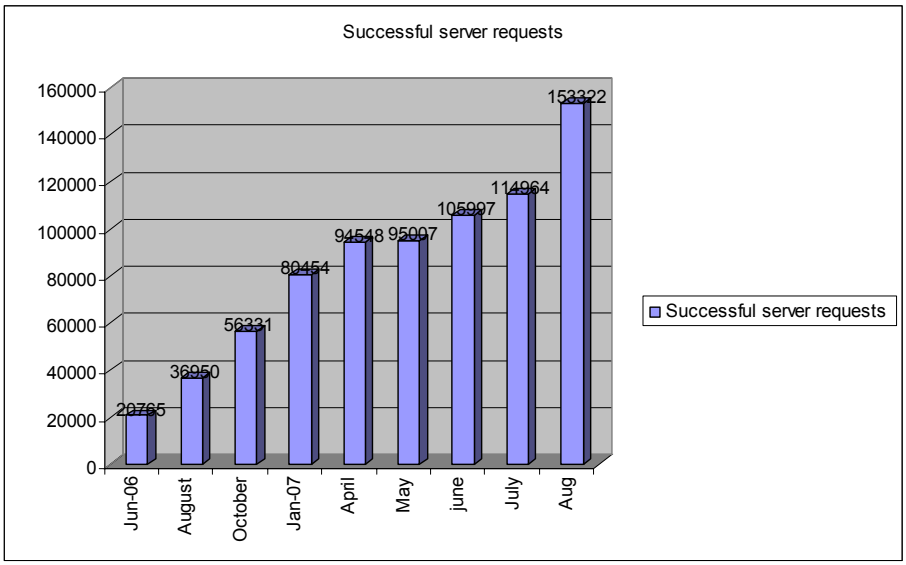
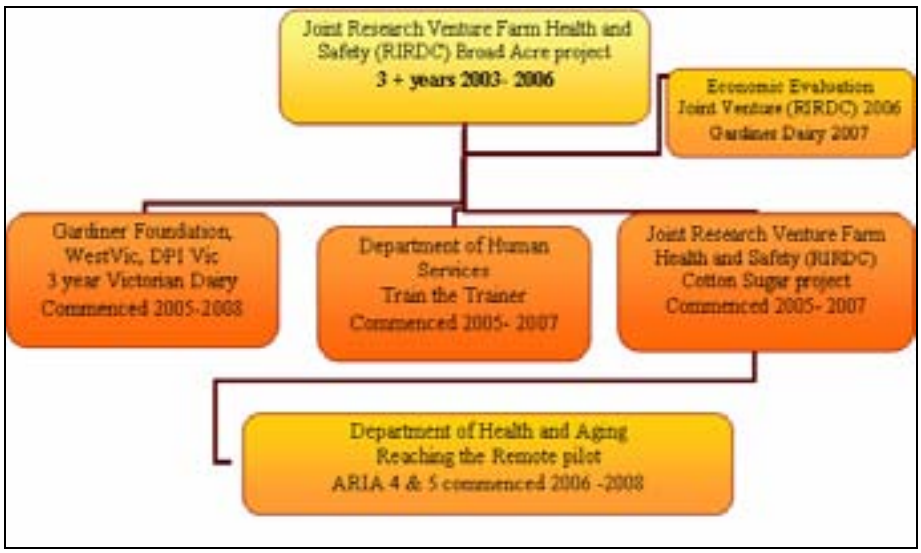


Figure 7.1: Successful server requests for the SFF website

Other funding and industries trials

As the SFF-BAEOF project continued, media coverage and word of mouth created more awareness – in particular in relation to trialling the project in a very remote capacity. Figure 7.2 below shows the relationship of additional SFF programs in relation to the original RIRDC funded project.

Figure 7.2: Pilots of the SFF project funded to 2008



Sustainable Dairy Farm Families – Gardiner Foundation – Victoria

The Gardiner Foundation, together with other industry partners (WestVic Dairy and Department of Primary Industry, Victoria) agreed to fund an extension of SFF to the dairy industry, involving 210 dairy farmers in 11 sites across 3 years. This involved strong collaboration with the United Dairy Farmers of Victoria who used their extensive networks to communicate the project. This project is due for completion in late 2007, with results to be reported in early 2008.

Train-the-trainer program – Department of Human Services – Victoria

The SFF project team, along with the steering group, identified the issues surrounding sustainability and the ability to continue to service the need of future demand for the project. In 2005, following the funding of the dairy pilot project, a funding opportunity was identified with the Victorian Department of Human Services and the plan for active recruitment and training of other health professionals across Victoria was piloted. Registered nurses were recruited from across Victoria to undertake education and training. Trainers were supported and educated in the theories of adult learning and the key foundations in which the SFF project was based. The capacity of the project was enhanced with key linkages with health services throughout Victoria. The ultimate success of this training program has seen the further development of another 50 health professionals from across Australia participating in the training program (Plate 7.1) to assist in the dairy project and the Reaching the Remote program (see below).

Plate 7.1: August 2006 'Train-the-trainers' program in Hamilton brought together rural and regional health professionals from across Australia

Reaching the Remote – Department of Health and Ageing – Queensland, the Northern Territory, Western Australia, New South Wales

Following the Joint Research Venture for Farm Health and Safety workshop in June 2005, dialogue commenced with the Rural Primary Health Section of the Department of Health and Ageing in relation to addressing health inequities in localities with Accessibility/Remoteness Index for Australian (ARIA) values of 4-5 and in different states across the country. In 2006 the Sustainable Farm Families – Reaching the Remote program commenced for completion in June 2008. The locations of these projects can be seen on Figure 7.3.

Figure 7.3: Locations of SFF projects as of May 2007

8. Discussion of results: program achievements and policy implications

At the end of the program, participants were asked if the SFF-BAEOF had made a difference to their health, well-being and farm safety. They expressed the view they were more aware of their own health and that of their family and had a greater understanding as to how they can respond to maintain good health. They could see, and feel, the benefits to their own health. They also made a connection between farmer health, well-being and safety – an assumption held by our research team when designing the program.

In terms of awareness, participants acknowledged they were primarily responsible for their own health, well-being and safety. A good starting point in this awareness was more careful consideration of their diet and the impact of moderate exercise – one of the most empowering aspects of the program. Reading food labels and being aware of the food they fed their family were constantly mentioned by participants.

That the program measured participants' cholesterol, blood sugar, blood pressure, BMI, waist-to-hip ratio, and informed them of their result – and what was regarded as acceptable limits for good health – is a cornerstone of the success of the program. The workshop program helps them understand and make the connection between their behaviour and health outcomes, and completes the learning cycle (Kolb 1984).

SFF-BAEOF participant responses also confirm that having the workshops 12 months apart was important as they could see the connection between their attempts to improve aspects of their health and obtain feedback on their efforts to change. However, this program was only a two year program (baseline and a 12 month follow-up) and numerous discussions centred around how to keep in touch, maintain the momentum and keep the group and industry relationships focussing on health well-being and safety (Plate 8.1). Given our experience with the original SFF program (which ran over three years) it is felt that longer term success may be more likely with the three year program.

Plate 8.1: SFF-BAEOF participants in Dalby

Participants also reported that they had a greater sense of perspective about the important role of health in their farming family decisions. For many, health management was now a priority, and they were passing this view on to family members, some included changing their production system to allow for increased appeal to and development of their children's interest in farming. They recognised the need to get the lifestyle mix right – including considerations of family, recreation, work, safety and the need to encourage their children to be involved.

In terms of farming business decisions, SFF-BAEOF participants recognised that if they are healthy they can work longer and more effectively. As this is part of a whole-of-life change, they also saw that they needed to change their lifestyle, not only in the quieter times of the year but also when they were working in the busy or peak farming times of the year. The program provided them with a rationale to have more time off, to try and achieve a better balance of work and non-work. This also required better time management around health, well-being and safety priorities:

> *"It gave me a better understanding how health impacts on business decisions and the financial performance of my own farm." (sugar participant)*

> *"Without good health you are no good to family or farm productivity. You and your health is the most important and only you can improve it." (cotton participant)*

In terms of managing stress and general anxiety, they recognised that it is important to talk with others about their problems and concerns. Small changes in lifestyle, thinking more about their own future, having downtime to attend children's sporting activities, for example, were now given a higher priority in their lives. For those who had denied themselves a holiday in recent years they recognised that this was an essential part of their personal regeneration and were actively planning for such events or had carried out the commitment.

The SFF-BAEOF program had wide ranging personal effects, or impacts, on behaviour. As several participants noted, the learning gave them permission to care about themselves. The benefits from participating in the SFF program were many. Some took more walks as a means of managing fitness and the pedometers were a great success. One participant took hers to the mothers' group to create interest. Playing golf was popular as were other forms of exercise, such as riding bikes and walking. Children were now encouraged to cycle around the farm to get fit. More organised sport and recreation was mentioned as real benefits.

We were encouraged that many farmers made a connection between health and well-being and farm safety. While it was our assumption as program planners that this was the case, having participants make this connection was a great outcome for the program. In discussing the pros and cons of being well or unwell they raised the connection between wellness and accidents – if you were unwell, as one farmer put it, you were more likely to not pay attention and be hurt.

Many participants reported that they used the Worksafe farm safety checklists provided in the workshop to undertake an audit of farm safety. While they may not have addressed all issues initially identified, they had addressed the top priorities and reduced the likelihood of harm on their farm. Many were more proactive in improving OH&S for employees and other family members. One group organised an OH&S specific workshop following the first year of the program. This was a very positive outcome for the program.

Managing the family diet was one thing participants could do and it had a significant impact on health. They followed up on information on diets suitable for their needs, and this made a difference. Living on farms, often some distance from larger centres, also challenges farming families to provide healthy and nutritious meals. Many reported they are now more systematic in planning and shopping for appropriate food for their family. Some also reported their local store or supermarket was stocking better food choices as a result of requests and consumer demand.

What is clear from the responses to this program is that farming families participating in the program did make healthy living choices, could see the connection between health and farm safety and could identify strategies to manage stress. The evidence from the health changes in the SFF-BAEOF participants confirms that there were changes on a number of indicators. Participants also know why these indicators have changed and feel empowered to continue with a healthy, well-being regime of diet, exercise and relaxation.

Evaluation of the program

A number of more specific observations can be made, arising from the formal evaluation of the program, and from the related project which attempted to assess the economic benefits of the program. During each workshop, participants were asked to rate each session against a set of questions about the presentation, their learning and aspects which could be improved (see Appendix 10). Overwhelmingly, participants reported very positively on both the quality of the presentations and their appreciation of the opportunity to learn about health issues, especially in relation to their own situations. The latter in particular seems to have become a major driver for their continuing participation in the workshops which is reflected in the high retention rates despite floods (Table 5.1). The intimacy of the physical assessment at the conclusion of each workshop, and the specific data on their own health (especially where there was also a referral) proved to be a significant factor in encouraging the farmers to return to each subsequent workshop.

Over the two workshops, there was an improvement on these measures. Tables 5.6 and 5.8 indicate that the aggregate improvement was significant statistically for those at risk. It is noted that whilst there was some

improvement not all were significant and that the overall group had a significant increase in their total fasting cholesterol (Table 5.7). This measurement is total fasting cholesterol and it was not possible for us to know the breakdown of LDL, HDL and triglycerides (i.e. 'good' and 'bad' cholesterol). However, this result has reinforced the important of stressing that the benchmark triggers are those for referral and that we all should remain vigilant in communicating ongoing risks for those not within the trigger levels. It is also noted that the base level with which SFF-BAEOF groups started was lower than the SFF board acre group (Table 5.2).

What were the principal drivers for the perceived improvements? They included:

- quality of presentation, interactive adult learning principles, graphic photos
- impact of personal health data, and personal relationship to presenters
- supermarket tour
- action plans and reporting back at the next session (using peer pressure)
- regular contact (follow-up if data not returned, two newsletters per program).

