



*Working in partnership
with researchers and industry*

Grower Group Alliance Grower and Researcher Annual Forum

14-15 August 2008

Proceedings & Summary of Outcomes



**Grains
Research &
Development
Corporation**

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1. Introduction

The Grower Group Alliance (GGA) is a non-profit, farmer driven organisation connecting grower groups, research organisations and agribusiness in a network across WA.

The GGA acts to add value to the activities of grower groups by maximising the opportunities for collaboration and information sharing.

The GGA project was developed in 2002 by grower groups and is managed by an advisory committee with representation from grower groups, research organisations and private agribusiness. It is funded by the Grains Research and Development Corporation.

In 2008, the annual “Grower and Researcher” forum brought together participants from 18 grower groups, six agribusiness companies, three universities, five research organisations, four catchment councils, and one R&D funder to interact and discuss ways to contribute and collaborate in research projects and ideas.

1.1 Purpose of the Day

- Grower group representatives to meet people from research, agribusiness and NRM organisations, creating personal relationships
- Growers to provide feedback to researchers on specific research projects
- Develop 12 month action plans for collaboration between groups, researchers and agribusiness

2. Outline of the Grower Group Alliance

2.1 Background

Aim of the Alliance

The Grower Group Alliance aims to:

Support the development of more effective grower groups with expanded networking capacity, and greater involvement in collaborative projects with other grower groups, industry partners and the wider research community.

Role of the Alliance

The Grower Group Alliance was established to:

- Expand the network of grower groups and their partners to allow the exchange of knowledge, ideas and research results between members
- Enhance the participation of grower groups in collaborative projects developed between grower groups, research providers and industry
- Support grower groups to work towards becoming more efficient and effective as a group.

Summary of GGA Members

Grower groups in the GGA network are independent, self-directed, and predominately comprised of broadacre grain and livestock enterprises. They are community based groups of farmers who focus on production and environmental issues at a local and national level. The groups are located throughout the WA grain production zone from Binnu in the north, Bodallin in the east, and Esperance in the south-east of the state. Characteristics of the groups include:

- About 2400 grower members in 51 groups, comprising approximately 40% of WA farmers
- Most groups formed in the period between 1994 - 2002
- Oldest group – Moora Miling Pasture Improvement Group (Est. 1938)
- Newest network member – West Midlands Group (Est. 2008)
- Groups operate via a management committee, most with 3 - 4 sub-committees
- Employ between zero and five staff, although many are run by volunteers
- Key topics addressed: R&D, NRM, perennial pastures, grain quality, skill development for members, community issues.

Major Activities for 2008

- Annual “Grower and Researcher” Forum
- NSW study tour for 16 farmers from 13 different groups
- Website (www.gga.org.au)
- Fortnightly calendar of events (emailed to ~ 600 people)
- Monthly e-newsletter “Newswire” (~ 350 people)
- Coordination of field day presenters eg. 'Carbon Mythbusters' roadshow
- Regional breakfast meetings between groups
- GGA scholarship for two UWA 4th year students.

– DAY ONE –

3. Getting ideas off the ground

- *Successful partnerships between growers & researchers* -

3.1 Perspective from a regional group - WANTFA, Don Cummins

Project: 'Improving the resilience of dryland farming in low rainfall areas of the Avon Region'

- \$205,000 over two years
- Phase 1 - Paddock based trials in heavy country in the Corrigin area looking at application of sustainable practices, data analysis and practice case studies
- Phase 2 - Information packages for EC areas and technology focused workshops

Who?

- Corrigin Farm Improvement Group (CFIG) – lead group
- WANTFA
- Avon Catchment Council

Do's

- Pick the right group for the right funding to partner with i.e. who is eligible for funding
- Brokers – Avon Catchment Council
- Common ethic – WANTFA and CFGI talk the same language
- Homework – who are the right people to communicate with
- Plan early
- Someone with responsibility for production

Don'ts

- Don't expect that everyone knows who you are and what you do
- Don't try and dominate – be cooperative
- Don't try and pull a 'swifty', be honest about the project and everyone's commitment
- Work out who is giving you advice and has a vested interest and filter as necessary.

Take Home Messages

1. Pick your funding and your partner organisation – match them up
2. Ensure you have a common goal and the project outcome is clear - a broker helps
3. Plan early- leave it too late and you may need to go begging and not end up with the right project

3.2 Perspective from a local group - NEFF, Andrew Thomas

Project: 'GRDC-funded Western Agribusiness Trial Extension Network'

NEFF

- North East Farming Futures is a regional group in the north-east agricultural region across four shires: Chapman Valley, Mullewa, Morawa, Perenjori. The board consists of grower group representatives, DAFWA, the Midwest Development Commission and local shires
- Covers four shires, taking in 803 growers and 1.43 million hectares
- The diversity and size of the region has its own complexities with a large range of soil types, enterprise mix and farm business size.

Western Agribusiness Trial Extension Network

- Project Description: Enhance communication and extension activities between private agronomists, agribusiness and local growers based around agronomic trials
- Grant Thompson from Alluvium Farm Solutions was engaged as the private agronomist and Landmark R & D agronomist Darren Chitty as the agribusiness entity
- For a one-year project, after consultation with Grant and the board, the decision was made to make the trials not too complex, but also to have some variability in the trials across the region
- The decision was then made to focus the trials predominately on understanding the impact of the series of droughts and dry seasons on farm businesses, and what effect this has had on the agronomic systems predominately now used in the north-east agricultural region
- Trials are based around a wheat only system with a semi-drought tolerant package. For example, there is a trial in Pindar (east of Mullewa) on short season varieties with row spacing, sowing rate combination. In another location there is disease work on a continuous wheat rotation
- We are not experiencing drought conditions this year, which for the trials is a good thing, as it is about managing the variability and also seeing how these packages perform when there aren't moisture limitations
- If the trial continues next year, it will look more closely at chemical fallow in a wheat-only rotation and the effects on gross margin in a water limited environment.

Three take home messages for this type of one year trial

1. As a group, identify the key agronomic issue in your area you want to trial
2. With the small resource, don't make the trials too complex
3. Keep the agronomic trial related to something that has a current financial impact on your local business. It creates a better discussion and attracts more interest.

4. Reaching the Researchers

The participants for day one of the GGA forum were carefully selected to allow GGA group members to access the foremost researchers and industry representatives who have the ability to drive collaborative projects and take on suggestions from grower groups. With this in mind, the 'Reaching the Researchers' session was designed to allow group and industry representatives the opportunity to provide feedback to three projects at different stages of development, with a variety of projects to suit everyone's interests.

There were three discussion sessions to choose from:

- Evercrop - Future Farm Industries CRC
- New landuse systems - ARWA Climate Adaptation Program
- Opportunities for energy production by Australian grain growers - CSIRO & GRDC

These projects were chosen to address current issues and provide discussion topics of interest to all groups. The Evercrop project has already been funded by the Future Farm Industries CRC. The ARWA Climate Adaptation project is currently being developed, and feedback from growers and industry representatives is essential to ensure the project meets industry requirements. Energy is a very current topic for the agricultural industry, and the project under discussion is the result of a GRDC/CSIRO scoping study, and will provide guidance on how the project can proceed.

There was only time to attend one session, so participants were asked in advance to consider which session they would attend so it would generate the best value for their group or organisation. Participants were expected to develop some actions for themselves and their group to complete after the forum. A copy of these actions was given to the discussion leaders to encourage future collaboration.

4.1 EverCrop - Future Farm Industries CRC

What is Evercrop?

The CRC for Future Farm Industries is identifying, adapting and fine tuning the management of perennial-based systems for key agro-ecological zones in southern Australia.

EverCrop is a five-year project which aims to increase the profitability of livestock and crop enterprises by increasing the extent and performance of perennials in mixed farming systems.

Key questions to be addressed are:

- Which perennial component is best for my circumstances,
- How much should I adopt, and
- Where on my farm should perennials be targeted for maximum impact?

In Western Australia, the EverCrop team plan to evaluate the role and benefits of pasture cropping in achieving NRM benefits, increased profits and flexibility to respond to variable seasons.

Pasture Cropping

Pasture cropping is a land management system where annual crops are sown into an existing perennial pasture. This system was pioneered by Collin Seis (NSW farmer) over 15 years ago and has grown in popularity in the eastern states due to profit and environmental benefits. As part of EverCrop activities, CSIRO and the Department of Agriculture and Food WA plan to establish two focus sites near Moora and Mingenew to evaluate the viability and benefits of this system in WA.

