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A Preliminary Review of the Grain and Graze Program

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A Preliminary Review of the Grain and Graze Program

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At A Glance

- "Grain and Graze - Total System Health" was a proposed joint initiative involving MLA, AWI, GRDC and LWA. An Implementation Plan suggested a combined investment of \$32.5 million over 5 years to address profitability and sustainability issues for mixed farming enterprises (wool, grains, meat) in the "sheep/cereal" zone of Australia. A whole of farm approach (called Farming Systems) was proposed.
- The Implementation Plan was rejected (in its current form) at a meeting of Chief Executives of the four RDC's in July 2002.
- This Report provides a Preliminary Review of the proposal and Options for ways forward.
- Following consideration of this Report, RDC's should decide upon either of two options. They are:
 - I. Abort plans to move toward a joint initiative for mixed farming enterprises.
 - II. Progress plans to undertake a joint initiative. To pursue this process would require:
 1. Commissioning the preparation of a Business and Operating Plan for a new Program including :
 - Conduct a research Gap analysis. Estimated cost would be \$30-50K
 - Coordinate the conduct of a Benefit Cost Analysis prior to submitting the Plans to each RDC for their consideration. Estimated cost \$10K
 - Business Plan and Operating Plan costs estimated to be \$40-60K. The upper end would include a focused, though limited, consultation process to more producers in the zone.
 2. Immediate establishment of a new Program Coordinating Group incorporating:
 - A joint Communications and Product Service Delivery Group to consider "across RDC" extension messages on sustainable farming in the sheep-wheat zone. Development of a joint communication strategy - estimated cost \$20K.
 - Appropriate program managers to consider common benchmarking and protocol development for R & D undertaken in the zone. Estimated cost \$20K
 - A call/commissioning of research proposals for some key national priorities.
 - Coordinator and general administration costs of \$50K.
 3. A total investment of up to \$60K in 2002/03 per RDC would be required. A new program should be fully operational by January 2003, although shareholder visibility of the RDC's joint efforts could be almost immediate.
- The basis for these recommendations arises from the key findings of this Review. These include:

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- ❖ Recognising the constraints of the short timeframe for this Review it is considered that the current documents failed to satisfy a number of requirements for a significant R & D proposal such as *Grain and Graze* including.
 - Adequate definition of the R, D & I problems to be addressed.
 - Adequate definition of the research outputs/products and outcomes to the producers/growers which could be quantified so as to enable an assessment of the likely return on investment.
 - Definition of an operational model with appropriate structures and budget to ensure maximum likelihood of delivery.
 - Clear definition of strategic advantages of appropriate bi-lateral and multi-lateral investments leading to significant added value to current or proposed investments.
- Nevertheless this Review has also found that:
 - Sufficient goodwill and desire exists between the four RDC's to continue to explore opportunities for a joint initiative for mixed farming enterprises.
 - There are strategic and tactical opportunities provided by a joint initiative of the type proposed by *Grain and Graze*.
 - Substantial changes to the current proposal will be required i.e. a minor rewrite will not be sufficient.
 - An obvious area of collaboration is within the delivery of consistent messages (of either existing or new information) and skills development for mixed farming enterprises.
 - There is a need to undertake a comprehensive identification of the specific production/sustainability issues faced by mixed farming enterprises and to identify gaps in the RDC's current portfolios.
 - In the interim, there should be a call/commissioning for several priority research projects of national significance. Some of these research projects are identified in this Report.
- If a new Program is initiated a small Program Coordinating Group (PCG) comprised of appropriate senior managers reporting direct to the respective CEOs should be established immediately. Separate research and extension sub-groups with specific skills will also be warranted.
- The PCG should bring forward and liaise on developing consistent extension and training methods for mixed farming enterprises and new research ideas or proposals which others may wish to co-invest in. Selection of projects will remain the responsibility of each RDC.
- The "Overarching" Outputs from the creation of a new Program would be:
 - **Marketing** - evidence of the four RDC's working together for their common shareholders.
 - **Communication/Extension** - consistent messages to mixed farmers in relation to production and sustainability issues through a range of products and services.

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- **Training/Education** - consistent skills development packages for mixed farmers either unilaterally or multi-laterally.
- **Research** - liaison on research priorities and opportunities and commissioning of new projects – both at a national and regional level.