These characteristics of the program were matched by a strong emphasis on personal responsibility. The program aims not simply to produce better health, but also to assist the participants to develop a strong sense of urgency in maintaining their own health and to see it as part of a commitment to lifelong learning:

> *"Some of the participants in the workshops weren't aware of how to access professional assistance and were unwilling to go to the local health facilities because everyone knows each other in a small town."* (CRDC)

> *"One of the big succesess is when a participant makes an appointment with a specialist, which they may not have done if it weren't for the workshop and actually follow it through. The presenters should be very proud of the results and the improvement in farming families health when this occurs."* (Helen Dugdale, CRDC)

The third year of the program seemed to be as important as the second in the SFF broad acre program, if not more so. This raised questions about SFF-BAEOF which, for resourcing reasons, ran for two years.

Economic benefit of the program (in summary)

As part of this research project the Joint Research Venture for Farm Health and Safety funded an economic evaluation of the SFF broad acre program (Boymal et al. 2007). The research aimed to determine the effectiveness of the SFF project in reducing the burden of harm attributable to the health related behaviours of the farmers and to inform future decision making about the project. It used clinical indicators to measure this based on current evidence. The evaluation provided an ideal opportunity to validate the SFF project approach in economic terms and to assist us make policy recommendations for further work to address farming family health.

Over the SFF program participants reported changes in the health and well-being behaviours in terms of:

- diet and nutrition through healthier eating and better food choices
- increased physical activity through exercise, changes in farming practice (e.g. running to the farm gate, walking)
- safer work practices
- health checks (these were undertaken each year as part of the SFF program).

Policy issues and program development

This report has documented the contributions made by the program to gathering knowledge about farmers' health, its implications for their businesses, and to promoting better health amongst the farming constituency. The program has won a range of awards which are testimony to the recognition which it has achieved as an innovative program for addressing health issues amongst farmers. It has compiled a database on farmer health, and has been in contact with the Australian Centre for Agricultural Health and Safety about a collaborative approach to enhancing research knowledge about farmer health.

However, the analysis presented above provides a foundation for offering more specific policy options for consideration by federal and state governments. The scale of referrals which have arisen from this program suggests that there is reason for cooperative government action to act on the needs of farmers for better health understanding and for assistance in learning to manage their health better than occurs at present.

'Triple Bottom Line Health Sustainability for Farmers'

It is proposed that the SFF program should be made available as a means of enabling farmers to exercise greater responsibility for their own health, well-being and safety, of gathering data nationally about farmer health, and for early intervention to ensure that farming families are treated appropriately for existing health issues. It should also be recognised that farm families and agricultural workers are a specific target group with different needs and requirements at all times, not just in periods of market and/or climatic stresses. The SFF program was commenced after identifying this specific need.

Major principles underpinning a new policy initiative should include:

1. Universal access
   All farming families and agricultural workers should have access to the SFF program, delivered in their locality, irrespective of age or gender or of agricultural sector.

2. Program design
   The SFF program has now been tested and revised in a variety of settings. This provides confidence in recommending the specific components of the program which need to be addressed:
   - integrated government approach, with industry and health working together
   - resource issues
   - implications for education of health professionals
   - development of a national database on farmer health.

3. Research
   There has been little research on the health and well-being of farmers, their families and farm workers in Australia, and indeed, in any setting. This is in contrast to research into the health of rural populations or work on agricultural health and safety (OH&S). There has been more research in the United States, but it is apparent that a major effort will be required to build a database which is adequate for the kind of epidemiological analysis which supports major policy development.

Developing a national program

One of the issues with extension of the SFF program (including the SFF-BAEOF) to remote areas of Australia is the very high turnover of staff. The SFF program through WDHS has been fortunate with the original staff staying and developing the program. However, engagement and training of others has been hampered with retention and work demand issues associated with rural and remote Australia. It does seem that part of the success of the program is the relationship developed between the farmers and the SFF team – health professionals whom they could trust – and this is clearly put at risk when there are regular staff changes. The WDHS team has the opportunity to explore how this might be managed in the context of the delivery of Reaching the Remote program in Western Australia, the Northern Territory and Queensland and New South Wales, where local facilitators have been appointed. To date this has worked well in getting knowledge and skills up and running, recruiting participants, building relationships with health services and training up local staff. However, ensuring how the program fits in with local strategic plans, changing the way services are delivered and attracting funds to run one or two SFF programs a year has not been straightforward. It has occurred in Victoria, from July 2007, and this may be the model for the other states.

Feedback from the CRDC suggested that *"this course be extended to other families and farm employees and to other cotton growing regions. However, due to continuing drought and a decrease in funding available it would need to be subsidised by the Federal government and then more people could access this*

program and benefit in a tangible way. Hence saving the government in health costs, when the problem becomes more advanced" (Helen Dugdale, CRDC).

The SRDC has in their research and development priorities the need to develop and promote practices that improve the health and safety of industry participants. It considers that the support of programs such as the SFF across all sugar regions will assist the industry to achieve a sustainable industry (SRDC).

Managing the rural crisis

Sustained drought, decreased water allocations, low cotton prices and high production costs were evident in their impact on SFF-BAEOF participating cotton growers from the baseline year to 12 months later. Some participants had incurred additional significant debt; others were relying on off-farm income or were looking for other forms of work. Participating cane growers also experienced a volatile period with cyclone Larry ravaging far north Queensland, smut found in sugar cane, changes from statutory marketing to voluntary marketing and flooding in the Ayr and Ingham regions.

One proposal raised with the WDHS team has been that the SFF program could be of particular benefit in those areas where the rural crisis was particularly severe. However, it has not been designed as a form of crisis management and there has been some concern that this proposal could be setting the program up to fail. Notwithstanding, the SFF program has clearly been of value in assisting farming families to manage crises when they arrive and assist in understanding the impact on health well-being and safety. For this to occur, the program should be established in a context in which farm families are able to participate positively, and to develop knowledge, skills and a perspective that could add to their resilience in difficult times.

The success of the SFF-BAEOF was based on effective inter-sectoral collaboration involving farmers, their industry associations, the CRDC, the SRDC, a university, WDHS and the interest of other health services. The program has credibility with farmers because they are participating with their peers and with farming industry support from the CRDC and the SRDC.

The SFF team recognises the need to work with other sectors in industry, government, community and lobby groups if the program is to work effectively with farm families and move from a pilot program to an embedded way of delivering services to farming families and agricultural workers. The SFF and SFF-BAEOF programs recognise that farming families are interested in their own health, well-being and safety and that they acknowledge the role it plays in their lives, their families and their farm businesses. It is viewed as central to the success of the program that it 'de-medicalises' health and well-being so that farmers and families are able to grasp and understand the cause, effect and impact that lifestyle decisions can make. SFF has recognised that farm places are also workplaces and therefore a variety of external factors and environment come into play. Whilst this can make it confounding and complex, it opens the way for a method of dealing with poor health outcomes and injuries from farming families that provides individual, family, workplace and community some control over the factors that affect their lives.

Recommendations

Key recommendations from the SFF-BAEOF project mirror those of the broader SFF program and are:

1. The Australian government fund a national SFF program to establish regional partnerships with rural and regional health services.

The role of the Australian government is central to the health and well-being of our rural community. Farmers remain central to these communities as much as rural society is dependent on this economic activity. The Australian government can take leadership in generating a national commitment to farmer health and well-being by establishing the framework for collaboration across the range of health, industry and educational sectors whose engagement will be central to the ongoing success of the SFF project. In the first instance this will be implemented most productively through establishing a funded national program for regional partnerships (health, industry, community) to deliver the SFF program across Australia.

2. The SFF program be included in the annual health promotion plan of rural and regional community health services with ongoing financial support from the Australian government.

Rural and regional health services are the primary service deliverers for health promotion programs like the SFF. A central feature in the success of both the original SFF project and the SFF-BAEOF is the local engagement of farmers in an informative program where they both learn about basic health improvement strategies and engage in a discussion with their peers and local health professionals about the reasons for their health status.

3. Future SFF programs be structured around partnership arrangements with institutions and organisations in health, government, industry, education and community.

There are several key factors which contribute to the success of the SFF program. These include the presentation of important health, well-being and safety information related to their current conditions in a highly interactive manner with participants who share a common business interest: agricultural production. The WDHS team have partnered with a wide range of institutions and organisations to design, deliver, evaluate, fund and extend the program well beyond the first program with broad acre farmers. Continuation of the SFF project will largely depend on the partnership arrangements established by key players, especially rural and regional health services.

4. The evidence-based approach remains a cornerstone of the SFF project as it is adopted by rural and regional health services across Australia.

Information on participants' overall health, well-being and safety is collected over time and recorded on their local health file with them understanding their cardiovascular health, (blood pressure, cholesterol, body mass index) and predisposition to cancer (family history, diet, activity, exposure to sun) and diabetes (blood glucose, waist measurement, family history, lifestyle). In addition, information on the causes of anxiety and depression, sexual and reproductive health and well-being are also provided. This evidence-based approach improves the long term call on health services through early recognition of conditions related to health indicators which have not previously been understood or dealt with by individuals. SFF-BAEOF farmers returned over the two workshops because they were aware of their personal health and well-being and safety risks and how these relate to the likelihood of their future health status. They were empowered by knowing about the key underlying causes of health and well-being and safety and where they now stand in relation to the information.

5. The Australian government work with the Western District Health Service to fund a five year program to implement the previous recommendations in the report.

The WDHS and its partners have provided leadership, research and development support for the SFF project since its inception and extension beyond the initial cohort of broad acre farmers. With support from the Australian and Victorian governments and industry partners (such as the CRDC, the SRDC, the Gardiner Foundation in Victoria, the Department of Human Services, the Victorian Department of Primary Industries and the Department of Health and Ageing) the WDHS has worked with universities, agricultural industry associations and community health services to extend and deliver SFF programs. For these programs to become embedded in the annual health promotion practice of rural and regional health services it will require funding for a five year period.

9. Conclusion

This analysis of the data from the SFF-BAEOF tells us much about the health status of the farmers represented in the study as well as their knowledge and understanding about family health matters. Interesting amongst this information is farmer attitudes to pain, the level of alcohol consumption, understanding about own gender issues and the strategies many of the participants use to address their health through alternative medicines. The latter reflecting an underlying concern they have about accessing mainstream health and medical services

Since the SFF project has developed into other agricultural domains (such as dairy, cotton and sugar) as well as to remote areas, it has become apparent that there is widespread concern amongst agricultural communities about the health and well-being of farm families and agricultural workers. The lack of recognition of this issue means that there is a major risk that the foundation of Australia's agricultural economy – farmers and their families – could be in crisis. This has potentially significant consequences not only for rural communities, but also for all Australians. An initiative such as the Sustainable Farm Families program has the potential to provide both better research on the issue itself, and to constitute an important intervention for the better.

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Appendices

Appendix 1 SFF steering committee terms of reference document

SUSTAINABLE FARM FAMILIES STEERING GROUP

TERMS OF REFERENCE

PURPOSE:

To take responsibility for the leadership and business associated with the Sustainable Farm Families Project.

Defining and realizing benefits, monitoring budgetary strategy and ensuring project goals are reached in a timely manner.

Being accountable for the SFF project outcome.

Advocating for Sustainable Farm Families project.

AUTHORISATION:

The group reports to WDHS Board and RIRDC as funding bodies

MEMBERSHIP:

Susan Brumby, WDHS Community Services
Professor Bruce Wilson, RMIT University, Melbourne, Victoria
Professor John Martin, La Trobe University, Bendigo, Victoria
Ms Susan Leahey, Australian Women in Agriculture
Ms Delwyn Seebeck, Victorian Farmers Federation
Mr Warren Straw, Department of Primary Industries, Victoria
Ms Victoria Mack, LandConnect Australia
Ms Jane Fisher, Rural Industries Research and Development Corporation
Mr John Marriott, Farm Management 500 Victoria
Ms Helen Dugdale, Cotton Research and Development Corporation
Ms Diana Maldonado, Sugar Research and Development Corporation
Mr Les Robertson, Sugar Research and Development Corporation
Ms Cynthia Mrigate, Gardiner Foundation

CHAIRPERSON:

Professor Bruce Wilson, RMIT University Melbourne Victoria

QUORUM:

Meeting quorum shall be a minimum of 50% of members plus one. Teleconference attendance may be available.