The research and development team would like to work with growers to determine:

- Is pasture cropping a viable technology in WA to integrate perennials into cropping systems?
- What are the benefits of pasture cropping across a range of environments, soil types and management regimes?
- What research and extension activities would be useful to test and integrate the concept of pasture cropping into current farming systems?
- What tools and approaches would assist farmer decisions about the placement and management of perennials in their cropping systems?

Benefits for growers to become involved

Participating growers will have the opportunity to provide input into the type of activities used to evaluate the concept of pasture-cropping. Growers will also play a key role in road-testing tools developed to assist decisions about the placement of perennials on farm (what species, where and what extent). The Future Farm Industries CRC would also like grower input to identify the best ways to convey research findings and the preferred mix of extension activities (e.g. case studies, workshops, on-farm demonstrations).

Session Leader

David Ferris: DAFWA, 08 9690 2117, dferris@agric.wa.gov.au

4.2 New landuse systems - ARWA Climate Adaptation Program

Overall aim

Scoping and analysis of transformational productive land uses for wheat-sheep farms in the WA agricultural zone that promote reliable farm income, greater ground cover and efficient use of rainfall, labour and capital.

Background

This project has arisen out of a need, expressed by farmers and industry, to re-assess the nature of broadacre farming systems in the Western Australian wheatbelt. Future predictions for climate change in the state include warmer and drier seasons, extended dry spells, later starts to the growing season and greater summer rainfall.

In the longer term we would like to evaluate, through bio-economic modelling and farmer interviews and experience, alternative broadacre crop-livestock systems that are adapted to climate change for all regions in the WA wheatbelt. Some key questions are:

- What new cropping and livestock systems are needed to cope with a future drying climate and incidence of higher temperatures?
- What opportunities are there for crop production to extend into the higher rainfall regions and what systems could be designed to take advantage of out of season rainfall?
- What changes in tactical and strategic farm management are needed?
- Are there forms of contracting, pooling of resources and management that can buffer the effects of increased seasonal variability?
- How will the advent of a National Emissions Trading Scheme impact on farming systems, both directly and indirectly?

New systems will be evaluated against economic criteria, income variability, compatibility with farm resource constraints (labour, machinery) and impacts on natural resources such as groundcover. The primary client for the work will be the members of farmer groups, their advisors, agribusiness and policy makers in the WA State Government.

Benefits for growers

Participating growers will have input into the types of systems being evaluated including: identifying currently available innovations and potential benefits; identifying innovations not currently available or adoptable; potential benefits (economics, risk, NRM) and constraints to adoption; and assessing post farm gate impacts of new land use systems. The project will also seek grower input on questions such as: How far ahead should we be looking – 30, 50, 100 years? Is looking beyond the farm gate a useful thing to do? What other future influences will we need to account for e.g. prices/costs?

Session Leader

Michael Robertson: CSIRO, 08 9333 6461, Michael.Robertson@csiro.au

4.3 Opportunities for energy production by Australian grain growers

- CSIRO & GRDC

Project Outline

GRDC has funded a project with CSIRO to examine opportunities for grain growers to reduce reliance on fossil energy.

The grains industry is, like many other sectors, being bombarded by oft conflicting information about the future of oil supplies, fossil fuel prices, and the promise and perils of biofuels. There is a clear need for some reliable analysis of the situation so that grain growers can better understand the implications of high energy costs, possible supply constraints, and an emerging 'renewable energy' sector for grain farms and grain growing regions.

This project is currently at the end of the first phase and investigated potential opportunities in energy efficiency, regional self sufficiency and energy production. This work focused on:

- Energy efficiency: Farmers have absorbed past increases by changes to minimum/zero till, and by including legumes in their farming system. What are typical energy flows through current grain farming systems? Have farming systems reached their limits of energy efficiency gains to buffer against increased oil price?
- Energy self sufficiency: Energy self sufficiency has been proposed at farm and regional scales by many – but are these opportunities real or perceived? Which areas in Australia could potentially become self-sufficient in their fuel requirements, and what factors would be important in achieving this?
- Energy production: Production of ethanol from new technologies which use the stubble rather than the grain is of great interest to the grains industry. How much stubble is currently produced in grain growing areas? What proportion of it could potentially be used for bioenergy and biofuels, and what would be the implications of removing it from the paddock?

Although this report is clearly focussed on the energy considerations of the farming systems, issues of energy security (availability and cost) must be viewed in the broader context of the tensions and trade-offs with food security, water security, and the need to reduce greenhouse gas emissions.

The second phase of the project will focus on case studies in the regions. The number of case studies, their location, and the depth to which various issues are explored is yet to be decided.

Key Questions for Discussion

- Trends in energy on farms: more or less vulnerable? Compared to international competitors?
- Biodiesel: a barrel of opportunities for Australian grain farmers, or for oil companies?
- Synergy or trade-off: Energy security, climate change, sustainability
- Beyond the research: where to next for Australian grain farmers?

Session Leaders

Mick Poole, michael.poole@csiro.au and Damien Farine, damien.farine@csiro.au, CSIRO

4.4 Responses to discussion questions

4.4.1 Evercrop

1. From your point of view, is pasture cropping likely to be a viable technology to integrate perennials into cropping systems in WA?

Response / Thoughts	Why? (Reasons)
<p>Positive</p> <ul style="list-style-type: none"> ○ Potential applicability in livestock / cropping systems. People wanting to still run livestock in a grain farming enterprise ○ Yes, but the key question is 'does pasture cropping have an ongoing role in cropping systems or is it opportunistic'? ○ Definitely a valuable option for farmers, especially with the need to utilise the greatest portion of farming land possible, including out of season rainfall and climatic variation / changes / fluctuations ○ Low fertiliser inputs ○ Retains more organic matter ○ Opportunity to research water use efficiency of using deep rooted perennials (other than lucerne) and crops ○ Opportunity for alternative legumes and reduction of input costs 	<ul style="list-style-type: none"> ○ Maybe better cash flow year to year ○ Better long term yearly average return ○ \$ return and labour shortage, time, capital investment ○ Farmers with livestock in their system would be more responsive to trialling pasture cropping without significant change to current program ○ With today's high cost of fertiliser ○ Better water holding capacity. Less runoff and salinity
<p>Challenge</p> <ul style="list-style-type: none"> ○ Challenge is to engage farmers – need clear economic and environmental benefits ○ Need economic analysis of perennials on different soil types and in different systems. What is \$ return? ○ Many cannot see the value in retaining or introducing stock in their system ○ We need to know which perennials we need to grow ○ Is there a benefit from high input or low? ○ Challenge to overcome pests and diseases in established pasture (to reduce impact on crop yield) ○ Will we have a disease problem? ○ Don't spend \$ 'reinventing the wheel', use the people and their experience ○ Utilise the work already happening on farms throughout the country 	<ul style="list-style-type: none"> ○ Dependant on economic information and development of decision making framework to assist growers in choosing where, when and why pasture cropping should be used ○ Is the system recommended as a rotational component or are the benefits/risks appropriate for ongoing use of this system?

2. (a) What research and extension activities would be most useful to test and integrate the concept of pasture cropping into current farming systems?

(b) What would your group/organisation be interested in considering further?

(c) What would your group / organisation be interested in committing to?

Additional research and extension activities	Why? (Reason)	Your group's interest?	Your group's actions to follow up on this project
<ul style="list-style-type: none"> ○ Economic data on different systems ○ Capture this from the research ○ On farm demonstrations (later years) 	<ul style="list-style-type: none"> ○ Assist growers to understand implications of these systems ○ Ability to visualise impact of different systems 	<ul style="list-style-type: none"> ○ Helping our members utilise their asset to full potential 	<ul style="list-style-type: none"> ○ Involve the Evergreen Group
<ul style="list-style-type: none"> ○ Crop into existing pastures ○ Lowering nitrogen inputs into crops through legume fixation 	<ul style="list-style-type: none"> ○ Adoptability advantages ○ Environmental Benefits 	<ul style="list-style-type: none"> ○ Some of our members may like to host some paddock scale work 	
<ul style="list-style-type: none"> ○ High & low rainfall trial sites ○ Deep rooted perennial ○ Row spacing & using 2cm sowing system ○ Low input/no fertiliser 	<ul style="list-style-type: none"> ○ Size of WA ○ Cereal growing in different root zones ○ Moisture & sowing advantages ○ Keep cost of putting crop in low 		

3. (a) What else needs to be done (that your group or organisation can't do) to assist grower decisions about the placement and management of perennials in their cropping system?

(b) What other tools and approaches might be necessary?