These should be clearly quantifiable against agreed performance measures that emphasise and uncover the benefits of collaboration.

- "Specific Outputs" from the 'Way Forward' would be;
 - A Business and Operating Plan, including an appropriate BCA.
 - A gap analysis of current sustainable farming problems in the wheat-sheep zone defining areas for potential areas collaboration and co-investment.
 - A joint communication strategy for growers-producers in the wheat-sheep zone.
 - A list of potential commissioned project described and evaluated.
 - Benchmarking and common research protocols.
 - An identified and appointed program coordinator.
 - The Outcomes from the creation of a new Program would be:
 - Significant productivity and profitability gains from sustainable mixed cropping and grazing system
 - Reduced duplication and cost savings for RDCs, research providers and producers.
 - Recognition by the producers of the individual RDC contributions to the overall program.
 - Plugging the gaps in the research and delivery mechanisms for producers.
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Background

In July 2002, the Chief Executives of Meat and Livestock Australia (MLA), Grains Research and Development Corporation (GRDC), Australian Wool Innovation Limited (AWI) and Land and Water Australia (LWA) considered a Prospectus (called the Mother document or Implementation Plan) for joint investment in a new Farming Systems research and development program called "*Grain and Graze - Total System Health*". The Prospectus was based on a Final Report which was completed in April 2002. The investment proposed was \$32.5 million over 5 years.

The Chief Executives rejected the Proposal as presented by the Steering Committee. Consultants were appointed to review the draft *Grain and Graze* proposal and if necessary prepare a Business Plan for a revised project (See Appendix 1 for Key Elements of the Consultants Brief). Such a Business Plan would provide the foundation for a final investment decision by the four Rural Research and Development Corporations/Companies (RDC's).

Purpose of this Report and Methodology

Purpose - This Report provides a preliminary review of the proposed *Grain and Graze* Program. It addresses only the first three Terms of Reference. Its purpose is to provide sufficient information from which Chief Executives of each RDC can make an informed decision as to whether to request the preparation of a revised Business Plan for a joint initiative. It also provides a definition of the consultancy scope, approach and cost for the preparation of that second stage.

Methodology - Given the limited time available to undertake this study and to prepare this Report, a simple approach was taken. It comprised:

- A review of existing documentation in relation to the *Grain and Graze* proposal plus a high level examination of the 4 RDC's Strategic Plans and relevant Operational Plans and Projects (see Appendix 2 for document listing).
- Meetings with RDC Chief Executives and appropriate Program Managers to clarify their position on the existing *Grain and Graze* proposal and to identify their (and their shareholder) needs in relation to any future Joint Initiative.

Accordingly, this report must be considered as indicative and preliminary only.

Overview of Current Grain & Graze Documentation

Documentation for the *Grain and Graze* proposal was substantial. It includes a Final Report (April, 2002) and a combined Implementation Plan and Prospectus.

The primary focus of the *Grain and Graze* proposal was to improve the profitability and sustainability of mixed farming enterprises in the "sheep/cereal" zone of Australia. In particular it sought to adopt a whole of farm approach to identifying new ways (technology, skills) to better manage water, nutrients, soils and biodiversity in cropping and sheep enterprises.

The drivers for this proposal appeared to be:

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- The successful experience which MLA and LWA had with the recently completed Sustainable Grazing System (SGS) program which operated in the High Rainfall Zone.
- The impending completion of the National Dryland Salinity Program (NDSP).
- A view that many Australian farmers who pay levies to more than one RDC require those RDC's to work more closely together (a position supported by the Commonwealth Government).
- That meat, wool and grains research and delivery tended to operate in "silos" and therefore important interactions on mixed farms were sometimes overlooked.
- That current mixed farming practices' were contributing to undesirable long term environmental impacts (increased salinity, poor utilization of rain, leaching of nutrients, acidification and poor soil structure, and reduction of biodiversity).