TERM OF OFFICE:

Committee members will serve for a term of two – three years being the life of the specific project.

FREQUENCY OF MEETINGS:

Meetings will be held quarterly in February, May, August and November. A minimum of 4 meetings per year shall be held.

FUNCTION:

- To take on responsibility for the SFF project business plan and achievement of outcomes.
- To ensure the Sustainable Farm Families project's scope aligns with the requirements of the stakeholder groups.
- To provide those directly involved in the SFF project with guidance on project business issues.
- To ensure effort and expenditure are appropriate to stakeholder expectations.
- To address any issue that has major implications for the Sustainable Farm Families project.
- To keep the SFF project scope under control as emergent issues force changes to be considered.
- To reconcile differences in opinion and approach, and resolve disputes arising from them.
- To report on SFF project progress to those responsible at a high level, such as RIRDC as funding body and WDHS Board as lead agency.

ROLE OF INDIVIDUAL STEERING GROUP MEMBERS:

- To understand the strategic implications and outcomes of initiatives being pursued through Sustainable Farm Families Project.
- To appreciate the significance of the SFF project for all major stakeholders and represent their interests.
- To be genuinely interested in the initiative and the outcomes being pursued in the Sustainable Farm Families Project.
- To be an advocate for the Sustainable Farm Families project's outcomes.
- To have a broad understanding of project management issues and the approach being adopted.
- To be committed to, and actively involved in pursuing the Sustainable Farm Families Project's outcomes.
- Steering group members report back to their respective organizations and related industries on the SFF project and Progress.

DISTRIBUTION OF MINUTES:

- Minutes will be distributed to all Steering Group Members within ten working days of the meeting.
- Agendas circulated at least ten days prior to scheduled meetings.
- Items to be sent to Susan Brumby at least 14 days before scheduled meetings.

Appendix 2 Pre and post knowledge report Sugar and Cotton Program 2006-2007

WOMEN'S REPEAT QUESTIONS Year 1& 2

Correct answers (%) and the knowledge gained in attending the workshop, questionnaire given before (pre) and after workshop (post), for the sustainable farm families program year 1 & 2 (female respondents)

Question	Correct answer (%)		Significant improvement in knowledge (P<0.05)	Correct answer (%)		Significant improvement in knowledge (P<0.05)
	Pre Yr 1	Post Yr 1		Pre Yr 2	Post Yr 2	
1. Who has the better health status metropolitan or rural women?	50	100	YES	93	95	NO
4. What are the 3 **major risk factors** for cardiovascular (heart attack, stroke, heart disease) disease?	70	100	YES	85	96	NO
5. List 3 things that assist in the prevention of cardiovascular disease.	85	100	YES	82	86	NO
6. List 2 major risk factors for diabetes?	82	83	NO	82	95	NO
7. What does the National Heart Foundation recommend as the best form of exercise?	97	100	NO	90	95	NO
8. How much exercise does the National Heart Foundation recommend per day?	94	100	NO	85	100	YES
9. How often should you exercise per week?	40	93	YES	47	95	YES
10. the percentage of Australian adults that experience depression at some point in their lives is:	65	83	YES	39	69	YES
11. What are the risk factors for bowel cancer?	91	97	NO	93	100	NO
12. How is bowel cancer detected?	57	77	YES	76	91	NO
16. How much fat is required in grams per day in our diet?	35	73	YES	71	96	YES
17. How much fibre is required per day in our diet?	22	75	YES	54	96	YES
18. Every three days a person is fatally injured on a farm in Australia.	63	100	YES	83	95	NO
19. List two diseases which are genetically linked?	85	93	NO	79	100	YES
20. What is the leading cause of death for Australian women?	24	93	YES	68	82	NO
24. How would you rate the relationship between health and your farm productivity?	50	73	YES	50	59	NO
25. With the increase in life expectancy the average years an Australian woman will spend with a physical handicap on average is:	15	85	YES	29	54	YES
26. How often should a breast self-examination and cervical smear be performed?						
26A. Breast	52	87	YES	64	64	NO
26B. Cervical	73	100	YES	82	91	NO

WOMEN'S NON REPEAT Years 1 & 2

Correct answers (%) and the knowledge gained in attending the workshop, questionnaire given before (pre) and after workshop (post), for the Sustainable Farm Families Program Year 1 & 2 (female respondents)

Question	Correct answer (%)		Significant improvement in knowledge (P<0.05)
Year 1	Pre Yr 1	Post Yr 1	
2. At what age do you think the average Australian female dies?	34	83	YES
3. At what age do you think the average Australian male dies?	26	66	YES
13. Women over 50 suffer a degree of incontinence, which interferes with daily life at the rate of:	31	69	YES
14. What is hormone therapy?	75	94	YES
15. What percentage of Australian women experience **mild to moderate** menopausal symptoms?	44	66	YES

Year 2	Pre Yr 2	Post Yr 2	
2. What do you think are the main signs or symptoms of depression (1 correct response)?	96	100	NO
3. If you thought someone you knew closely was experiencing depression, what would you do (1 correct response)?	100	100	NO
13. List two methods by which we can treat prostate cancer:	62	95	YES
14. The impotence rate in men over fifty is	33	53	YES
15. What are two treatments for impotence?	17	83	YES
18. Every three days a person is fatally injured on a farm in Australia (True or False).	83	95	NO
22. The likelihood of stress occurring in jobs over which people have little control is more likely to occur than those people working in jobs with high level of control.	36	82	YES

MEN'S REPEAT QUESTIONS Year 1 & 2

Correct answers (%) and the knowledge gained in attending the workshop, questionnaire given before (pre) and after workshop (post), for the sustainable farm families program year 1 &2 (male respondents)

Question	Correct answer (%)		Significant improvement in knowledge (P<0.05)	Correct answer (%)		Significant improvement in knowledge (P<0.05)
	Pre Yr 1	Post Yr 1		Pre Yr 2	Post Yr 2	
1. Who has the better health status metropolitan or rural men?	52	96	YES	92	91	NO
4. What are the 3 **major risk factors** for cardiovascular (heart attack, stroke, heart disease) disease?	59	100	YES	88	91	NO
5. List 3 things that assist in the prevention of cardiovascular disease.	59	84	YES	72	77	NO
6. List 2 major risk factors for diabetes?	56	84	YES	84	82	NO
7. What does the National Heart Foundation recommend as the best form of exercise?	89	92	NO	92	95	NO
8. How much exercise does the National Heart Foundation recommend per day?	89	96	NO	88	100	YES
9. How often should you exercise per week?	27	75	YES	59	100	YES
10. The percentage of Australian adults that experience anxiety or depression is:	44	80	YES	68	81	NO
11. What are the risk factors for bowel cancer?	67	96	YES	80	96	YES
12. How is bowel cancer detected?	52	88	YES	68	95	YES
13. List two methods by which we can treat prostate cancer?	45	80	YES	76	86	NO
16. How much fat is required in grams per day in our diet?	34	64	YES	53	95	YES
17. How much fibre is required per day in our diet?	26	63	YES	28	91	YES
18. Every three days a person is fatally injured on a farm in Australia.	56	96	YES	76	95	YES
19. List two diseases which are genetically linked?	63	76	NO	64	86	YES
20. What is the leading cause of death for Australian men?	82	84	NO	64	86	YES
24. How would you rate the relationship between health and your farm productivity?	60	100	YES	56	77	YES

MEN'S NON REPEAT Years 1 & 2

Correct answers (%) and the knowledge gained in attending the workshop, questionnaire given before (pre) and after workshop (post), for the Sustainable Farm Families Program Year 1 & 2 (male respondents)

Question Year 1	Correct answer (%)		Significant improvement in knowledge (P<0.05)
	Pre Yr 1	Post Yr 1	
2. At what age do you think the average Australian female dies?	33	76	YES
3. At what age do you think the average Australian male dies?	33	60	YES
14. The impotence rate in men over fifty is:	15	68	YES
15. What are two treatments for impotence?	15	76	YES

Year 2	Pre Yr 2	Post Yr 2	
2. What do you think are the main signs or symptoms of depression (1 correct response)?	100	100	NO
3. If you thought someone you knew closely was experiencing depression, what would you do (1 correct response)?	92	100	NO
14. What is hormone therapy?	48	59	NO
15. What percentage of Australian women experience mild to moderate menopausal symptoms?	32	27	NO
22. The likelihood of stress occurring in jobs over which people have little control is more likely to occur than those people working in jobs with high level of control.	64	91	YES
25. With the increase in life expectancy the average years an Australian woman will spend with a physical handicap on average is:	4	55	YES
26 . How often should a breast self-examination and cervical smear be performed?			
26A. Breast	44	77	YES
26B. Cervical	44	77	YES

Appendix 2 Pre and post knowledge report

WOMEN'S REPEAT QUESTIONS Cotton and sugar Year 1& 2

Correct answers (%) and the knowledge gained in attending the workshop, questionnaire given before (pre) and after workshop (post), for the sustainable farm families program year 1 & 2 (female respondents)

Question	Correct answer (%)		Significant improvement in knowledge (P<0.05)	Correct answer (%)		Significant improvement in knowledge (P<0.05)
	Pre Yr 1	Post Yr 1		Pre Yr 2	Post Yr 2	
1. Who has the better health status metropolitan or rural women?	50	100	YES	93	95	NO
4. What are the 3 **major risk factors** for cardiovascular (heart attack, stroke, heart disease) disease?	70	100	YES	85	96	NO
5. List 3 things that assist in the prevention of cardiovascular disease.	85	100	YES	82	86	NO
6. List 2 major risk factors for diabetes?	82	83	NO	82	95	NO
7. What does the National Heart Foundation recommend as the best form of exercise?	97	100	NO	90	95	NO
8. How much exercise does the National Heart Foundation recommend per day?	94	100	NO	85	100	YES
9. How often should you exercise per week?	40	93	YES	47	95	YES
10. the percentage of Australian adults that experience depression at some point in their lives is:	65	83	YES	39	69	YES
11. What are the risk factors for bowel cancer?	91	97	NO	93	100	NO
12. How is bowel cancer detected?	57	77	YES	76	91	NO
16. How much fat is required in grams per day in our diet?	35	73	YES	71	96	YES
17. How much fibre is required per day in our diet?	22	75	YES	54	96	YES
18. Every three days a person is fatally injured on a farm in Australia.	63	100	YES	83	95	NO
19. List two diseases which are genetically linked?	85	93	NO	79	100	YES
20. What is the leading cause of death for Australian women?	24	93	YES	68	82	NO
24. How would you rate the relationship between health and your farm productivity?	50	73	YES	50	59	NO
25. With the increase in life expectancy the average years an Australian woman will spend with a physical handicap on average is:	15	85	YES	29	54	YES
26. How often should a breast self-examination and cervical smear be performed?						
26A. Breast	52	87	YES	64	64	NO
26B. Cervical	73	100	YES	82	91	NO

WOMEN'S NON REPEAT Years 1 & 2

Correct answers (%) and the knowledge gained in attending the workshop, questionnaire given before (pre) and after workshop (post), for the Sustainable Farm Families Program Year 1 & 2 (female respondents)

Question	Correct answer (%)		Significant improvement in knowledge (P<0.05)
Year 1	Pre Yr 1	Post Yr 1	
2. At what age do you think the average Australian female dies?	34	83	YES
3. At what age do you think the average Australian male dies?	26	66	YES
13. Women over 50 suffer a degree of incontinence, which interferes with daily life at the rate of:	31	69	YES
14. What is hormone therapy?	75	94	YES
15. What percentage of Australian women experience **mild to moderate** menopausal symptoms?	44	66	YES