Actions (including steps if necessary)	Person/Group Responsible	Follow up/accountability rests with
<ul style="list-style-type: none"> ○ Explore water holding capability of pasture cropping, i.e. management strategies: ○ Water holding capacity - Available pre-season ○ Water holding capacity - Available in-season 	<ul style="list-style-type: none"> ○ Research project team 	<ul style="list-style-type: none"> ○ Research project team
<ul style="list-style-type: none"> ○ Explore disease management implications of pasture cropping, with emphasis on green bridge ○ Modelling ○ Field validation 	<ul style="list-style-type: none"> ○ Research project team 	<ul style="list-style-type: none"> ○ Research project team
<ul style="list-style-type: none"> ○ Develop agronomy packages & economic thresholds to assist growers when considering pasture cropping systems 	<ul style="list-style-type: none"> ○ Research project team 	<ul style="list-style-type: none"> ○ Research project team

4.4.2 New landuse systems

1. (a) From your perspective, what are the challenges to making this project happen successfully?

(b) What opportunities can you envisage from this research?

Response / Thoughts	Why? (Reasons)
<p>Opportunities</p> <ul style="list-style-type: none"> ○ Take on tough stuff - GMO's for drought tolerance, salt tolerance. Benefits to health etc. ○ Infrastructure development e.g. logistics to more farm inputs in the regions ○ Power infrastructure in the regions e.g. moving oil mallee production around the regions ○ Look of the flow on effects of new systems e.g. fly in fly out farmers ○ What do we think the future of agriculture with by corporate farms going to look like? Will small farms, family farms exist in the future? ○ Society's perception of agriculture ○ Need work on what the options etc, like today's activities ○ Summer crops ○ Collaboration with other groups ○ What are the consequences of peoples concern for the environment e.g. EU customers demands. Premium markets being lost may result in being left with commodity markets ○ Getting buy in from financiers that investing in these initiatives are valuable – provide financiers with way to measure the value of this – reducing risk ○ Need smaller milestones so get results disseminated as the project progresses 	<ul style="list-style-type: none"> ○ Alternatives to make farming in WA sustainable ○ Is there going to be the demand for these potential new industries? ○ Understand agriculture responding to challenge of climate change ○ Market forces ○ Who is going to manage and carry out projects? Farmers/groups already busy ○ Can't afford to wait ○ Loss of premium markets ○ Using existing networks/experience/research ○ Need to bring in financiers into understand the importance of the project

Response / Thoughts	Why? (Reasons)
<p>Communication with groups/researchers</p> <ul style="list-style-type: none"> ○ Dissemination of information ○ Uptake and adaption by growers ○ Working with land managers, dealing with the issues on a daily basis by those based in cities etc ○ Outcomes need to be taken up by the users ○ Influence: need to get long term support of government & agencies etc for the farmers. ○ Outcome: government etc to understand implications of the project. Need to influence government policy ○ Deliver answers & solutions while farmers are still trying to survive 	<ul style="list-style-type: none"> ○ Extension to all growers ○ Lack of regular contact with researchers ○ WA needs new solutions ○ How to get results out to people & make change ○ Method has to be efficient & effective in order to promote large scale change ○ Support of commercial size trial/size ○ Understanding all trial results - failures & other outcome ○ Clear consistent messages needed ○ Large, multi stakeholder approach needs the buy-in by grower groups, industry groups, regional groups, government, community groups, and researchers
<p>Challenges</p> <p>Economics, dollars and cents</p> <ul style="list-style-type: none"> ○ Management – Time, resources, people ○ Realistic outcomes needed ○ Market ability/access <p>Scale/seasonal variability</p> <ul style="list-style-type: none"> ○ Need flexibility to cope with variable seasons across years ○ Need to cover range of geographic regions & climate conditions ○ Need landscape system perspective ○ Different scales - same issue of seasonal variability ○ Need a wider range of options trialled ○ Suite of solutions needed to select from ○ Geographic – climate similarities CO2 complication 	<ul style="list-style-type: none"> ○ Return on investment – social and financial ○ Financial risk ○ Need to be relevant to & benefit to the individual e.g. profitable ○ Needs to be economically sound ○ Market focus ○ Nitrogen has to make money <ul style="list-style-type: none"> ○ Tools needed

Response / Thoughts	Why? (Reasons)
<p>Challenges - Long term</p> <ul style="list-style-type: none"> ○ Momentum needed to keep driving the project and update over the future years ○ Looking at future systems (blue sky) Imagining different and new options - what are they? ○ Variability in rainfall needs to be considered ○ End points unknown ○ Accepting prognosis/scepticism ○ Lack of government long term support ○ New Industries take time to develop 	<ul style="list-style-type: none"> ○ See the impact of the system over a range of seasons ○ Real solutions and keeping people motivated ○ Reliance on current systems ○ Restricted by options on what can be trialled e.g. crops & existing options - Need a landscape approach ○ Different enterprises ○ Needs long term government support ○ May not deliver quick answers ○ Lack of long term engagement e.g. short funding periods ○ Government support needed to get investment by others

Summary
<ul style="list-style-type: none"> ○ Return on investment – money & social ○ Opportunity to go blue sky/large/longer term ○ Challenge – get back to growers quickly & honestly i.e., what did not work ○ Difficult to imagine the options

2. (a) From your point of view, in addition to climate change, what other potential future influences need to be examined (eg changing markets; prices; costs etc)?

(b) In what ways might looking beyond the farm gate to non-farm issues be a useful thing to do?

Response/Thoughts	Why?(Reasons)
<p>Community</p> <ul style="list-style-type: none"> ○ Social costs/community sustainability ○ Lack of people – labour, families, community ○ Shortage of labour (social aspect) – simpler/more complex ○ Social aspect – rural communities, family farm aspect 	<ul style="list-style-type: none"> ○ Are you creating communities where people want to be? Avoid a fly in/fly out environment ○ Can't create systems that require labour ○ Can we attract people back to these areas? ○ Corporate farming ○ Lack of facilities ○ Mining (can also be a positive) ○ Uncertain how it may affect the industry? What's the influence of government policy? Need to influence policy decisions ○ Limits complexity of new systems adopted ○ Labour availability ○ Time poor
<p>Markets</p> <ul style="list-style-type: none"> ○ Future markets <ul style="list-style-type: none"> - What will they be? - How will they differ from now? ○ Input costs & grain prices ○ Corporate farming – different views to risk <ul style="list-style-type: none"> - Different attitude to land use e.g. blue gums - May be able to respond quicker with more resources or slower with bureaucracy - May take less risk as workers not owners ○ New systems – generate new arrangements / markets & specialisation of business – e.g. straight cropping & livestock agistment 	<ul style="list-style-type: none"> ○ Future market drivers ○ Demands for participants ○ Risk ○ May change the way farming is run in WA

Response/Thoughts	Why?(Reasons)
<p>Policy</p> <ul style="list-style-type: none"> ○ Emissions Trading Scheme <ul style="list-style-type: none"> - How is it going to work? - Impact on farm & industry profits - How to still grow food? - May grow carbon (trees) not food - How can families maximise carbon storage? ○ New skills coming in (tertiary education of younger people) ○ Changing farming systems in response to customer demand ○ Increased area of marginal land– how to use ○ Efficient use – impact on price of land? ○ Social & environmental requirements from EU customers 	<ul style="list-style-type: none"> ○ Climate change policy <ul style="list-style-type: none"> - What extra work will it create for farmers? - How will farming be affected? ○ More analytical approach to farming <ul style="list-style-type: none"> - Business approach - Farm family business meetings ○ Could be negative but may also have positive impact – specific use of marginal land <ul style="list-style-type: none"> - What determines ‘marginal’? ○ Off farm work by choice/need ○ New industries / diversification ○ Training – all new skills e.g., grain marketing
<p>New production systems</p> <ul style="list-style-type: none"> ○ GMO’s fast track to breed what people want ○ Input costs, terms of trade, fuel <ul style="list-style-type: none"> - Increases level of risk some farmers prepared to take 	<ul style="list-style-type: none"> ○ Food/fuel debate ○ Carbon trading ○ Non-merinos – easier to manage ○ Impacts on crops planted/area, etc
<p>Summary</p>	
<ul style="list-style-type: none"> ○ Social costs ○ Community sustainability e.g., fly in fly out; corporate ○ Lack of people/labour, therefore need to adapt to lack of labour ○ Skills of younger generation – analytical/business approach required ○ New marketing arrangements 	

3. (a) What current research and extension activities would be most useful to growers and grower groups?
 (b) What would your group/organisation be interested in considering further?
 (c) What would your group/organisation be interested in committing to?