While these points may be valid, they alone are insufficient to constitute justification for a significant financial R & D investment. Only clarification and quantification of the benefits to levy payers and Australian tax payers (as contributors to Rural R and D) can do that - either commercial returns or public good outcomes. The documentation also suffered from several deficiencies which resulted in the subsequent lack of support from the RDC's. Some of these deficiencies included:

- Confusing wording.
- Lack of a clear definition of the problem(s) to be addressed.
- No specific outcomes identified which could be quantified so as to enable an assessment of the likely return on investment.
- A complex and costly management and administrative process.
- An apparent loss of control over investment decisions by each RDC (although it is acknowledged that this is not the view of the Management Committee).
- Lack of strong arguments about how the proposed joint investment added value over and above individual or bilateral investments by the RDC's:
- No apparent recognition or utilisation of existing farming systems research, structures and farmer groups other than MLA HRZ SGS groups.
- Insufficient consideration of how the proposed *Grain and Graze* may be integrated or added on to existing Programs.

This review also identified an apparent breakdown in communication between the Management Committee and the individual RDC's.

Situation Analysis - Relevance of Proposed Grain and Graze to RDC Plans

This Section provides a brief overview of the relevance of the current *Grain and Graze* initiative as it relates to the RDCs' Strategic Plans and Operational Plans/Project Listings. It is formatted on the basis of three issues:

- Research Relevance;

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- Political Issues;
- Financial Capacity.

In addition, and relevant for all RDC's is the federal Governments' R and D priorities for Rural research - one of which is:

"Sustainable management and use of soil, water, air, vegetation and fauna resources integrated into farming and land use systems"¹.

GRDC

Research Relevance

The GRDC Strategic Plan (2002-07) states *sustainability and resource management* as an industry priority linked directly to the Commonwealth government priority of *sustainable management and use of our soil, water, air, vegetation and fauna resources integrated into farming and land use systems*

Program Four – “Sustainable Farming Systems program” is the major avenue of investment to meet these priorities. The objective is:

To develop sustainable farming adapted to each of the GRDC agro-ecological regions that are responsive to grower, community and catchments needs.

GRDC already invests in 30 farming systems projects throughout Australia. In addition there are projects with objectives of addressing water balance, nutrient availability and uptake, improving legumes, pastures and break crops and rhizobia, improving rotations, development of practical conservation methods and maintaining natural resource base at a range of scales. Three strategic initiatives have been identified for further funding during the next five years; combating soil constraints, precision agriculture and soil biology.

Focus has also increased on the development of projects and programs that build grower groups, tools for these groups to access exposure to risk and positioning of the grains industry to address environmental issues.

Political Issues

The primary focus of the GRDC investment in sustainable farming systems will remain at the paddock and farm level through contestable and commissioned projects directed through the three regional and the national panels. The panels provide direct linkages through grower groups, scientific advisers and program management to address regional issues covering each of the agro-ecological zones. The research priorities within each region are set at workshops involving growers and scientific experts.

Though committed to further co-investment with the other Rural Development Corporations the GRDC has indicated that it has potentially over allocated to the sustainable farming systems program. The GRDC management and panels have indicated their support for examining ways to ‘co-badge’ existing projects or new projects as they arise over the next five years.

Financial Capacity

¹ Letter (May 2001) from Senator the Hon Judith Troeth to Rural RDC's and companies.

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A total investment in 2002-03 of \$23.39 million is directed toward strategies in the sustainable farming systems component of the GRDC portfolio. As part of the preparation of the 2002-2007 five year strategic plan the GRDC undertook detailed economic analyses of the research and development and product and service delivery components of the portfolio.

An ex-ante economic model developed by the Centre for International Economics and Hassall & Associates was used to examine the various aspects of each major element of the portfolio. This involved evaluation under a value chain model, benefit cost analysis, an allocative process and a stochastic model. Thirteen existing research areas were analysed including sustainable farming systems, including precision agriculture and soil biology.

The current allocation in the “Farming Systems” research area is 21%. The allocative model suggests that the optimum allocation, under certainty be 9% (of the GRDC’s total investment) and 10% under uncertainty in Program 4. A reduction of funding and the resulting re-allocation of resources would increase the overall R&D and I portfolio *ex ante* Benefit Cost Ratio.

The GRDC Management indicated that there are limited opportunities to increase investment in the farming systems area. In the short term re-allocation of projects and small directed co-investment in areas of demonstrable added value may be possible. In the longer term as existing projects complete or wind down new funds may become available.