Year 2	Pre Yr 2	Post Yr 2	
2. What do you think are the main signs or symptoms of depression (1 correct response)?	96	100	NO
3. If you thought someone you knew closely was experiencing depression, what would you do (1 correct response)?	100	100	NO
13. List two methods by which we can treat prostate cancer:	62	95	YES
14. The impotence rate in men over fifty is	33	53	YES
15. What are two treatments for impotence?	17	83	YES
18. Every three days a person is fatally injured on a farm in Australia (True or False).	83	95	NO
22. The likelihood of stress occurring in jobs over which people have little control is more likely to occur than those people working in jobs with high level of control.	36	82	YES

MEN'S REPEAT QUESTIONS Cotton and Sugar Year 1& 2

Correct answers (%) and the knowledge gained in attending the workshop, questionnaire given before (pre) and after workshop (post), for the sustainable farm families program year 1 &2 (male respondents)

Question	Correct answer (%)		Significant improvement in knowledge (P<0.05)	Correct answer (%)		Significant improvement in knowledge (P<0.05)
	Pre Yr 1	Post Yr 1		Pre Yr 2	Post Yr 2	
1. Who has the better health status metropolitan or rural men?	52	96	YES	92	91	NO
4. What are the 3 **major risk factors** for cardiovascular (heart attack, stroke, heart disease) disease?	59	100	YES	88	91	NO
5. List 3 things that assist in the prevention of cardiovascular disease.	59	84	YES	72	77	NO
6. List 2 major risk factors for diabetes?	56	84	YES	84	82	NO
7. What does the National Heart Foundation recommend as the best form of exercise?	89	92	NO	92	95	NO
8. How much exercise does the National Heart Foundation recommend per day?	89	96	NO	88	100	YES
9. How often should you exercise per week?	27	75	YES	59	100	YES
10. The percentage of Australian adults that experience anxiety or depression is:	44	80	YES	68	81	NO
11. What are the risk factors for bowel cancer?	67	96	YES	80	96	YES
12. How is bowel cancer detected?	52	88	YES	68	95	YES
13. List two methods by which we can treat prostate cancer?	45	80	YES	76	86	NO
16. How much fat is required in grams per day in our diet?	34	64	YES	53	95	YES
17. How much fibre is required per day in our diet?	26	63	YES	28	91	YES
18. Every three days a person is fatally injured on a farm in Australia.	56	96	YES	76	95	YES
19. List two diseases which are genetically linked?	63	76	NO	64	86	YES
20. What is the leading cause of death for Australian men?	82	84	NO	64	86	YES
24. How would you rate the relationship between health and your farm productivity?	60	100	YES	56	77	YES

MEN'S NON REPEAT Years 1 & 2

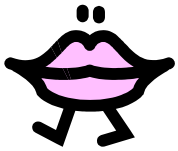
Correct answers (%) and the knowledge gained in attending the workshop, questionnaire given before (pre) and after workshop (post), for the Sustainable Farm Families Program Year 1 & 2 (male respondents)

Question Year 1	Correct answer (%)		Significant improvement in knowledge (P<0.05)
	Pre Yr 1	Post Yr 1	
2. At what age do you think the average Australian female dies?	33	76	YES
3. At what age do you think the average Australian male dies?	33	60	YES
14. The impotence rate in men over fifty is:	15	68	YES
15. What are two treatments for impotence?	15	76	YES

Year 2	Pre Yr 2	Post Yr 2	
2. What do you think are the main signs or symptoms of depression (1 correct response)?	100	100	NO
3. If you thought someone you knew closely was experiencing depression, what would you do (1 correct response)?	92	100	NO
14. What is hormone therapy?	48	59	NO
15. What percentage of Australian women experience mild to moderate menopausal symptoms?	32	27	NO
22. The likelihood of stress occurring in jobs over which people have little control is more likely to occur than those people working in jobs with high level of control.	64	91	YES
25. With the increase in life expectancy the average years an Australian woman will spend with a physical handicap on average is:	4	55	YES
26 . How often should a breast self-examination and cervical smear be performed?			
26A. Breast	44	77	YES
26B. Cervical	44	77	YES

Appendix 3 SFF-BAEOF workshop education

Workshop program Year 1



AGENDA:

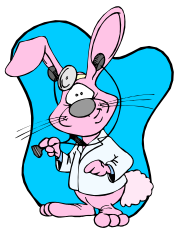
NIL BY MOUTH

DAY ONE:

7.00am – 8.10am:	Individual Fasting Health Assessments
8.10am –8.45am:	**BREAKFAST** and Focus Group discussions
8.45am – 9.00am:	Introduction of project
9.00am – 9.40am	State of rural health – how are we travelling?
9.40am – 10.45am	Cardiovascular disease – getting to the heart of things
10.45am – 11.00am:	**Morning Tea**
11.00pm – 12.00pm:	Cancer – you can beat it
12.00pm – 1.00pm	Farm health & safety – Where you live work and play
1.00pm – 1.30pm	Nutrition and diet (Label reading)
1.30pm – 2.00pm:	**Lunch**
2.00pm – 5.00pm:	Individual health assessments

DAY TWO:

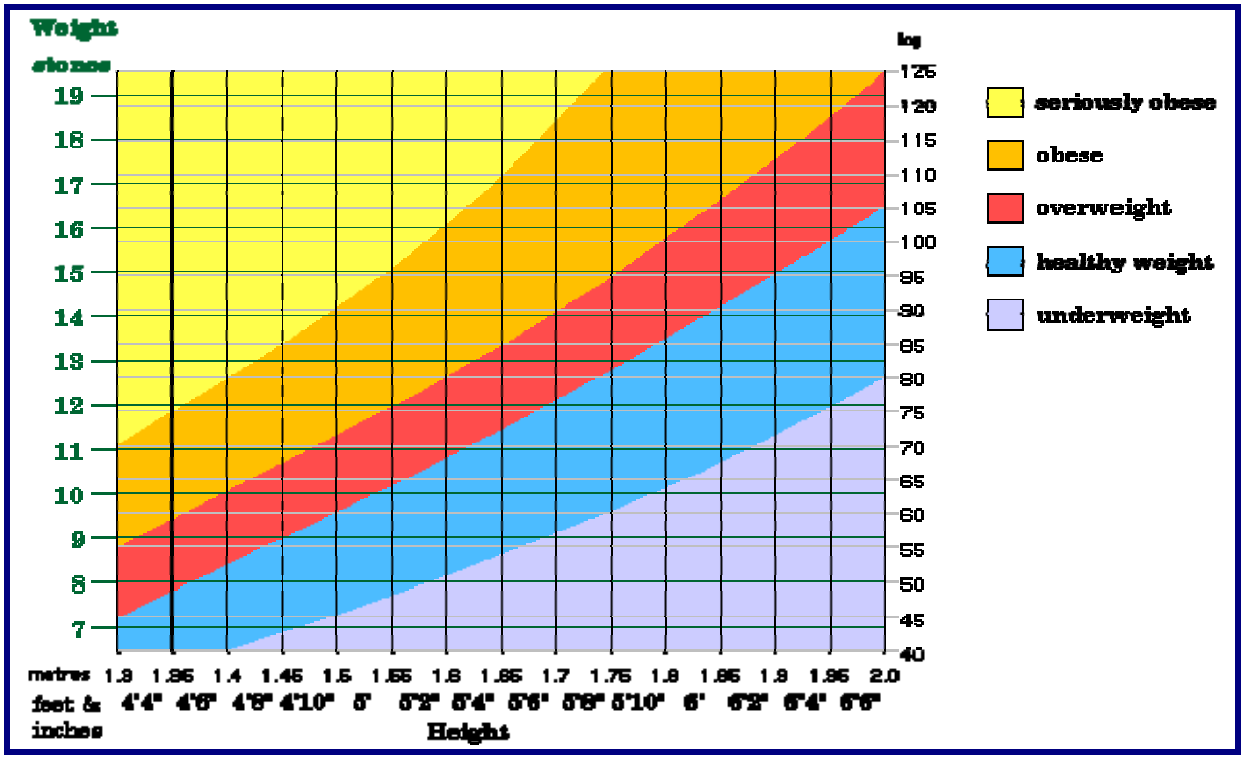
8.00am – 10.30am:	Balance of Individual health assessments
10.45am – 11.45am	Supermarket tour
11.45am– 12.45pm	Stress Less
12.45pm – 1.30pm	**Lunch**
1.30 pm – 3.45pm:	Gender benders
3.45pm – 4.00pm	**Afternoon tea**
4.00pm – 4.15pm	Post Questionnaire
4.15pm – 5.15pm	Action Planning; Safety Check and Evaluation
5.15pm – 5.30pm	Questions and Close



Appendix 4 Physical health assessment

UR Label

Sustainable Farm Families Indicators



Health Indicator	*Recommended Values*	*Initial Assessment* *Date……..*		*12 Month Review* *Date……..*		*24 Month Review* *Date……..*	
Weight and height	Per individual	Weight	Height	Weight	Height	Weight	Height
Waist Hip ratio	*M 1.0 to 1.0 ratio* *F 0.8 to 1.0 ratio*	Waist	Hip	Waist	Hip	Waist	Hip
Body mass Index	*M 20-25 healthy* *F 20-25 healthy*						
Percentage of Body Fat	*M 10-20%* *F 20-35%*	%	Kg	%	Kg	%	Kg
Cholesterol level	*5.5 mmols or less*						
Blood Sugar level	*3.5-7.7 random test 5.5 or less fasting*						
Blood Pressure	*Below 140/90*						
Pulse Rate	*60-100 regular*						