Additional research and extension activities	Why? (Reasons)	Your Group's interest?	Your group's actions to follow up their interest in this project
Nutrition <ul style="list-style-type: none"> ○ Nutrient uptake ○ Is our current soil testing effective enough? ○ Soil constraints 	<ul style="list-style-type: none"> ○ High input costs ○ Sustainability ○ Need to farm 'smarter' to save on inputs ○ Changing weather & environments 	<ul style="list-style-type: none"> ○ Increasing size of crop, decreasing sheep. Our members want to be profitable 	<ul style="list-style-type: none"> ○ Lit review ○ Look at past results
<ul style="list-style-type: none"> ○ Crops that can draw on deep reserves of fertiliser ○ Better understanding of low input systems ○ Rehashing old research e.g., lime, fertiliser rate 	<ul style="list-style-type: none"> ○ Locked up reserves, higher costs of fertiliser ○ Fertiliser cost ○ Fertility ○ Financial risk ○ Soil PH phosphate availability 		<ul style="list-style-type: none"> ○ Use of 'old' ameliorants & looking for new ones ○ Link with interested bodies
<ul style="list-style-type: none"> ○ Lack of tools for decision making ○ Managing input costs 	<ul style="list-style-type: none"> ○ This year used deep nitrate test ○ Minimise losses in dry years ○ Maximise gains in wet years ○ Cost of nitrogen fertiliser 	<ul style="list-style-type: none"> ○ Nutrient management 	<ul style="list-style-type: none"> ○ Fertiliser decision making, tactical fertiliser use, use specific nutrient management ○ Discussion with other groups/institutions
<ul style="list-style-type: none"> ○ Role of legumes in nitrogen supply to crops & NO₂ emission etc ○ Soil carbon cycling <ul style="list-style-type: none"> - Sequestration etc - Modelling 	<ul style="list-style-type: none"> ○ Carbon offsets – what's it worth, decision test 		

Additional research and extension activities	Why? (Reasons)	Your Group's interest?	Your group's actions to follow up their interest in this project
<p>Sustainability/NRM</p> <ul style="list-style-type: none"> ○ Benefits of residue ○ What will a sustainable landscape look like? ○ What's the role of a perennial in this landscape? ○ Landscape segmentation based on capability in different climate scenarios 	<ul style="list-style-type: none"> ○ Evaporation ○ Summer rain infiltration ○ Need for long term viability ○ Better understanding of farming systems application for different areas 	<ul style="list-style-type: none"> ○ Outcomes on healthy environment ○ Able to target extension & research activities 	<ul style="list-style-type: none"> ○ Already scoping up a regional project
<ul style="list-style-type: none"> ○ Salinity management ○ New land use options ○ New plants & perennials 	<ul style="list-style-type: none"> ○ Uncertain whether it will decrease, stabilise as increase ○ Adopt to change ○ Management ○ Options 	<ul style="list-style-type: none"> ○ Saltland management 	<ul style="list-style-type: none"> ○ Productivity of same soils & recovery ○ Consider – attract research ○ Monitor/filtering info
<p>Farm management/systems</p> <ul style="list-style-type: none"> ○ Sheep breed comparison ○ Use marginal lands for sheep grazing ○ New technologies for cropping ○ Plant, options, rotations ○ Profitable rotations across rainfall zones 	<ul style="list-style-type: none"> ○ Lack of labour ○ Decrease in wool prices ○ Cost ○ Sustainability ○ NRM ○ Labour shortages & low skill levels ○ Fuel, food ○ Sustainable production comes from a mix of grain options 	<ul style="list-style-type: none"> ○ Members moving from wool to meat ○ NRM positives ○ Retain sheep ○ High salt scalds ○ Increased pulse production ○ Refining agronomy of pulses, testing & demonstration 	<ul style="list-style-type: none"> ○ Case studies ○ Lit review - not trial work ○ Lucerne ○ Perennial grazing ○ Facilitate rotation & species demonstrations

Additional research and extension activities	Why? (Reasons)	Your Group's interest?	Your group's actions
<ul style="list-style-type: none"> ○ Agronomic regimes for pulse species ○ Improvements in the farming system for grain production & mixed farming ○ Crop variety research – GMOs in particular ○ Trialling & demonstrating concept technologies & species ○ Dry system farming ○ Sheep - do they fit? ○ Varietal adaption & improvement ○ Utilisation of current technologies ○ Optimising use of summer rainfall ○ Summer crops ○ More research into saltland grazing, perennial, grasses, etc ○ Reclaiming salt land ○ GMO ○ Alternatives for unprofitable land ○ Wheat plants with greater top roots ○ Salt tolerant wheat ○ Restraint of growth on soil types ○ Lack of rain ○ Utilising water previously unavailable to livestock 	<ul style="list-style-type: none"> ○ Need to be profitable in farming seasonal conditions ○ Are high carbon & water use efficient systems able to be implemented? ○ Increased understanding of application & advantages ○ Growers learn well from 'doing' & experiencing ○ To be more profitable ○ Changing growing season lengths ○ Increasing costs of inputs ○ More summer rainfall predicted ○ Increased summer rainfall in some areas ○ Drying conditions need appropriate feed ○ Increase in salt affected land in our area ○ More drought/salt tolerant crops ○ Penetrate pans ○ Soils are becoming more saline ○ Sodium rising in soil profile ○ A lot of land holders are experiencing water shortages & want to utilise saline water 	<ul style="list-style-type: none"> ○ Application of the best components of the no-till systems for WUE outcomes ○ Responding to grower expectations ○ Having a long term trial site, demo sites & satellite sites – over longer periods of time ○ New crops, GMOs ○ Core business of group ○ Maintaining sustainability of growers ○ Modelling & measuring soil water ○ Issues are relevant to our area ○ To increase productivity ○ Adapting farm systems to changing water use due to climate change or changing climatic conditions 	<ul style="list-style-type: none"> ○ Get involved with Mike Robertson & CSIRO ○ Consultation with breeders ○ Start a project looking into PA ○ Field research & modelling e.g., APSIM ○ Group to run trials and share results ○ Group to run trials and share results ○ Group to run trials and share results ○ Group to run trials and share results ○ Projects are in place- CSIRO ○ Possible trial into using magnetic fluid reactors to utilise slightly saline water

Additional research and extension activities	Why? (Reasons)	Your Group's interest?	Your group's actions to follow up their interest in this project
<p>Policy</p> <ul style="list-style-type: none"> ○ Role of carbon trading scheme ○ Understanding measures of soil carbon & trading implications ○ Carbon sequestration opportunities ○ GMO development ○ Social change 	<ul style="list-style-type: none"> ○ Change of land use – size/area ○ Prepare farmers for carbon trading ○ Help guide government policy ○ Role of soils in carbon sequestration ○ Politicised ○ New skills ○ Education ○ Training 	<ul style="list-style-type: none"> ○ ID opportunities for growers under potential carbon trade systems ○ Soil carbon processes ○ Adoption 	<ul style="list-style-type: none"> ○ Carbon storage & turnover in soils under different management scenarios ○ Lobby
<p>Extension</p> <ul style="list-style-type: none"> ○ Improve communication between groups ○ 4-5 page newsletter ○ Some extension activities should always have a research content ○ Effective information dissemination ○ Interest in the extension of greater level of crop production in higher rainfall areas ○ Secondary & tertiary education 	<ul style="list-style-type: none"> ○ Can learn new things from other groups ○ Very popular ○ You never know what other people might know ○ Awareness of climate change is there but the adaptation to agriculture is not (refining to tertiary education i.e., Ag Science, etc) 	<ul style="list-style-type: none"> ○ To be able to provide members with different options ○ Committed to incentive programs 	<ul style="list-style-type: none"> ○ Maintaining contact with other groups ○ Ongoing

Additional research and extension activities	Why? (Reasons)	Your Group's interest?	Your group's actions to follow up their interest in this project
<ul style="list-style-type: none"> ○ Local trials ○ Case studies & newsletter info – facts & figures ○ Field sites/demos & tours – a visual of what's going on ○ Workshop – info presented from experts & politicians on policy & latest research e.g., carbon credits, etc ○ Making results from studies or trials available to local regions in the form of a 'farm level' publication ○ Communication of climate change policy to growers 	<ul style="list-style-type: none"> ○ Not currently done ○ See what has been done – what has worked & what hasn't worked ○ Evidence of success & failure of new crops/systems/farming techniques ○ To aid decision making process ○ To give land holders an understandable conclusion of results which they sometimes miss out on 	<ul style="list-style-type: none"> ○ Providing valid & accurate info to networks ○ Promoting info & identifying risks or barriers to making the change ○ Is getting info out/discussed by the farming community? 	<ul style="list-style-type: none"> ○ Implement ○ Distribute info to stakeholders ○ Promote to networks
<p>Risk management</p> <ul style="list-style-type: none"> ○ Managing variability ○ Need for multiple industries to manage variability ○ Decreasing risk in grain production ○ Pulse marketing ○ Risk management & what if scenarios 	<ul style="list-style-type: none"> ○ Input cost increases profit margins at risk ○ Smart marketing is as important as good production ○ People are unsure of these level of risk to season's ○ How to use risk management in differing climatic seasons? 	<ul style="list-style-type: none"> ○ Using pulses to reduce disease across the rotation, increase pest control options ○ Domestic vs. international marketing. Niche markets vs. global. Local infrastructure to maximise opportunities 	

Additional research and extension activities	Why? (Reasons)	Your Group's interest?	Your group's actions to follow up their interest in this project
<ul style="list-style-type: none"> ○ Weather forecasting ○ How to analyse climate predictions ○ Alternative industries 	<ul style="list-style-type: none"> ○ To manage input costs ○ Some farmers don't understand what they mean & place too much weight on them 	<ul style="list-style-type: none"> ○ North East Ag Region strategy ○ Interested in result 	<ul style="list-style-type: none"> ○ Continue to drive this strategy

4. (a) What possible future innovations might your grower group be interested in adopting?