MLA

Research Relevance

The Lamb and Sheepmeat Research and Development Program (2001-06) and the Draft Southern Beef Program Strategic Plan 2001/02 identify the program “Feedbase and Natural Resource Management” primarily to address the following production efficiency and sustainability components;

- *To increase the proportion of the land area used for Australian livestock production from pastures incorporating perennial phase;*
- *To increase the proportion of Australian livestock production that is from production systems that are environmentally sustainable particularly in relation to salinity, water quality, soil erosion, movement of nutrients from soil and biodiversity retention; and,*
- *Monitor animal emissions of greenhouse gases from Australian livestock for areas of reduction.*

In the current year, emphasis is on completion of the current investment in SGS for the High Rainfall Zone. A key research driver for MLA in the proposed joint investment is the broadening of the geographical boundaries to include the wheat sheep and pastoral zones, and increasing the emphasis on mixed farming systems, as well as grazing systems.

Political Issues

The MLA is interested in co-investment for a range of reasons;

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- opportune timing for extending its investment in sustainable grazing systems to the sheep-wheat belt;
- obviate the problems of multiple channels of communications to the growers in this zone from different rural RDC and companies.; and,
- leveraging investment in areas where there are clear identifiable gaps in research needs and priorities for MLA levy payers.

MLA has reaffirmed its commitment to working with each of the RDCs and other stakeholders within the sheep-wheat zone (MDBC, NHT, NAP) to address issues of concern at the paddock, farm level and landscape level.

Financial Capacity

The MLA is in the final year of the major activity of the SGS program. Completion of the major research components of the program provides an opportunity for the MLA to invest in a significant new activity for the sheep-wheat zone.

The sub-program "Feedbase and natural resource management" has a budget of approx. \$2.205M p.a. for the 2002-03 year with similar commitments to 2007.

AWI

Research Relevance

The AWI Strategic Plan (2002-2007) lists:

Priority D - Wool Sheep as Good Business - products, costs, profits and sustainability

as one of their five key R,D & I investment priorities. This investment Priority has direct relevance in many areas to the general thrust of the proposed *Grain and Graze Program*. Furthermore, within this Priority, the Plan further identifies two "Lines of Innovation (Strategy)" which are directly pertinent viz.:

- *D2 Feeding - Pastures and nutrition to lift returns.*
- *D3 Enhance the Natural Resource Base for Wool Production.*

In addition, AWI's Strategic Plan also lists:

Priority E - Understanding and Adoption - relevant RDI and communication

as another investment priority. This Priority also directly links to Proposed Grain and Graze given its significant focus on increasing the skills of farmers to adopt innovative new methods.

Over the next five years, AWI intends to invest approximately \$25 million per annum (or about 34% of total expenditure) on Priority D and approximately \$7 million per annum on Priority E (10%).

It is evident that the high level concepts underpinning the *Proposed Grain and Graze* fits within AWI's future strategies.

Political Issues

AWI's Strategic Plan provides financial projections for investments over the next five years as they relate to Federal Government priorities. Approximately \$37 million (from

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an expected total income of around \$80 million) will be aligned to those priorities. A significant 25% of this investment will relate to enhancing the natural resource base.

Financial Capacity

AWI has several current investments in relation to their research priorities of "Feeding - Pastures and Nutrition" and "Natural Resource Management". Several of these projects are being undertaken in conjunction with other RDC's. Their 2002-2003 Operating Plan list the following relevant projects:

Feeding - Pastures and Nutrition

- Phalaris Improvement Program.
- NAPLIP
- Control of Red Legged Earth Mite.
- Biocontrol of Patersons Curse and Thistles
- Genetically Modified Pastures.

NRM

- Land Water & Wool
- AWI Pilot Revegetation Advisory Support Service

For the 2002-2003 financial years, NRM projects have a proposed investment level of \$ 9 million, of which \$2.4 million is currently uncommitted. Similarly, for the Feeding strategy, projected investment stands at \$3.8 million, of which \$1.5 million is currently uncommitted.

In addition, AWI's "Understanding and Adoption" Priority refers to a "Targeted Activities" strategy which includes working with producer groups such as Bestprac, Cicerone etc. Projected investment is listed as \$2.4 million with \$0.8 million currently uncommitted.

LWA

Research Relevance

The LWA Strategic R & D Plan 2001 - 2006 notes that one of its Strategic Directions is to have:

"enhanced activities in partnership with industry, particularly through working with other R & D Corporations".

It also notes one of its key challenges as:

"we do not yet have, in the broadacre sheep/cereal belt, farming systems that are competent in their management of water and nutrients at a landscape scale, and that are practical and profitable to implement".