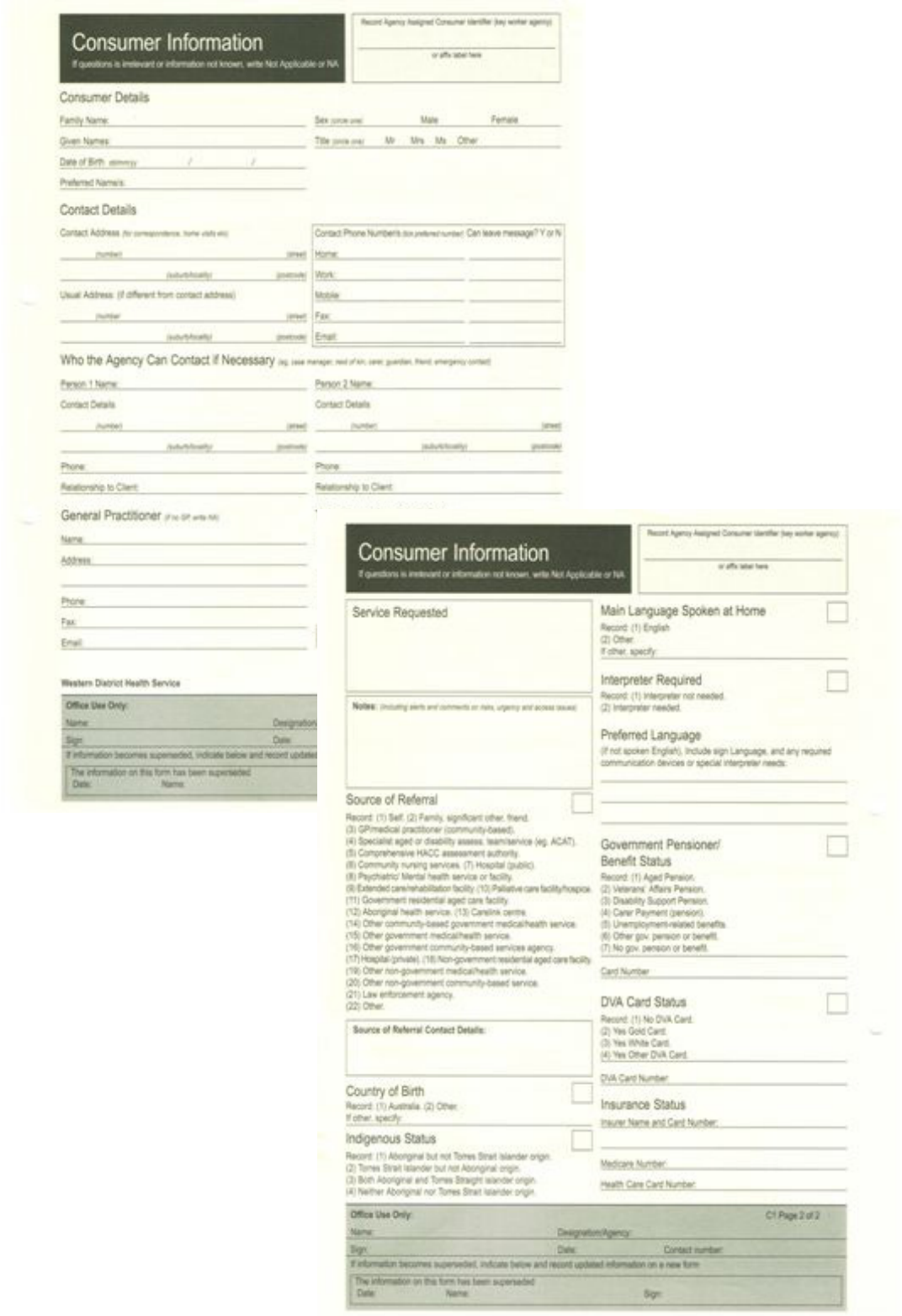
Comment: ……

Sustainable Farm Families **Physical Assessment**	UR Number

General Appearance and Presentation ❑ Allergies ❑ List medications	**General comments**
Genetic Evaluation ❑ Family history of cancer ❑ Familial link to cardiovascular disease ❑ Familial link to diabetes ❑ Other genetically linked disease	
Neuro assessment ❑ Visual impairments ❑ Frequent headaches ❑ Hearing impairment ❑ Other related disorders	
Skin and mucous membranes ❑ Intact ❑ Disorders noted	
Cardiovascular assessment ❑ Irregular pulse ❑ Hypertension ❑ Elevated cholesterol	
Respiratory Assessment ❑ Cyanosis ❑ Cough/sputum ❑ Shortness of breath ❑ Smoker number per day____	
Gastrointestinal Assessment ❑ Abdominal tenderness ❑ Nausea/vomiting ❑ Gastro intestinal indigestion/ reflux ❑ Constipation/diarrhoea	
Urological Assessment ❑ Stress incontinence ❑ Frequency of voiding>1 per night ❑ Difficulty in voiding pattern	
Sexual and Reproductive ❑ Sexually active: - yes or no ❑ Overdue pap smear/ mammography ❑ Erectile dysfunction ❑ Other issues	
Musculoskeletal Assessment ❑ Joint or muscle pain ❑ Other issues	
Psychosocial ❑ Living arrangements (carer, partner, children) ❑ Stress, anxiety or depression	

Signed: _____ Date: _____

Appendix 5 Demographics – consumer info in SCOT tool



Consumer Information

If questions is irrelevant or information not known, write Not Applicable or NA

Record Agency Assigned Consumer Identifier (key worker agency)

or affix label here

Consumer Details

Family Name:

Given Names:

Date of Birth: dd/mm/yy

Preferred Name/s:

Sex (circle one): Male Female

Title (circle one): Mr Mrs Ms Other

Contact Details

Contact Address (for correspondence, home visits etc)

(number) (street)

(suburb/locality) (postcode)

Usual Address (if different from contact address)

(number) (street)

(suburb/locality) (postcode)

Contact Phone Number/s (tick preferred number) Can leave message? Y or N

Home:

Work:

Mobile:

Fax:

Email:

Who the Agency Can Contact if Necessary (eg. case manager, next of kin, carer, guardian, friend, emergency contact)

Person 1 Name:

Contact Details

(number) (street)

(suburb/locality) (postcode)

Phone:

Relationship to Client:

Person 2 Name:

Contact Details

(number) (street)

(suburb/locality) (postcode)

Phone:

Relationship to Client:

General Practitioner (if no GP write NA)

Name:

Address:

Phone:

Fax:

Email:

Western District Health Service

Office Use Only:

Name: Designation:

Sign: Date:

If information becomes superseded, indicate below and record updated

The information on this form has been superseded

Date: Name:

Consumer Information

If questions is irrelevant or information not known, write Not Applicable or NA

Record Agency Assigned Consumer Identifier (key worker agency)

or affix label here

Service Requested

Notes: (including alerts and comments on risks, urgency and access issues)

Source of Referral

Record: (1) Self, (2) Family, significant other, friend,
(3) GP/medical practitioner (community-based),
(4) Specialist aged or disability assess. team/service (eg. ACAT),
(5) Comprehensive HACC assessment authority,
(6) Community nursing services, (7) Hospital (public),
(8) Psychiatric/ Mental health service or facility,
(9) Extended care/rehabilitation facility (10) Palliative care facility/hospice,
(11) Government residential aged care facility,
(12) Aboriginal health service, (13) Carelink centre,
(14) Other community-based government medical/health service,
(15) Other government medical/health service,
(16) Other government community-based services agency,
(17) Hospital (private), (18) Non-government residential aged care facility,
(19) Other non-government medical/health service,
(20) Other non-government community-based service,
(21) Law enforcement agency,
(22) Other.

Source of Referral Contact Details:

Country of Birth

Record: (1) Australia, (2) Other.

If other, specify:

Indigenous Status

Record: (1) Aboriginal but not Torres Strait Islander origin,
(2) Torres Strait Islander but not Aboriginal origin,
(3) Both Aboriginal and Torres Straight Islander origin,
(4) Neither Aboriginal nor Torres Strait Islander origin.

Main Language Spoken at Home

Record: (1) English
(2) Other.
If other, specify:

Interpreter Required

Record: (1) Interpreter not needed.
(2) Interpreter needed.

Preferred Language

(If not spoken English), include sign Language, and any required communication devices or special interpreter needs:

Government Pensioner/ Benefit Status

Record: (1) Aged Pension,
(2) Veterans' Affairs Pension,
(3) Disability Support Pension,
(4) Carer Payment (pension),
(5) Unemployment-related benefits,
(6) Other gov. pension or benefit,
(7) No gov. pension or benefit.

Card Number:

DVA Card Status

Record: (1) No DVA Card,
(2) Yes Gold Card,
(3) Yes White Card,
(4) Yes Other DVA Card.

DVA Card Number:

Insurance Status

Insurer Name and Card Number:

Medicare Number:

Health Care Card Number:

Office Use Only: C1 Page 2 of 2

Name: Designation/Agency:

Sign: Date: Contact number:

If information becomes superseded, indicate below and record updated information on a new form

The information on this form has been superseded

Date: Name: Sign:

Appendix 6 Health conditions and behaviours

Profile: Health Conditions

If question is irrelevant or information not known, write Not Applicable or NA

Record Agency Consumer Identifier (initial contact agency) _____

or affix label here

Overall Health

In general, how would you say your health is?

- ○ Excellent
- ○ Very Good
- ○ Good
- ○ Fair
- ○ Poor

How much did your health interfere with your normal activities (outside and/or inside the home) during the past 4 weeks?

- ○ Not at all
- ○ Slightly
- ○ Moderately
- ○ Quite a bit

Hearing

How is your hearing?

- ○ Excellent
- ○ Very Good
- ○ Good
- ○ Fair
- ○ Poor

Do you wear a hearing aid?

○ Yes ○ No

How much bodily pain have you had during the past 4 weeks?

- ○ None
- ○ Very Mild
- ○ Moderate
- ○ Severe
- ○ Very Severe

Vision

How is your eyesight for reading?

- ○ Excellent
- ○ Good
- ○ Fair
- ○ Poor

How is your long distance eyesight?

- ○ Excellent
- ○ Good
- ○ Fair
- ○ Poor

Do you wear glasses?

○ Yes ○ No

Falls

Have you had a fall inside/outside the home in the past 6 months?

○ Yes ○ No

If yes, record number of falls

____

Health Conditions *(include all issues eg. Allergies, acute medical conditions, disabilities, continence, dental, developmental problems)*

1.

2.

3.

4.

5.

Current Medications *(include prescriptions, over-the-counter and alternate products)*

1.	5.
2.	6.
3.	7.
4.	8.

Comments

Office Use Only

Name:	Designation/Agency: **WDHS Community Services**
Sign:	Date: Contact Number: **(03) 555 18450**

Profile: Health Behaviours

If question is irrelevant or information not known, write Not Applicable or NA

Record Agency Assigned Consumer Identifier (initial contact agency)

or affix label here

Smoking

○ Never smoked
○ Has quit smoking
○ Currently smokes

If quit, record when
Date/Year _____

Alcohol

How often do you have a drink containing alcohol?

○ Never – if never, proceed to next question
○ Monthly
○ Once a week
○ 2 to 4 times per week
○ 5+ per week

How many standard drinks do you have on a typical day when you are drinking?

○ 1 to 2
○ 3 to 4
○ 5 to 6
○ 7 to 8
○ 8+ per day

How often do you have more than 6 standard drinks on one occasion?

○ Never
○ Monthly
○ Once a week
○ 2 to 4 times per week
○ 5+ per week

Breast Screen

○ Yes ○ No

If yes, record when
Date/Year _____

Pap Smear

○ Yes ○ No

If yes, record when

Date/Year _____

Physical Activity

Would you accumulate 30 minutes or more of moderate intensity physical activity on most days of the week?

○ Yes ○ No

Physical Fitness

activity you could do for at least 2 minutes?

○ **Very heavy** (eg, run, fast pace; carry a heavy load upstairs or uphill of 25 lbs/10kg)

○ H**eavy** (eg, jog, slow pace; climb stairs or A hill at moderate pace)

○ **Moderate** (eg, walk, medium pace; carry a heavy load level ground 25 lbs/10 kg)

○ **Light** (eg, walk, medium pace; carry a light load level ground 10 lbs/5 kg)

○ **Very Light** (eg, walk, slow pace; wash dishes)

Comments, including other relevant Issues (eg, other substance use, safe sex practices):

Office Use Only

Name:	Designation/Agency: **WDHS Community Services**
Sign:	Date: Contact Number: **(03) 555 18450**

Appendix 7 Kessler K 10 mental health survey

Health and Well Being

Record Agency Assigned Consumer Identifier (initial contact agency) ___

or affix label here

For all questions, please fill in the appropriate response circle with a tick ✓

In the past 4 weeks:	None of the time	A little of the time	Some of the time	Most of the time	All of the time
1. About how often did you feel tired out for no good reason?	○	○	○	○	○
2. About how often did you feel nervous?	○	○	○	○	○
3. About how often did you feel so nervous that nothing could calm you down?	○	○	○	○	○
4. About how often did you feel hopeless?	○	○	○	○	○
5. About how often did you feel restless or fidgety?	○	○	○	○	○
6. About how often did you feel so restless you could not sit still?	○	○	○	○	○
7. About how often did you feel depressed?	○	○	○	○	○
8. About how often did you feel that everything is an effort?	○	○	○	○	○
9. About how often did you feel so sad that nothing could cheer you up?	○	○	○	○	○
10. About how often did you feel worthless?	○	○	○	○	○

Personal and Social Support

During the past 4 weeks, was someone available to help you if you needed and wanted help? For example, if you:

- Felt very nervous, lonely or blue
- Got sick and had to stay in bed
- Needed someone to talk to
- Needed help with daily chores
- Needed help just take care of yourself

○ Yes, as much as I wanted
○ Yes, quite a bit
○ Yes, some
○ Yes, a little
○ No, not at all

Office Use Only

Name:	Designation/Agency: **WDHS Community Services**
Sign:	Date: Contact Number: **(03) 555 18450**

Appendix 8 Farm safety survey

Please take time to complete this survey

1. Please indicate the main type of farming undertaken. (tick the relevant boxes)

Enterprise	**Tick**	***Enterprise***	**Tick**
a) Cattle	☐	e) Cotton	☐
b) Sheep	☐	f) Viticulture	☐
c) Cropping	☐	g) Market Gardening	☐
d) Dairy	☐	h) Sugar	☐

2. Please tick the table below to indicate your immunisations for the following.

Vaccination	**Yes**	**Year**	**No**	**Not sure**	**Vaccination**	**Yes**	**Year**	**No**	**Not sure**
Tetanus					Flu				
Hepatitis B					Meningococcal				
Q Fever					Other				

3. Do you use **chemicals (pesticides, herbicides, strong detergents)** on your Farm?
Yes ☐ Occasionally ☐ No ☐

If yes or occasionally, what protective gear is used when applicable:
☐ a) Overalls ☐c) Goggles/Safety glasses
☐ b) Mask ☐d) Gloves ☐e) Other……

4. When using workshop or outdoor equipment eg lawn mower, power tools, post hole driver/auger or assisting in the use of these, do you wear protective gear?