(b) What would your group/organisation be interested in considering future?

Innovations of interest e.g., new crop species such as mustard for biodiesel	Why? (Reasons)	Your group's actions (and person/people responsible)	Who will follow up on your interest in this project?
<ul style="list-style-type: none"> ○ GMOs (x4) 	<ul style="list-style-type: none"> ○ New technology ○ This could be the future ○ Salt land farming 	<ul style="list-style-type: none"> ○ Happy to undertake trial & extension work ○ MFIG ○ Researchers 	<ul style="list-style-type: none"> ○ President & executive officer ○ DAFWA ○ MFIG
<ul style="list-style-type: none"> ○ Perennial system ○ New farming systems e.g., perennial systems ○ Perennial-based systems for carbon and livestock forage ○ Perennial-based system ○ Perennial system successfully incorporated into cropping with measurable returns ○ Perennial species 	<ul style="list-style-type: none"> ○ Options for business survival ○ Food & fuel ○ SPA activity ○ Climate ○ Livestock ○ Carbon ○ NRM ○ To adapt to changing individual systems to benefit individual regions ○ Do not pay at present 	<ul style="list-style-type: none"> ○ Incentive program ○ Trials – Farmer scale ○ Trials coordinator is responsible for ○ NLP project ○ Possibly trials ○ Watching brief some trials 	<ul style="list-style-type: none"> ○ SPA managers ○ Trials coordinator & EO ○ SPA staff/chair/committee ○ Landholders in the area already trialling ○ Group committee
<ul style="list-style-type: none"> ○ Trialling new crop options e.g., perennial wheats, short season wheats, grazing wheat (x2) 	<ul style="list-style-type: none"> ○ 40 days growing - no breeding done yet 		
<ul style="list-style-type: none"> ○ Advocating for a whole of landscape approach 	<ul style="list-style-type: none"> ○ Environments outcomes ○ Social outcomes ○ Economic outcomes ○ Culture outcomes 	<ul style="list-style-type: none"> ○ Leading NRM in the South Coast work with State & Federal government 	<ul style="list-style-type: none"> ○ SCNRM strategic projects ○ Land facilitators ○ Water facilitators ○ Biodiversity facilitators

Innovations of interest	Why? (Reasons)	Your group's actions (and person/people responsible)	Who will follow up on your interest in this project?
<ul style="list-style-type: none"> ○ Food/fuel/fibre/carbon ○ Environmental benefits ○ Using farm waste to produce bio-energy ○ On farm fuel generation/self sufficiency? 	<ul style="list-style-type: none"> ○ All farm accumulate waste such as stubble etc which may be able to be utilised in a variety of ways 	<ul style="list-style-type: none"> ○ Community groups ○ Tertiary ○ Local government ○ Looking into the most viable options for our area 	<ul style="list-style-type: none"> ○ Can be followed up through liaising with universities that are doing the research
<ul style="list-style-type: none"> ○ Carbon value, trading, storage ○ Carbon sequestration on salt land ○ Carbon credits & farm forestry 	<ul style="list-style-type: none"> ○ Opportunity for profitable use of saline land ○ Farming for future 	<ul style="list-style-type: none"> ○ Trials ○ Research into possible amounts & means of qualification ○ MFIG ○ Researchers 	<ul style="list-style-type: none"> ○ Richard Bell ○ The body who sets the trial up
<ul style="list-style-type: none"> ○ First time growers 	<ul style="list-style-type: none"> ○ Encouraging land holders to carry on more work 	<ul style="list-style-type: none"> ○ Incentive programs & newsletter 	
<ul style="list-style-type: none"> ○ New plant species that are useful ○ Making sure that plants get beyond the discovery stage 	<ul style="list-style-type: none"> ○ Very important 	<ul style="list-style-type: none"> ○ Researcher/farmer type activities 	
<ul style="list-style-type: none"> ○ Valuating land on 'NRM' activities & assets as well as potential productivity 	<ul style="list-style-type: none"> ○ It adds to the 'long' term value of the land i.e., biodiversity/bush. May help mitigate rising groundwater in some areas, i.e., potential salinity issues but currently adds little value to land 		
<ul style="list-style-type: none"> ○ Summer growing crops/species 	<ul style="list-style-type: none"> ○ Summer rain 	<ul style="list-style-type: none"> ○ Express interest to researchers 	<ul style="list-style-type: none"> ○ Group committee
<ul style="list-style-type: none"> ○ Marginal land interaction 	<ul style="list-style-type: none"> ○ To use it to advantage 	<ul style="list-style-type: none"> ○ Investigate model 	<ul style="list-style-type: none"> ○ Group committee

Innovations of interest	Why? (Reasons)	Your group's actions (and person/people responsible)	Who will follow up on your interest in this project?
<ul style="list-style-type: none"> ○ Adoption of saline pastures (especially new species) 	<ul style="list-style-type: none"> ○ Productive use of saline/'marginal' lands make \$\$ 	<ul style="list-style-type: none"> ○ SPA network & committee 	<ul style="list-style-type: none"> ○ Projects coordinator ○ Group EO ○ DAFWA
<ul style="list-style-type: none"> ○ Climate forecasting 	<ul style="list-style-type: none"> ○ To be warned 	<ul style="list-style-type: none"> ○ Currently just observing 	<ul style="list-style-type: none"> ○ Individuals
<ul style="list-style-type: none"> ○ Managing climate decisions 	<ul style="list-style-type: none"> ○ Climate ○ Carbon ○ Sustainability 	<ul style="list-style-type: none"> ○ Watching brief ○ Committee/employees 	<ul style="list-style-type: none"> ○ SPA staff/chair/committee
<ul style="list-style-type: none"> ○ Communicate messages developed 	<ul style="list-style-type: none"> ○ Membership & adoption 	<ul style="list-style-type: none"> ○ Newsletter (quarterly) ○ Opportunities to share messages 	<ul style="list-style-type: none"> ○ Projects coordinator ○ Group EO

5. What else needs to be done (that your group/organisation can't do) to assist grower decisions about climate change adaptation programs and research?

Actions (including steps if necessary)	Person/Group Responsible	Follow up/accountability rests with
<ul style="list-style-type: none"> ○ Fine tune scope & focus of the research project 	<ul style="list-style-type: none"> ○ Research Project Team 	<ul style="list-style-type: none"> ○ Research Team – self accountable
<ul style="list-style-type: none"> ○ Increase communication - target anyone & everyone ○ Background research of what has been done ○ Feed research into one body 	<ul style="list-style-type: none"> ○ Government for policy making ○ Research team as a central body 	<ul style="list-style-type: none"> ○ DAFF – yet very remote from region ○ Everyone to make sure info is supplied & passed on
<ul style="list-style-type: none"> ○ Financial/audits – make the process easier so that the auditing doesn't take up so much time on resources 	<ul style="list-style-type: none"> ○ Funding providers 	
<ul style="list-style-type: none"> ○ Industry adjustment programs – assist people/farmers to adjust to change (gradual transition) e.g., guidelines, incentives: <ul style="list-style-type: none"> - Economic modelling - Skills adjustment 	<ul style="list-style-type: none"> ○ Government ○ Research providers 	

4.4.3 Energy Efficiency

1. (a) What do you think are the important trends in energy on farms?

(b) Are Australian farmers more or less vulnerable than in the past?

(c) How do you think Australian farms compare to international competitors?