Finally, one of LWA's Four Strategic R & D Arenas is "Improving Sustainability and Addressing Contemporary Issues in Primary Industries".

All these above strategic considerations are directly relevant to LWA's involvement in the proposed *Grain and Graze* Program.

Political Issues

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LWA is an R & D Corporation fully funded by the Federal Government. LWA has a primary role in facilitating "public good" research outcomes. The LWA mission statement encapsulates this:

"National leadership in generating knowledge, informing debate and inspiring innovation and action in sustainable natural resource management."

Without public good outcomes and a significant focus on NRM, LWA's investment in Proposed *Grain and Graze* would be tenuous.

Financial Capacity

LWA's current annual budget from Government appropriation is approximately \$12 million. A further \$7.6 million is derived from third party contributions to projects.

The breakdown across LWA's R & D Arena's which are relevant to *Grain and Graze* is as follows:

Primary Industry	\$5.9 million.
Vegetation	\$2.2 million.
Rivers	\$4.4 million.

Several programs within the Primary Industries Arena are directly relevant (although not duplicative) to *Grain and Graze* and include Sustainable Grazing Systems (SGS), Climate Variability in Agriculture program (CVAP), National Dryland Salinity program (NDSP) and Land Water and Wool (LWW). Each of these programs should be closely linked with any future mixed farming Program. Indeed information coming from them (both past and future work) would form the basis of some of the initial and ongoing extension information and application of research results.

The LWA Operating Plan for 2002-03 refers to current negotiations in relation to *Grain and Graze* and makes an allocation of \$248,000 for 2002/03.

Summary:

There is no doubt that all four RDC's have a clear mandate to invest in the type of R, D and I as generally proposed by *Grain and Graze*. The financial capacity and availability of new or additional funds vary between RDCs depending on the level of current investments and implementation of respective Strategic Plans. For example, the GRDC already has significant investments in their Sustainable Farming Systems portfolio whereas MLA is seeking new investments in this area.

Guiding Principles for Possible Future Joint Investment

On the basis of the information obtained in the conduct of this review and should the four RDC's agree to progress the development of a joint initiative for mixed farming enterprises, then the following "Guiding Principles" are seen as critical for success. These "Principles" are the base assumptions considered necessary for any collaborative program and would guide the formation of the Business Plan. They include:

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Structural

- Management overheads must be kept to commercially acceptable levels (maximum of 7%). Committee structures should be kept to a minimum to avoid the establishment of a bureaucracy.
- Each RDC must be able to control their investment (i.e. make individual decisions on projects), except perhaps for a small amount of pooled administration funding. In many instances, unilateral, bilateral or multi-lateral investments may be most appropriate.
- Project management, contract administration, management of IP and clear processes for brand management must be detailed.
- That the delivery (extension of information) and research components of any new Program should be separate, but linked.
- Each RDC must be able to continue to communicate individually to their shareholders about the program – a purpose built “magazine” is not needed.
- Furthermore, utilisation of existing producer groups should form the platform for producer driven commercial demonstration of new practices.
- A staged Implementation Plan for a new Program is likely to be most appropriate – building up over time as funds become available and new issues identified.
- The overall cost of a revised Program is likely to be less than the proposed \$6.5 million per annum of new funding. Indeed, individual RDC's would decide on their variable investment level.
- Investment requirements should be determined by priorities, appropriate quality in proposed R, D & I and not simply the necessity to expend funds in a particular program area.
- A producer participative approach should form a part of any new program - once the Program has been clearly established.
- The title *Grain and Graze* should be reviewed, as it is not pertinent to all RDC's.

Research

- Appropriate protocols and benchmarking should provide a methodology to enable the four RDC's to share information about research priorities (or proposals), research outputs, outcomes and identify opportunities for co-investment.
- For any revised Program, and for each specific project (or sub-program) within it, a clear problem definition and quantifiable expected outputs and outcomes must be detailed.
- There must be ability for organizations to "roll" current projects into the revised Program where the relevant RDC sees this as appropriate.

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- Emphasis should be given to developing a Triple Bottom Line based on a commercial operating model. “Public Good” outcomes are necessary and must be pursued.

Outcomes of this Review

The initial basis for this review was the development of a Business Plan for the implementation of the proposed *Grain and Graze* program. The terms of reference identified a number of steps toward the completion of that task over a period of six weeks.