Yes ☐ Occasionally ☐ Never ☐ Don't ever use or assist ☐

If yes or occasionally please indicate:
☐a) Goggles/Safety glasses ☐c) Gloves
☐b) Ear muffs ☐d) Other ……

5. Do you use any sun protection? ☐ Yes all the time ☐ Usually ☐ Occasionally ☐ Never
What do you use?

☐ a) Long sleeved shirts ☐ c) Peak hat ☐ e) Long pants ☐ g) Other…..…..…
☐ b) Broad brim hat ☐ d) Sunglasses ☐ f) Sun cream – **SPF rating** .....

6. Have you suffered any farm injury / illness in the last 12 months? Yes ☐ No ☐
If yes, proceed to question 7 ***If no, proceed to question 11***

7. What was the contributing factor? (Please tick and indicate)

☐ a) Farm vehicle (eg truck, ATV, ute).....

☐ b) Mobile plant/ Machinery (eg tractor, auger, posthole driver).....

☐ c) Fixed plant equipment (handpiece, pump, dairy plant, irrigation plant).....

☐ d) Workshop equipment (eg welder, angle grinder, drills).....

☐ f) Materials (eg rope, wire, nail).....

☐ h) Animal(horse, cattle, sheep, pigs, spider, dog).....

☐ i) Chemical (eg pesticide, herbicide, diesel, explosives).....

☐ j) Working environment (eg sun, dust, smoke exposure).....

8. Description of Injury - please provide a brief description of the injury.

What were you doing?…….....…….…

.....

What went wrong?…….....…….....…

.....

What actually caused the injury?…….....

Eg: *During harvest I was climbing on the ford 5000 tractor. I slipped off the tractor and my head hit the ground.*
Eg: *I was lamb marking and vaccinated myself with Coopers 5:1 vaccine using a disposable vaccinator*.

9. What was the body location of the injury?…….....…… ....

10 a. What was the nature of injury? (Please tick and indicate)

☐ a) Soft tissue injury (eg cut, puncture, bruise, burn, foreign body).....

☐ b) Bone, tendon, joint (fracture, sprain).....

☐ c) Animal related illness (eg leptospirosis, scabby mouth).....

☐ d) Other (poisoning, inhalation, absorption).....

10 b. What treatments were involved? (Please tick and indicate)

☐ a) None (did nothing).....

☐ b) Self managed (ice, pain killers, bandage, rest).....

☐ c) Health Service (bush nursing, hospital).....

☐ d) General Practitioner .....

☐ e) Other (physiotherapy, chiropractor, naturopath).....

11. Do all your tractors have a ROP fitted? ☐ Yes ☐ No

12. Do all your PTO have guards in place?
☐ Yes
☐ No

13. Have you undertaken a First Aid Certificate? ☐ Yes Year…….. ☐ No

14. Do you know how to perform basic life support? ☐ Yes ☐ No

15. Do you have an emergency/ evacuation plan? ☐ Yes ☐ No

16. Do you wear a motorcycle helmet when on a motorbike or ATV?
☐ Yes all the time ☐ Usually ☐ Occasionally ☐ No ☐ Never ride or a passenger

If you don't wear a helmet all the time, why not?……

……

17. Do you eat your own meat (eg slaughter/contract kill) ☐ Yes ☐ No

If yes, what kinds of meat (eg lamb, beef, pork)

.....

.....

Thankyou

Sustainable Farm Families

Appendix 9 Pre and post knowledge questionnaire

Sustainable Farm Families
Pre / Post Knowledge Questionnaire (Men)

These questions give us the ability to assess your pre and post education knowledge and awareness and allow us to help better structure education sessions and teaching techniques. Please answer the questions listed; if you are unsure of the answer please leave the question blank. No names are required **but please fill in your U.I with the number on the back of your name tag**.

1. Who has the better health status metropolitan or rural men? _____

2. At what age do you think the average Australian female dies?
   - ❑ 65-70
   - ❑ 70-75
   - ❑ 75-80
   - ❑ 80-85

3. At what age do you think the average Australian male dies?
   - ❑ 65-70
   - ❑ 70-75
   - ❑ 75-80
   - ❑ 80-85

4. What are the **3 major risk factors** for cardiovascular (heart attack, stroke, heart disease) disease?
_____

5. List 3 things that assist in the prevention of cardiovascular disease. _____

_____

6. List 2 major risk factors for diabetes?_____

7. What does the National Heart Foundation recommend as the best form of exercise?
   - ❑ Brisk walking
   - ❑ Cycling
   - ❑ Swimming
   - ❑ Running

8. How much exercise does the National Heart Foundation recommend per day?
   - ❑ 10 minutes
   - ❑ 30 minutes
   - ❑ 60 minutes
   - ❑ 2 hours

9. How often should you exercise per week?
   - ❑ 3 times
   - ❑ 5 times
   - ❑ 7 times
   - ❑ 10 times

10. The percentage of Australian adults that experience anxiety or depression is:

- ❑ 20%
- ❑ 10%
- ❑ 5%
- ❑ 2%

11. What are the risk factors for bowel cancer?

_____

_____

12. How is bowel cancer detected? _____

13. List two methods by which we can treat prostate cancer? _____

14. The impotence rate in men over fifty is

- ❑ one quarter of all men
- ❑ over one third of all men
- ❑ over half of all men
- ❑ over two thirds of all men

15. What are two treatments for impotence? _____

16. How much fat is required in grams per day in our diet?

- ❑ About 10 grams per day
- ❑ About 30 grams per day
- ❑ About 40 grams per day
- ❑ About 50 grams per day

17. How much fibre is required per day in our diet?

- ❑ About 10 grams per day
- ❑ About 30 grams per day
- ❑ About 40 grams per day
- ❑ About 50 grams per day

18. Approximately every three days a person is fatally injured on a farm in Australia.

☐ **True** or ☐ **False**

19. List two diseases that are genetically linked?

_____

20. What is the leading cause of death for Australian men?

- ❑ Cardiovascular Disease
- ❑ Cancer
- ❑ Diabetes
- ❑ Accidents, (including road) poisoning, injury, violence

21. How would you rate your current health status now?

- ❑ Poor
- ❑ Average
- ❑ Better than average
- ❑ Fantastic

22. How do you rate your weight and physical assessment indicators (blood pressure, cholesterol, weight)

- ❑ Poor
- ❑ Average
- ❑ Better than average
- ❑ Fantastic

23. Do you feel you have a good understanding of your health?

- ❑ Yes totally understand
- ❑ Not fully aware
- ❑ Have no idea at all
- ❑ Would like to know more

24. How would you rate the relationship between health and your farm productivity?

- ❑ Very Important
- ❑ Important
- ❑ Slightly important
- ❑ Not important

Thank you for you time and involvement

<insert name>

Sustainable Farm Families
Pre / Post Knowledge Questionnaire (Women)

These questions give us the ability to assess your pre and post education knowledge and awareness and allow us to help better structure education sessions and teaching techniques. Please answer the questions listed; if you are unsure of the answer please leave the question blank. No names are required **but please fill in the U.I with the number on the back of your nametag.**

1. Who has the better health status metropolitan or rural women? _____

2. At what age do you think the average Australian female dies?
   - ❑ 65-70
   - ❑ 70-75
   - ❑ 75-80
   - ❑ 80-85

3. At what age do you think the average Australian male dies?
   - ❑ 65-70
   - ❑ 70-75
   - ❑ 75-80
   - ❑ 80-85

4. What are the 3 **major risk factors** for cardiovascular (heart attack, stroke, heart disease) disease?
_____

5. List 3 things that assist in the prevention of cardiovascular disease. _____

_____

6. List 2 major risk factors for diabetes?_____

7. What does the National Heart Foundation recommend as the best form of exercise?
   - ❑ Brisk walking
   - ❑ Cycling
   - ❑ Swimming
   - ❑ Running

8. How much exercise does the National Heart Foundation recommend per day?
   - ❑ 10 minutes
   - ❑ 30 minutes
   - ❑ 60 minutes
   - ❑ 2 hours

9. How often should you exercise per week?
   - ❑ 3 times
   - ❑ 5 times
   - ❑ 7 times
   - ❑ 10 times

10. The percentage of Australian adults that experience anxiety or depression is:

- ❑ 20%
- ❑ 10%
- ❑ 5%
- ❑ 2%

11. What are the risk factors for bowel cancer?

_____

_____

12. How is bowel cancer detected? _____

13. Women over 50 suffer a degree of incontinence, which interferes with daily life at the rate of:

- ❑ 70%
- ❑ 40%
- ❑ 25%
- ❑ 10%

14. What is hormone therapy?_____

15. What percentage of Australian women experience **mild to moderate** menopausal symptoms?

- ❑ 1 out of every 5 women
- ❑ 2 out of every 5 women
- ❑ 3 out of every 5 women
- ❑ 4 out of every 5 women

16. How much fat is required in grams per day in our diet?

- ❑ About 10 grams per day
- ❑ About 30 grams per day
- ❑ About 40 grams per day
- ❑ About 50 grams per day

17. How much fibre is required per day in our diet?

- ❑ About 10 grams per day
- ❑ About 30 grams per day
- ❑ About 40 grams per day
- ❑ About 50 grams per day

18. Approximately every three days a person is fatally injured on a farm in Australia.

☐ **True** or ☐ **False**

19. List two diseases that are genetically linked?

_____

20. What is the leading cause of death for Australian women?

- ❑ Cardiovascular Disease
- ❑ Cancer
- ❑ Diabetes
- ❑ Accidents, (including road) poisoning, injury, violence

21. How would you rate your current health status now?

- ❑ Poor
- ❑ Average
- ❑ Better than average
- ❑ Fantastic

22. How do you rate your weight and physical assessment indicators (blood pressure, cholesterol, weight)

- ❑ Poor
- ❑ Average
- ❑ Better than average
- ❑ Fantastic

23. Do you feel you have a good understanding of your health?

- ❑ Yes totally understand
- ❑ Not fully aware
- ❑ Have no idea at all
- ❑ Would like to know more

24. How would you rate the relationship between health and your farm productivity?

- ❑ Very Important
- ❑ Important
- ❑ Slightly important
- ❑ Not important

25. With the increase in life expectancy the average years an Australian woman will spend with a physical handicap on average is:

- ❑ 14 years
- ❑ 10 years
- ❑ 5 years
- ❑ 2 years.

26 . How often should a breast self-examination and cervical smear be performed?

a. Breast Examination_____b.Cervical Smear_____

27. How often do you do a breast self examination and have cervical smear?

a. Breast _____ b.Cervical Smear_____

Thank you for you time and involvement

<insert name>

Appendix 10 Workshop evaluation

Sustainable Farm Families - Course Evaluation Form

ID Code …….. Date: ……/……/…… Venue: ……

Session	1	2	3	4	5	6	7	8	9	10
Rank each question 1 Strongly disagree 2 Disagree 3 Agree 4 Strongly agree	State of rural health	Cardio-vascular disease	Cancer	Farm health & safety	Diet and Nutrition / Super-market tour	Stress	Wise women's business	Wise men's business	Action planning	Physical assess-ment
Training Sessions										
The session was successful in updating my knowledge about										
The session was successful in updating my awareness of how I can influence my health status										
I can see how I can apply the content of the session in my life and work										
There was appropriate balance between information giving, activities and questions										
The session was conducted at an appropriate pace …										
I found the language and concepts easy to grasp …										
Resource Kit										
The resource kit is an excellent guide and resource										
The resource kit is easy to read…										
Learning Outcomes										
I was an active learner in the session …										
Course Organisation										
The organisation of the session positively assisted learning and understanding										

Are there any specific issues that you would like further information about or comments you would like to make?