Response/Thoughts	Why? (Reasons)
<ul style="list-style-type: none"> ○ Extremely vulnerable we will struggle to produce enough for Australia ○ Increasing farm costs. More vulnerable as we don't produce our own fuel ○ Increase in awareness of energy on farms ○ Increase fuel efficiencies with machinery producers. Market demands will ensure this happens ○ Farming is totally mechanised – fuel demand will continue ○ Higher distance from markets will increase energy costs 	<ul style="list-style-type: none"> ○ Production drops due to climate change ○ Perfect scenario with biodiesel compromising food ○ International food production increasing ○ Diesel prices/fertiliser prices ○ Don't produce own fertiliser – market is far away ○ Import costs escalating – peak oil prices ○ Rely heavily on imports, can't source locally ○ Large geographically isolation/range
<ul style="list-style-type: none"> ○ In comparison to international competitors we are front runners in respect to change of technology & adaptability ○ Huge opportunity to drop fuel use. We are efficient input users but there's room for improvement ○ Nitrogen costs – farms with less legume options will find N costs prohibiting ○ Research by nitrogen producers into reducing costs ○ Grain quality – market niches will more because of protein losses ○ Legumes are vital in the mix to provide more natural sources of nitrogen 	<ul style="list-style-type: none"> ○ We are front runners in adaptability & production and cost efficiency & technology - but there's always room to improve! ○ Being held more accountable ○ Good platform for production increases ○ New technology i.e., better understanding implementing technology

2. Biodiesel: a barrel of opportunities for Australian grain growers? Or for oil companies?

Response/Thoughts	Why? (Reasons)
<ul style="list-style-type: none"> ○ Capital cost – farm gate ○ Driven by relative cost – fuel & grain ○ Opportunity for local cooperation. Fuel co-ops/local plants – community benefit. Contracts for biodiesel from canola grain – to ensure viability of co-op ○ Lower rainfall areas – less opportunity because of higher inputs & less oil production crops, less reliable rainfall ○ Need to look at immediate future, next 10 years ○ Essential opportunity for rural industry 	<ul style="list-style-type: none"> ○ In a central location build up infrastructure ○ On farm ○ Minimise cost ○ Improve efficiency
<ul style="list-style-type: none"> ○ Value of biodiesel needs to be higher than the grain itself ○ Price at farm gate will determine if used for fuel or export ○ Energy supply to oil companies for wider community 	<ul style="list-style-type: none"> ○ Needs to be worth it financially & better value for farmers ○ Oil companies are able to provide for the world ○ Increase sustainability of their business
<ul style="list-style-type: none"> ○ Storage issues for bad seasons. May need to store in bad seasons to have stockpile to ensure ongoing sustainability ○ Difficult to produce with varieties available etc, need to develop better ones ○ Oil mallees production as opportunity – processing issues, more research on viable processing. Scale of processing capacity. Minimum viable size 	<ul style="list-style-type: none"> ○ Ability to supply region to region because 'seasonal variability' ○ Capitalising on seasonal conditions
<ul style="list-style-type: none"> ○ Production capacity ○ Oil companies eventually will get on board & produce for the world & get a share of market year-in, year-out ○ Won't be able to produce consistent supply ○ East & West – across Australia. Eastern WA producers will have difficulty producing enough biodiesel to sustain own farm. Linked to world commodity prices because of returns 	

3. Synergy or trade-off: What are the relationships between energy security, climate change and sustainability?

Response/Thoughts	Why? (Reasons)
<p>Synergy</p> <ul style="list-style-type: none"> ○ Flexibility – crop rotation improvement ○ Synergy between energy security & sustainability ○ By stimulating crop rotations, energy effort is synergistic with sustainability ○ Opportunity for rural industries. Driven by cost ○ Synergy: in cropping program, diversified crops (legume, oil seeds, cereal) ○ Sustainability <ul style="list-style-type: none"> - High rainfall areas – yes on farm scale - Statewide/regional – no ○ Oil mallees unique in WA, potential access to biodiesel with needs further research, economics, etc. 	<ul style="list-style-type: none"> ○ Fit it into rotations ○ Provides security for commercial operation ○ Diversification will contribute to sustainability of farming enterprise
<p>Trade-off</p> <ul style="list-style-type: none"> ○ To improve energy security there are huge trade-offs. If Australia becomes self sufficient possible to be sustainable trade off less than 1% of population provides food for rest of population ○ No reduction in green house gases - potential trade off ○ Current farming suggests there is a trade-off – less income in legume phase ○ Energy ratio 1:1 question. Currently cost of production greater than pay off, unlikely to be commercial benefit 1:3 (stubble, harvest, transport 50 km) 	<ul style="list-style-type: none"> ○ External energy demand (China) threatens fossil fuel supply ○ Climate change may compromise ability to grow canola/biofuel ○ Ethanol – not energy efficient to produce at present costs/prices ○ Lime replacement essential – stubble removal accelerates acidification; ameliorated by lime imported from coast (at full cost) ○ Need greater emphasis on closed cycling of nutrients & fuels on farm ○ Nitrogen costs increase, demand for legume nitrogen on farm as part of energy management ○ No effective savings

Response/Thoughts	Why? (Reasons)
<ul style="list-style-type: none"> ○ Trade off between energy ratio has to be of significant numbers, 1:1 not viable. Need to ensure that we get the energy back for what is put in, not necessarily the case at the moment ○ Drop in productive area due to climate change – may be other areas that open up such as Kununurra & northern areas that may become more appropriate for crop production ○ In current farming systems, trade-off - legumes are a small crop, less income, need to ensure will get energy back ○ Hindrance to opportunity is farm-gate price ○ Climate change compromise - less stubble ○ Trade off between sustainability & commercial opportunities ○ Impacts on other industries – tourism ○ Climate change may compromise ability to grow canola or other crops for biodiesel ○ Difficult to produce enough ○ More stubble that removed from farm means more nutrients need to put back i.e., lime replacement will be compromised due to costs 	<ul style="list-style-type: none"> ○ Continual movement to larger farming units with increasing corporate involvement – leads to less emphasis on sustainability & greater reference to return on investment ○ Can't grow required crops in every season

4. Beyond the research : Where to next for Australian grain farmers?

Additional research and extension activities	Why? (Reasons)	Your group's interest?	Your group's actions to follow up on their interest in this project
<ul style="list-style-type: none"> ○ Real life case studies 	<ul style="list-style-type: none"> ○ Farmers use to make decisions 	<ul style="list-style-type: none"> ○ Sustainability of Industry 	
<ul style="list-style-type: none"> ○ Rigorous economic analysis. Numbers to make decisions – capital & practical decisions 	<ul style="list-style-type: none"> ○ Need robust information in economics of biodiesel 	<ul style="list-style-type: none"> ○ Teaching and research – various aspects of agriculture 	<ul style="list-style-type: none"> ○ Connect with ARE at UWA
<ul style="list-style-type: none"> ○ More complete benefit cost analysis for ethanol niche inputs of line & nutrients 	<ul style="list-style-type: none"> ○ Straw / stubble losses may mean losses of nutrients etc for other systems 		
<ul style="list-style-type: none"> ○ Efficiency of tractor machinery - fuel use down, efficiency up 			
<ul style="list-style-type: none"> ○ Legume crops to replace nutrients 	<ul style="list-style-type: none"> ○ Efficiency of use: how to cost especially fertiliser price – transport further year 		
<ul style="list-style-type: none"> ○ Wider range of life cycle assessments for regions 	<ul style="list-style-type: none"> ○ Site specific case studies 	<ul style="list-style-type: none"> ○ Understanding 'general' model & range of site specific solutions 	
<ul style="list-style-type: none"> ○ Ethanol for stubble – off farm benefit rather than on-farm 	<ul style="list-style-type: none"> ○ Greater contribution to community needs 	<ul style="list-style-type: none"> ○ Broader understanding 	
<ul style="list-style-type: none"> ○ Trade offs <ul style="list-style-type: none"> - Long and short term - Soil health vs. fuel (and corn / stubble) 			
<ul style="list-style-type: none"> ○ Economic sustainability of alternatives 	<ul style="list-style-type: none"> ○ No change will occur without economic incentives 	<ul style="list-style-type: none"> ○ Profitable farmers 	
<ul style="list-style-type: none"> ○ Diversification on farm water resources ○ Cost of inputs + outputs – particularly with stubble (retain or get rid of) ○ Social issues 			
<ul style="list-style-type: none"> ○ Meal and glycerol value? 			