Comments about the course overall (to be completed at the conclusion of the program)	
The venue and food were appropriate	Strongly disagree ☐ Disagree ☐ Agree ☐ Strongly agree ☐ Comment:……
The pre-course information was appropriate *	Strongly disagree ☐ Disagree ☐ Agree ☐ Strongly agree ☐ Comment:……
* *Plain language statement, consent form, participation letter, final reminder letter*	
I was <u>comfortable</u> with the format of the course and the discussions?	Strongly disagree ☐ Disagree ☐ Agree ☐ Strongly agree ☐ Comment:……
The course should be:	Longer ☐ Shorter ☐ More practical ☐ Not changed ☐ Comment……..

Comments about the course overall (to be completed at the conclusion of the program)

Would you recommend the course to your friends or industry people? Yes ☐ No☐
Give reasons for your answer.

What did you like about the course overall?

What do you think could be improved?

If you were asked to justify to an organisation or another person why health should take on an increased importance in rural life, would you feel confident of being able to present a good argument? Please explain briefly.

Did the program make you feel more empowered about men's / women's health?

Appendix 11 Participant action planning SFF-BAEOF

SUSTAINABLE FARM FAMILIES ACTION PLAN – YEAR 1

NAME: _____

(Please Print Name)

PROGRAM VENUE:

Action	***How I plan to achieve my action***	***How I can share my actions and outcomes with the group***
Eg 1: Reduce my weight ***Eg 2: Improve farm OH&S***	***Plan to walk 5 mornings for 20 minutes; join the bowls club.*** ***Do OH&S Audit; build chemical shed.***	Report on weight loss and success of activities. ***Share OH&S Audit outcomes.***
1.		
2.		
3.		

Please indicate if you wish us to send you specific assistance literature and resources to help with any of your goals.

_____

_____

_____

_____

Signed:_____ Date: _____

Send this form back in the enclosed reply paid envelope

Put this somewhere you will read it each day

(the loo is a good spot)

1. No one can ruin your day without YOUR permission.
2. Most people will be about as happy, as they decide to be.
3. Others can stop you temporarily, but only you can do it permanently.
4. Whatever you are willing to put up with is exactly what you will have.
5. Success stops when you do.
6. When your ship comes in, make sure you are willing to unload it.
7. You will never "have it all together."
8. Life is a journey...not a destination. Enjoy the trip!
9. The biggest lie on the planet: "When I get what I want, I will be happy."
10. The best way to escape your problem is to solve it.
11. I've learned that ultimately, 'takers' lose and 'givers' win.
12. Life's precious moments don't have value, unless they are shared.
13. If you don't start, it's certain you won't arrive.
14. We often fear the thing we want the most.
15. He or she who laughs.....lasts.
16. Yesterday was the deadline for all complaints.
17. Look for opportunities...not guarantees.
18. Life is what's coming....not what was.
19. Success is getting up one more time.
20. Now is the most interesting time of all.
21. When things go wrong.....don't go with the flow.

Author Unknown

Appendix 12 SFF Action Plan Achievement Scale

The Martin Performance Scale

5 Great results! Beyond my expectations
4 Had an impact that others could see
3 Followed through with moderate results
2 Got started for a few weeks
1 Thought about it
0 Did absolutely nothing

Appendix 13 Business decisions survey

BUSINESS DECISIONS SURVEY

A key objective of the Sustainable Farming Families project is to evaluate the impact of this health education and research program on farm families' business decisions. This survey is intended to help in gathering data that will allow us to undertake this evaluation. As with the other survey data collected as part of this project, your response will remain confidential to the project team.

QUESTIONS:

1. What is a 'business decision' for you?
(please tick only **one** of the following options that best summarises your view)

- ☐ A decision with financial implications
- ☐ All farming decisions are business decisions
- ☐ 'Big' decisions which change the way that you do things
  - (eg, new wool shed, change of enterprise)
- ☐ Making the best use of all your resources (including people)
- ☐ Decisions about operational processes
- ☐ Other? (Please specify)_____

_____

2. Can you list the five main factors that influence your business decisions?

a. _____

b. _____

c. _____

d. _____

e. _____

3. How often do you consider significant change (eg time of calving, level of debt, sowing mix, enterprise change) to the enterprises on your farm? (please tick only **one** of the following options that best summarises your view)

- ☐ Every few months
- ☐ Once a year
- ☐ Whenever we have a bad year
- ☐ When I see a real new opportunity
- ☐ When another member of the family, neighbour or colleague suggests it
- ☐ Other? (Please specify)

_____

_____

4. What are the major factors you consider when making a decision about significant change? (please tick **any** of the following options that apply to you)

- ☐ Investment risk
- ☐ Quality of family life
- ☐ Your health
- ☐ What you will be able to pass on to your children
- ☐ Impact on farm management / organisation
- ☐ Profitability
- ☐ Impact on the land
- ☐ Other? (Please specify)_____

_____

5. Has the sustainable farm families program prompted you to think differently about managing the work on the farm?
(please tick **any** of the following options that apply to you)

- ☐ Recruiting additional staff?
- ☐ Taking holidays more regularly?
- ☐ Spending more time with family?
- ☐ Changing the enterprises?
- ☐ Specific action to improve your health (eg. weight loss, walking more)?
- ☐ Adopting different farm management systems?
- ☐ Improving farm safety practices?
- ☐ Increased use of contractors
- ☐ Other? (Please specify)_____

_____

6. Do you think that improving your health helps you to make better business decisions?

- ☐ Yes
- ☐ No
- ☐ Not sure

What are your reasons for giving this response?_____

_____

7. Which aspects of improving your health and safety make a real difference to your business decision-making? (see Q.1 for response to business decisions)
Please rank these from '1' to '5', with '**1' as the most important**

- _____ Better physical fitness?
- _____ Less concern about stress?
- _____ Better diet?
- _____ Better farm safety practices?
- _____ Better understanding of the impact of poor health?

Please note any other aspects:_____

_____

8. **Which aspects of improved health and safety make a real difference to <u>your general contribution to work on the farm?</u>**
(please rank these from '1' to '5', with '1' as the most important, and 5 as the least important)

_____ Better physical fitness?
_____ Less concern about stress?
_____ Better diet?
_____ Better farm safety practices?
_____ Better understanding of the impact of poor health?

Please note any other aspects:

_____

_____

9. Since doing the Sustainable Farm Families program has your amount of leisure time?

(please tick **<u>one</u>** of the following options that apply to you)

☐ Increased
☐ Stayed about the same
☐ Decreased
☐ Other? (Please specify) _____

_____

10. Since doing the SFF program have your on farm working hours?

(**please tick** <u>one</u> **of the following options that apply to you)**

☐ Increased
☐ Stayed about the same
☐ Decreased
☐ Other? (Please specify) _____

_____

Any other comments about the relationship between farm family health and safety on farm business decisions

_____

_____

_____

Thankyou

Appendix 14 Copy of sample abstract for conferences

The Sustainable Farm Families Project: Changing Farmer Attitudes to Health

Susan Brumby[1], John Martin[2], Stuart Willder[3]

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Latrobe University PO Box 199 Bendigo Vic 3552.
Western District Health Service, PO Box 283, Hamilton. 3300 stuart.Willder@WDHS.net

Farm health and safety has focussed on strategies such as injury prevention, audits and fulfilling legislative responsibilities. We know farmer injuries mask deeper health issues such as higher rates of cancer, suicides, cardiovascular disease and stress. The relationship between occupational health and safety and farming family health has not been investigated by other researchers either nationally or internationally. The Sustainable Farm Families project attempts to make this connection in order to address the unacceptable rates of premature death, higher morbidity and injury on Australian farms.

The SFF focuses on the human resource in the triple bottom line and is working with farmers, families, industry, and university to collaboratively address and improve the health and well being of farming families. Based on a model of extension that engages farming families as active learners where they commit to healthy living and safe working practices the SFF is proving to be an effective model for engaging communities in learning and change. Health education and information is delivered to farming families using a workshop format with participants reporting positive impacts on their farming business. The SFF project sits across generations and sexes and has a high level of support with the overwhelming majority of participants saying they would recommend the program to others.

This paper discusses the progress of the research outlining the design of the project, the delivery and extension processes used to engage 321 farming families to date. The paper presents key learning's on intersectoral collaboration, engaging farmers and families in health and the future for this project extending into agricultural industries across the nation. Key learnings are that farmers who are at high risk of premature mortality who participate in a health education program based around industry collaboration with high levels of individual participation will obtain an improved health status demonstrating that farmers will engage with health professionals if programs are presented to them in personally engaging and relevant ways.

Key words: health, farming families, collaborative, industries,

Appendix 15 Copy of sample media articles

Media Release
18 January 2006

DALBY FAMILIES SIGN UP FOR HEALTH AND SAFETY WORKSHOPS

A new project which aims to raise the health status and awareness of cotton farmers and their families has been launched in the Dalby district by the Cotton Research and Development Corporation.

The **Sustainable Farm Families Project**, which was initially developed for the Victorian dairy industry, explores links between family health, farm related accidents and farm sustainability.
The project takes farmers and their family members through an intensive health evaluation, education and training process which identifies potential health and well-being risks.
Speaking at a presentation to potential participants at the DPI offices in Dalby, CRDC's Program Coordinator, Helen Dugdale, said that despite a perception that the country is a healthy place to live, the reality is that farming families can have more health problems than city residents.
"Similar projects held in other farming regions and industries have attracted a great deal of praise and support from local communities as well as delivering measurable improvements in the health and well-being of farming families.
"The ladies attending today's presentation have been very supportive of the project, and many of them have signed up to take part in the workshops." she added.
Over a 12 month period, participants will attend a series of workshops covering health education, risk assessment, health action planning, health assessment, farm accidents and farm sustainability.
"The workshops are a fun, informative and relaxed way of increasing awareness levels of potential health related issues for farming families.
"All personal information discussed during the duration of the project is strictly confidential." Mrs Dugdale added.
Participants will be required to attend an initial 2 day workshop as well as keeping records before, during and after the program. CRDC are currently recruiting participants for the Dalby workshops which will begin on 16 & 17 February.
There is no charge for participants, and anyone interested in taking part is encouraged to contact Helen Dugdale at CRDC on 6792 4088.
Media Contact - Julie Burt – 0429 916 758

Appendix 16 Copy of SFF-BAEOF Newsletter 2

October 2007

Newsletter 2

Western District Health Service

Australian Government
Sugar Research and Development Corporation

LA TROBE UNIVERSITY

Australian Government
Cotton Research and Development Corporation

An Australian Government Initiative

Sustainable Cotton & Sugar Farm Families Newsletter is produced in collaboration with the above partners.

Principal Investigator:
Sue Brumby

Principal Researcher:
Stu Wilder

Research Advisor:
Professor John Martin

Phone 03 55518450 for more information.

Welcome to the final edition of the Sustainable Farm Families Cotton and Sugar Newsletter!

In 2007 we returned to Ayr, Dalby, Wee Waa and Ingham to revisit the learning's from year 1 and build new learning's with the focus on depression, anxiety and swapping the gender bender workshops. A total of 53/63 (84%) participants returned which was particularly pleasing considering the floods that held back Ingham participants.

We would like to acknowledge the great work you achieved over the program - group farm safety meetings, attended OH&S seminars, taking a family holiday, completed first aid course, grow only Bollgard cotton, walk the Kokoda trail and educated children on label reading.

In this newsletter we show some of the progress (some good, some bad) and changes you have made over the program. It has been a successful program with all participants recommending it for its great wake up call regarding farming family health.

It has been a pleasure and a great deal of fun working with you over the duration of the program and we hope you continue the good work; by eating healthier food, becoming more active and being more farm safe.

We wish you all the best with the seasonal challenges ahead and would enjoy hearing back from you at any stage.

Sue, Stu and John

LIFELINE'S JUST ASK - 1300 131 114

Your Rural Mental Health Information Service Lifeline's Just Ask is a rural mental health information service. Information provided includes: referral to services and web sites, printed material and a range of self help resources. The self help resources focus on practical steps to help promote mental health in a range of areas. For information and copies of resources call or visit http://www.justask.org.au

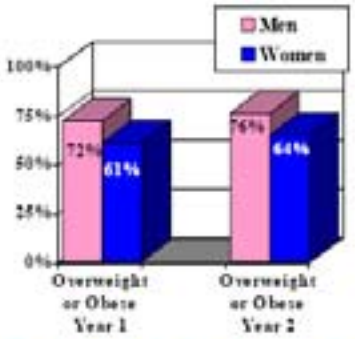
Congratulations to all participants from Ayr, Wee Waa, Ingham and Dalby!

Results from Year 2

Body mass index (BMI) is used to estimate your total amount of body fat.
Our results show that there was a slight increase in the incidence of overweight or obese participants. The need for focusing on health as well as the upcoming seasonal challenges must be kept in mind. We encourage all participants to get into the healthy BMI range by managing their 30 minutes of exercise five times a week and maintaining a healthy diet!

The results were largely the same between sugar and cotton producers.

Percentages of participants with overweight or obese BMI Scores



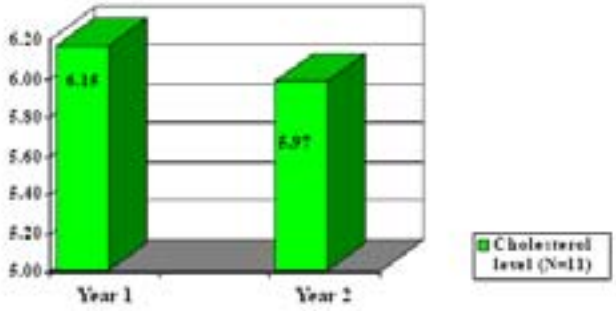
Risks of being overweight and physically inactive

If you are overweight (BMI over 25) and physically inactive, you may develop:

- Cardiovascular (heart and blood circulation) disease
- Gall bladder disease
- High blood pressure (hypertension)
- Diabetes
- Osteoarthritis
- Certain types of cancer, such as colon and breast cancer.

http://www.betterhealth.vic.gov.au

Mean Cholesterol Level: of participants at risk (>5.5mmol)



Cholesterol

The graph to the left highlights the mean cholesterol level of participants at risk (>5.5mmol). It can be seen that there has been a reduction by 0.18mmol for participants at risk from year 1 to year 2. We hope that you keep working to achieve a level below 5.5mmol. Medical specialists believe that levels above 5.5 indicate an increased risk for vascular disease such as heart disease and strokes. Remember reducing your intake of saturated fat is best for lowering your cholesterol level. Saturated fat is found in animal fats, dairy (choose lower fat options) coconut and palm oil (often used in takeaways and commercially prepared biscuits).

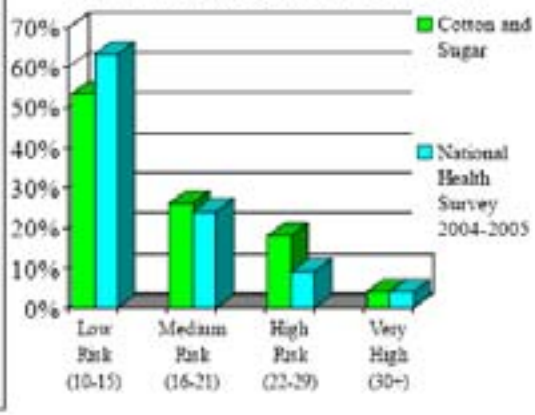
Kessler Test (K10):

A measurement of risk for psychological distress.

The Kessler test has been used as a tool for identifying potential risk of psychological distress. The cut off scores are 10-15 low risk, 16-21 medium risk, 21-29 high risk and scores over 30 are very high risk. In the Sustainable Farm Families program participants that scored over 21 in the high risk category were offered a referral for mental health support. The graph shown gives a relative comparison between cotton and sugar farmers and the national population of 2004-05. It should be noted that the SFF data is only raw data that has not been standardized like the National Health Survey Data. The sugar and cotton industry have had some potentially stressful challenges over the program due to climate and seasonal differences. If you are a participant that is feeling distress, anxious or depressed remember to refer back to your mental health chapter in your SFF manual or seek assistance.

Rural Mental Health Lifeline 1300 131 114

Kessler Pyschological Distress Scores.



What gets your business ticking?

In the final year you were asked to complete a survey prior to the workshop on your perceptions of the relationship between health and farming business decision-making, and the different kinds of changes that you had made to your farm management practices, as a consequence of this project. It would seem obvious that profitability and investment risk dominate when making a business decision, but it is great to see that other aspects like family life and health are major contributors.

You were also asked whether improving your health would help you to make better business decisions; to which 92.5% thought that it would. So to get the best out of your business you should be in the best health!

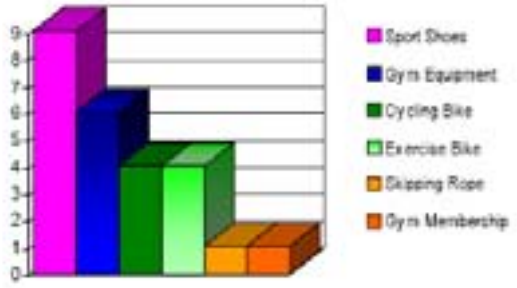
Quiz: Getting your fats right.

1. To satisfy the body's needs for essential fatty acids, it's important to eat some greasy foods every day. *True or False?*
2. A single average serve of chocolate mud cake contains about how many grams of fat? *a) 20g b) 40g c)60g d) 80g*
3. If you've been exercising to build muscle and then stop, your muscle turns into fat. *True of False?*
4. Fried foods do not increase your risk of heart disease so long as they are fried in vegetable oil. *True of False?*
5. The most useful way to keep blood cholesterol levels healthy is to: *a) avoid eating eggs b) avoid eating all foods containing cholesterol c) Cut back on foods containing trans and saturated fats*
6. One 100g bar of chocolate has roughly the same amount of kilojoules as: *a) 2 large apples b) 4 large apples c) 6 large apples*
7. Margarine is healthier for your heart than butter. True of False
8. All types of fat (saturated, monosaturated, polyunsaturated) contain the same amount of kilojoules *True or False*
9. If you're trying to lose weight, you should aim to lose no more than: *a) Between 0.5-1.0kg a week b) Between 1.0-1.5kg c)2kg a week*
10. To lose one kilogram in a fortnight, you would need to cut your energy intake by approximately how many kJ a day on average? *a) 1000kJ b) 2500kJ c) 5000kJ*
11. To burn off 1000kJs (2.5 TimTams) a 70kg person would need to walk briskly for approximately how long? *a)20mins b) hour c)2 hours*
12. Foods prepared outside the home usually have more fat than foods cooked at home. *True or False?*
13. Cold pressed liquid oils (extra virgin olive oil) are healthier because they contain more disease-fighting antioxidants. *True or False*
14. Children under 12 should not be routinely given reduced-fat dairy products. *True or False?*
15. All seafood have very little fat or cholesterol. *True of False?*

http://www.abc.net.au/health/quizzes/fat/ Answers: 1) F 2) D 3) F 4) F 5) C 6) C 7) T 8) T 9) A 10) B 11) B 12) T 13) T 14)F 15) T

Lifestyle Changes

Fitness Equipment bought/borrowed as a result of project



At the end of the final workshop you were asked to fill out a health economics survey. One of the more interesting results was the changes seen in the everyday diets of participants. Of the 47 people who completed the survey, 41 (87.2%) said that they had changed their diet as a result of the project. The major change that has been made to diets was using or purchasing lean meat when cooking and preparing meals. Additionally, participants were also asked if the project had prompted them to purchase or borrow fitness equipment to help reach their activity goals. Twenty-one out of the forty-seven that completed the survey answered positively with sport shoes and gym equipment being the favorite among participants. It is great to see the results of this survey portraying a keen group of people committed to changing their current habits in order for a healthier lifestyle.

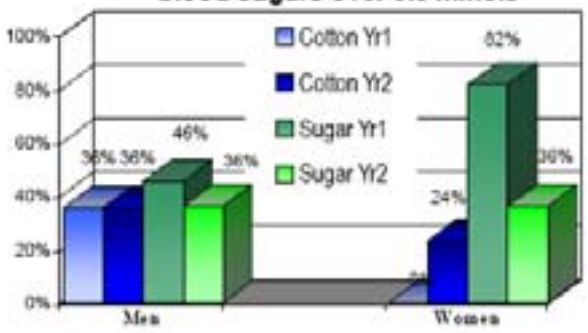
Diabetes: The Silent Epidemic.

In pre-diabetes blood glucose levels are higher than normal but not high enough to be called diabetes. Pre-diabetes has no warning signs or symptoms. Each year, in your early morning assessments we tested your fasting blood glucose and people greater than 5.5mmols were referred for further follow up and/or diet advice.

The results from the two workshops show that the sugar participants have strongly reduced the amount in high risk. The male cotton participants have stayed constant and the women still have the lowest percentage risk out of all the groups.

Research from the US, Finland and China show that moderate weight loss, and exercise reduce the risk of pre-diabetes developing into type 2 (mature onset diabetes) and help reduce your blood glucose levels. If you have a high glucose level get working to reduce fat intake, watch diet , exercise more and read your food labels to make better choices!

Percentage of participants with fasting blood sugars over 5.5 mmols

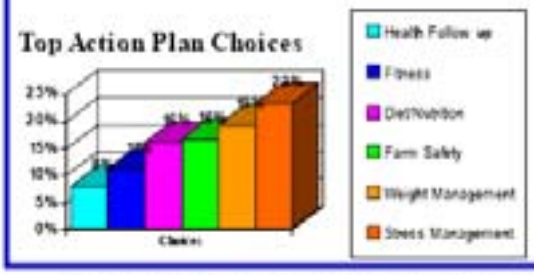


Action Plans: How did you go?

Our summary from the action plans indicated that stress and weight management along with farm safety were the priority of most participants. In our second year workshop, all participants were asked to review their action plans and give themselves an achievement rating on their progress. These ratings have revealed that 82% of participants action plan choices showed moderate to great results beyond expectations, whilst only (6%) had no action taken. We hope you continue to tackle your action plans and achieve your own personal goals.

Finally we want to wish you all a Merry Christmas and a happy new year and remember to slip, slop, slap, seek slide!

Top Action Plan Choices



Action Plan Ratings

PROTECT YOUR FARM'S MOST IMPORTANT ASSET. YOU.

The Cancer Council Victoria SunSmart

www.sunsmart.com.au

Living Longer on the Land

Case studies of the Sustainable Farm Families Program in the Sugar and Cotton industries

RIRDC Publication No. 08/049

The health and well-being of all Australians is an important factor in the social and economic success of the nation. This report provides an insight into the current health status of rural farming families within the sugar and cotton industry. It increases our understanding of what factors impact farming family health and identifies measures to improve farming family health, well-being and safety. Many of the specific strategies to improve farming family health were provided by the farmers themselves.

The report is targeted at people interested in the impact of health and well-being of farming families in rural and remote Australia. This includes farming families, the farming workforce and agricultural industries, especially those involved in policy and resource allocation decisions.

The Collaborative Partnership for Farm Health and Safety is a joint venture that was established in 2001 with the Rural Industries R&D Corporation, Australian Wool Innovation, Cotton R&D Corporation, Grains R&D Corporation, Meat & Livestock Australia and the Sugar R&D Corporation. The partnership is managed by RIRDC.

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