Additional research and extension activities	Why? (Reasons)	Your group's interest?	Your group's actions to follow up on their interest in this project
<ul style="list-style-type: none"> ○ More work on inputs & outputs i.e., cost of removing stubble 	<ul style="list-style-type: none"> ○ Help growers make decisions 	<ul style="list-style-type: none"> ○ Growers can't afford to take risks 	
<ul style="list-style-type: none"> ○ Short term vs. long term ○ Economic vs. agronomic 	<ul style="list-style-type: none"> ○ Sustainability + profitability 		
<ul style="list-style-type: none"> ○ Need better case studies 	<ul style="list-style-type: none"> ○ This help growers make decisions 		
<ul style="list-style-type: none"> ○ Need to find better system to work on the edge of wheat belt 	<ul style="list-style-type: none"> ○ So we can maintain production ○ Happening now 		
<ul style="list-style-type: none"> ○ Opportunity to input into Green Paper to shake up excise system of fuel 			
<ul style="list-style-type: none"> ○ Nitrogen efficient cereals 			
<ul style="list-style-type: none"> ○ Need the numbers/costs for decisions ○ Govt needs to be upfront with policy 	<ul style="list-style-type: none"> ○ Growers can't afford to take risks ○ Govt can have more influence than individual grower (excise, tax, etc) 		

5. Building and Maintaining Partnerships in Tough Times

Darren Beazley, General Manager – Strategic Partnerships, Fremantle Football Club

Darren's presentation began with a very straight-forward message applicable to all attendees - innovate or die!

He focused on strategic partnerships and noted that groups need to be able to answer the following questions:

- What does your organisation have to offer?
- Conduct an asset audit of your organisation
- Conduct a situational analysis – who are your competitors for this funding?
- Research the organisation that you are seeking funding from – how do they expect the submission to be prepared? What KPI's they are seeking? What is your capacity to deliver?
- What does your organisation have that might be seen as valuable to another?
- How is your organisation unique? What it is that you do better than anyone else in your industry?
- What commitment is your organisation prepared to do, to make the commercial partnership something special?

All organisations should focus on return on effort. Five key opportunities are:

- The power of the data base
- Look at business to business opportunities
- Utilise networking opportunities
- Look at what assets are at your disposal
- Money can't buy opportunities

He emphasised that groups must look at the process for change – firstly, establish a performance based organisation.

Work with strategic intent – with good strategy, there is discipline in execution. Insulate against the elements.

Build on your strategy – there is power through relationships.

Darren's full presentation can be found in Appendix 3.

6. Influencing Industry

DAFWA Research Priorities for the Grains Industry

Peter Metcalfe, Grains Industry Director and Christine Thompson, Senior Policy Officer, Department of Agriculture and Food WA

The draft Department of Agriculture and Food “Research Priorities for the Grain’s Industry” was presented to the forum, with the opportunity for attendees to provide feedback on the plan while it was still in the draft stage. The presentation can be found in Appendix 4.

Q.1 How relevant is the industry plan to your group or organisation?

- Very relevant but to what degree it’s hard to know (depends on where you are)
- We have a sceptic view of climate change (is it real or not?)
- Highly relevant to seasonal forecasting (input & yield potential)
- Plans for grower business decision going into the future
- Yes, it will contribute to profitability and versatility
- DAFWA can continue to provide this independent support/advice
- Will direct funding/potential projects
- Water use efficiency is critical to all rainfall zones (Outcome 6)
- Agribusiness biosecurity (Outcome 2, 3 & 4)
- Identifying threats of imports, border protection, farm protection (Outcome 4)
- Research and understand risk management
- Grower groups/groups of farmers – education, identification
- Decreasing rainfall because extremely relevant – diversification of systems
- Encourage more research/trials into low water plants etc
- Breeding for low inputs
- Risk management strategies
- Enhanced credibility if resource base is maintained
- Marketing edge – market access
- Australian export opportunities to close neighbours
- Identify a market need, then develop a product to fit
- Intelligence needs to feed back to groups so they can provide appropriate product.

Q.2 How can your group or organisation contribute to achieving these outcomes?

Outcome 1 - *Industry has the capacity to respond to and manage under climate change*

- Groups could develop/ or trial new technology – dry farming systems.
- Help to measure attitudes and understanding by farmers of climate change.
- Case studies or adaption strategies.
- Farmer size trials – access to grass roots.
- Open communication.
- Extension of research results on ground quickly.
- Monitoring and evaluation.

Outcome 4 - *Cost effective biosecurity*

- Need adequate ‘on the ground’ resources.
- Cost benefit analysis.

Outcome 5 - *Matching and optimising inputs to variable seasonal conditions*

- Collect data so that information is ‘best quality’.
- Common language of information.

Outcome 6 - *Optimising water use efficiency to enhance profitable grain production*

- Disseminate information through groups' media communications.
- Conduct trials and extend information.
- Water use efficiency with crops.
- SEPWA could calculate potential yields of each variety based on growing season rainfall.
- Our group could be a research partner and trainer.

Outcome 7 - *New varieties achieving enhanced industry profitability*

- As a researcher, can try to understand traits and develop more efficient breeding varieties.

Q.3 Where are the opportunities or gaps in the strategies to achieve these outcomes?

Outcome 1 - *Industry has the capacity to respond to and manage under climate change*

Opportunities

- Increase research into marginal lands.
- Create good industry tool for predicting seasonal variables.
- Alternative enterprises.
- Individual farms can push the boundaries beyond what research organisations as a network.

Gaps

- Not thinking "outside the box".
- Need to be smarter about research.
- Need a paradigm shift in research methodology – scenario planning.

Outcome 2 - *Enhanced grower opportunities to capture profit through high value end uses or high volume markets*

- WA not pushing their 'clean and green' image.
- Not reading the signals coming out of Asia.

Outcome 3 - *Demonstrated sustainable cropping credentials*

- Need financial incentives.
- Opportunity to provide extension and access to members (farmer to farmer).
- Need benefit cost analysis

Outcome 4 - *Cost effective biosecurity*

- Adequate (and trained) "on the ground" resources".
- Cost benefit analysis.

Outcome 5 - *Matching and optimising inputs to variable seasonal conditions*

- Information on market forecasts left to industry eg banks.

Outcome 6 - *Optimising water use efficiency to enhance profitable grain production*

- Lack of awareness of the tools to address water use efficiency.
- Temperatures in May – drying effect on upper levels of soil – not enough moisture for crops to grow well in initial weeks.
- Reliable rainfall forecasts and understanding forecasts (\$\$ millions at risk).

Outcome 7 - New varieties achieving enhanced industry profitability

- Need to set targets.
- Independent evaluation/advice will need to continue as the industry becomes more commercialised.
- GMO's need to be considered and addressed.
- Need to look at alternative strategies to GMO's specifically.
- Breeding varieties that look at grain as a nutritious food source i.e identify specific nutrition of that grain (beyond variety and protein).

Q.4 Are there any other opportunities/gaps in the overall industry plan?

- How are you (DAFWA) integrating grower groups in this plan? Need to identify the strategy for collaboration in implementation of the strategy.
- How will the strategies be implemented?
- Needs to focus – detailed short, medium and long term plan.
- New initiatives need to be acted, KPI's established and action needs to happen!
- Cost of getting into new varieties (new varieties not necessarily the answer).
- Issues will define priorities (eg. outcome (3) area may be higher than a 'medium').
- It would be great to have more time to digest the information prior to responding to this question. Perhaps we could give the document to our committees (GG's).
- Opportunity for perennial crops.
- Opportunity for grazing crops.
- Need to address the issues confronting the grains industry eg. resistance, drought and salinity tolerance, nutrient stress.

Q.5 General Comments.

- Very broad statements – need to focus and ACT!
- Good overall attempt to include others via framework.
- Some priorities need review.

7. Evaluation

Evaluation from day one of the forum allowed the GRDC to trial their new electronic response system, which was well received by attendees and made the evaluation easy to complete. To provide richer the results and allow for qualitative responses, participants also contributed written responses.

A brief summary of the evaluation follows.

Did the forum provide information of value to you? Please circle one

Yes	No	Maybe
85%	0%	15%

Why / Why Not?

Yes

- Yes, meeting other growers, groups & industry was extremely valuable. They are potential collaborators
- Diverse range of views on issues discussed
- Extremely relevant content. Enjoyed researcher interaction. Darren was great
- Great networking. Heaps of time for this.
- Link with researchers from different bodies. Don't often get opportunity. Collaboration, networking with other groups
- A good mixture of growers, industry & government
- Good to meet industry players

Maybe

- Had a bit of repetition to it
- Sessions too long, shorter more specific for outcomes
- Didn't hear anything that was new, but useful to hear discussion
- Have to wait & see how develops

Please rank the overall value of the forum

Poor	Needs Improvement	Average	Good	Excellent
0%	2%	17%	50%	31%

Why / Why Not?

Average

- Good networking, nice people
- Too many government & research people and not enough growers

Good

- Great networking opportunity
- Rebuild links & networks & catch up
- Well balanced, information, discussion, networking

Excellent

- Great opportunity for interaction & networking
- Networking was the most important outcome
- Great opportunity for smaller grower groups

A list of unanswered questions was compiled and can be found in Appendix 5.

– DAY TWO –

8. Purpose of the day

The second day of the GGA Forum was specifically tailored for the grower group members of the GGA. No external industry or research representatives attended. The focus of the day was on the current activities and future plans of grower groups.

The purpose of day two was for groups to:

Learn more about the activities of other groups from around the state

Discuss specific successes and challenges of running a grower group

Group chairperson/staff to learn new skills to improve the operation of their group

The morning session looked at factors external to groups – namely interactions with R&D funders. The afternoon focused on factors internal to groups – including sponsorship and group motivation.

9. Grower Group ‘Meet and Greet’

Prior to the GGA Forum, each group was asked to contribute a profile of their group answering questions such as: why did you begin, size of membership, and planned projects for 2008.

The group profiles were printed on A3 posters and placed around the room. These were:

- Northern Agricultural Region
- South West Region
- Central Agricultural Region
- South Coast Region
- Statewide Groups

Group representatives were asked to give a quick presentation on their group on the top three successes from the previous year. This allowed other attendees to ask questions about each group’s aims, activities, and future plans. The key questions discussed related to membership fees, financial issues including auditing, and planning for future R&D projects.

10. Funding Updates

10.1 Caring For Our Country Update

Mike Grasby, Caring For Our Country Facilitator, DAFF

Phone: 9333 6804, Mobile: 0427 074 202, Email: michael.grasby@csiro.au

This presentation centred on the changes to funding opportunities since the new Federal Government introduced the Caring For Our Country program.

It reinforced that regional NRM Groups remain relevant and important, and industry groups are critical delivery organisations. Community skills, knowledge and engagement are key national priorities and climate change and adaptation strategies are key Government initiatives.

Six national priority areas for investment have been identified, including 'Sustainable Farm Practices'.

Caring For Our Country is funded as an ongoing program with a total of \$2.246 billion allocated for the first five years. The program will:

- Bring together four programs: NHT, NLP, Environmental stewardship program and Working on Country;
- Have a much greater focus on the Commonwealth's national priorities; and
- Meet the Government's NRM election commitments.

Other opportunities include Australia's Farming Future, worth \$130 million over four years which aims to equip primary producers to adapt and respond to climate change. FarmReady will provide assistance for individual growers to attend training courses (up to \$1,500 per year), and industry grants of up to \$80 000 to industry, farming and NRM groups for projects to develop strategies to manage impacts of climate change.

The full presentation can be found in Appendix 6.

10.2 GRDC Investment Plan - What's in there for grower groups?

Merrie Carlshausen, GRDC Western Panel

P: 08 9664 1050, E: mcarlshausen@bigpond.com

GRDC Priorities over the next five years are:

Environmental- responses to climate change; improved water use efficiency; sustainability and resource management; soil health and biology.

Farm Management- integrated practices and technologies; integrated management of weeds, pests and diseases; herbicide resistance management.

Variety development- improved biotechnology for genetic gain; superior new varieties.

New and Innovative product development

Capacity Building- improving skills, training and education in Agriculture; farm business management.

2009-10 Investment plan – FOR GROUPS

Four categories of investments that groups could be partners with in the new investment plan:

- Focus on nutrient efficiency (N, P)
- Look out for results coming out of projects in next 2-3 years
 - Fertiliser from waste
 - Grain storage extension
 - Up skilling extension providers
- Opportunities to partner with research providers
 - Integrated pest management
 - Water use efficient farming systems
 - PA in practice
- Grower groups to apply directly
 - Western Agribusiness Trial Extension Network

The full presentation can be found in Appendix 7.

11. So much more than a handshake!

Live interactive networking session Andrew Huffer

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Putting it into practice!

Your mission - you're at the launch of Andrew's new café. You don't know anyone, but you do have a business card to give out. Your mission is to meet two other people.

Find out two or three things about them including something that's unique (ie you'll remember) and think of how you could help them. Report back!

Debrief

What was your level of nervousness/confidence?

What did you find out?

How can you help the people you met?

How can they help you?

How would you improve your networking in future?

What are the benefits of networking?

- Inspiration
- Tapping into other people's knowledge
- Industrial espionage
- Reinvigorate yourself
- Add value to your work or collaborate on a joint venture
- Have fun with like-minded people
- Polite way to sticky beak
- Give confidence to ring people later
- Reassurance that you are doing things correctly
- Grow your business/bring in work
- Find out other organisations have same problems

Why don't people network?

- Lack of confidence
- People don't know how to interact
- Scared/shy
- Can't see the point
- Feel inadequate/going to say wrong thing/intimidation
- Don't know what to say

What happens when you don't know anyone?

- Go to the bar/tea/coffee
- Look at shoes to tell who they are and decide whether to talk to them
- Go to a person you know and ask them to introduce you to others
- Don't want to interrupt – stand alone
- Feel vulnerable

Ways to improve networking:

- Include posters/props in room as talking points
- Name badges
- Allocation people/buddies to introduce you

- Arrive early so you get in a group (even the organiser!)

How to remember names?

- Repeat it back three times
- Find something in common
- Swap business cards
- Talk about non-work stuff
- Make notes on people association (where they are from) after meeting
- Networking provides opportunities to give something back
- Remember eye colour/distinguishing feature for association

What gives you confidence?

- Something in common
- Everyone equally strange/unknown
- Interested in them
- Have an issue others could help you with

Exit strategy

- Toilet/Get a drink
- Phone call
- Bring someone else in, introduce them
- Wait for pause in conversation, then politely say "thanks for the chat, goodbye".

Making conversation

- Finds out something interesting about them
- Responsibility of host to mix people up? (If sitting in corner)
- Ask a question 'where have you travelled from today?'
- Ask relationship to host
- What brings you here today?
- What's been the most interesting thing you have done in last two weeks?

How to improve networking in future?

- Turn around to personal benefit - make work connection quicker
- Make objectives before going to event
- Have a question in your head when you go
- Read the paper – be aware of local circumstances so don't put them off
- Body language – very important
- Looking away – not interested or shy?
- Ask leading question to generate interest, something non-threatening

12. Choose Your Own Adventure

12.1 Governance

Rachel Bagshaw (Mingenew-Irwin Group) & Sophie Carlshausen (Liebe Group)

Topics covered:

- Constitution
- Strategic Plan
- Management Committee
- Subcommittees
- Staff Protocols

Ideas discussed:

Minutes

- Type straight into computer
- Be very careful so there's no confusion
- 1 or 2 people to cross check
- Do 1-2 days after meeting (quick as possible)

Meetings

- Two hours maximum
- Done in working hours
- Strategy only, operational issues at a different meeting
- Business arising - if big issue comes up – move to general business

Constitution questions

When discussing changes to the constitution, a group should:

- Provide notice to members one month before
- Discuss the issue at a general meeting
- Know what percentage of membership vote is required to pass the amendment (can be up to 75%)

12.2 Sponsorship

Myra Quartermaine, Rabobank

Myra's presentation covered the basics of sponsorship, including what it is and why people get involved, through to how to obtain and keep sponsorship.

She also included her top tips for sponsorship:

- It is not solely about your need but the sponsor's objectives – it needs to be a win-win-win outcome
- Sponsors don't need to share your passion – just need to see the commercial benefit
- Natural fit
- Ensure your whole group understands what the sponsorship is about
- Your proposal offers a lot more than just promoting a logo

- Give yourself plenty of time
- Better to have a couple of big sponsors than lots of small ones
- Important to keep in touch with sponsors
- Understand what sponsorship is all about (in general)

Myra's presentation can be found in Appendix 8.

12.3 Events

Gemma Walker, SEPWA

This discussion looked at what kind of events SEPWA runs and some guiding principles on how to run a successful event.

12.4 Membership

Kaye Philips-Webb, WANTFA

The membership discussion centred around five main questions.

- What is in it for me? And why should I join?
- How much should it cost, and what is too expensive?
- How do we attract more members?
- How do they like to receive communication?
- How do we deal with negativity within membership?

13. Evaluation of Day 2

For full details, see Appendix 9.

Key questions included:

- What worked well?
- What could be done differently?
- As a result of day two of the forum, what will you do differently in the next six months?