The development of a business plan, appropriate for a proposed multi-million dollar investment over five years requires detailed and rigorous analysis. Such a business plan would be predicated on the availability of adequate information and data analysis. Recognising the constraints of the provision and access to data in the last 12 days our view is that the current documents failed to satisfy a number of basic requirements.

1. Adequate definition of the R, D & I problems appropriate to the priorities important to respective shareholders in any joint program.
2. Adequate definition of the market for any R, D and I. This is particularly relevant to the question of delivery of research outputs/products and outcomes to the growers.
3. Definition of an operational model with appropriate structures and budget to ensure maximum likelihood of delivery.
4. Clear definition of strategic advantages of appropriate bi-lateral and multi-lateral investments leading to significant added value to current or proposed investments.

In addition,

5. There is significant and useful data available from the original scoping study and consultation processes, however it is the reviewers view and that of some of the RDC's that insufficient consideration was given to consultation with the ultimate market – the growers and producers.

As already recognised by the respective senior executives, there have also been a number of fundamental breakdowns in communication of the respective needs and capacity to participate in a collaborative venture by the GRDC, MLA, AWI and LWA.

General Key findings of this Review are:

- 1) While only a very quick review has been undertaken of each of the four RDC's Strategies, Plans and Projects it is apparent that:
 - a) A joint initiative of the type proposed by *Grain and Graze* would meet each RDC's Strategic Directions
 - b) There appears to be opportunities (gaps) in the RDC's current research and particularly delivery plans for mixed farming enterprises.
 - c) With the exception of the GRDC the RDC's have uncommitted funds that have been "allocated" to work within this general area (productive sustainable

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solutions). The GRDC may be able to allocate funds as other projects wind-up or complete.

- 2) Despite different cultural and strategy implementation timing issues, sufficient goodwill and desire exists between the four RDC's to continue to explore the establishment of an appropriate joint initiative for mixed farming enterprises.
- 3) An obvious area of collaboration is for the delivery of consistent messages (of either existing or new information) and skills development for mixed farming enterprises. This would not mean removal of existing communication methods or farmer groups: rather coordinating the approach between the four RDC's.
- 4) While it would appear that joint research opportunities exist, there is a need to undertake a comprehensive identification of the specific production/sustainability issues faced by mixed farming enterprises and to identify gaps in the RDC's current portfolios. Some potential areas for national research include:
 - a) New cost-effective methods to reduce soil acidification.
 - b) Better understanding of the interface between animal and grain production using enhanced sustainability practices.
 - c) Methods to (and varieties of) increase perennial species in rotational situations.
 - d) Increased use of available rainfall and reductions in nutrient loss.
 - e) Methods to increase biodiversity in rotational situations.
 - f) Simple tools or models that mixed farmers can use to measure their performance from an environmental point of view.
- 5) Any new Program should comprise two primary components:
 - a) Delivery
 - i) Packaging of consistent messages (or training) for mixed farming enterprises from current knowledge. This will enable rapid recognition "on the ground" of the new Program.
 - ii) An ongoing commitment to co-ordinate the release of new information as it becomes available throughout the Program - through RDC's existing mechanisms.
 - b) Research
 - i) Collaborative joint projects of national significance (such as some of those listed above) and identified through the proposed Gap Analysis.
 - ii) Regionally specific producer driven sites to demonstrate the benefit (or trial) of new technology.
- 6) If a new Program is initiated the following Management Structure is proposed:
 - a) A small Program Coordinating Group (PCG) comprised of a representative of a senior manager from each RDC with an independent grower Chair should be established. Separate research and extension sub-groups with specific skills may be required.

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- b) The PCG should bring forward and liaise on:
 - i) Existing relevant information and training packages.
 - ii) New research ideas or proposals which others may wish to co-invest in.
 - iii) Consistent research protocols.
 - iv) New research findings to be distributed to producers.
 - c) Appointment of a part-time Coordinator funded from combined resources from each RDC.
- 7) The "Overarching" Outputs from the creation of a new Program could be:
- a) **Marketing** - evidence of the four RDC's working together for their common shareholders.
 - b) **Communication/Extension** - consistent messages to mixed farmers in relation to production and sustainability issues through a range of products and services.
 - c) **Training/Education** - consistent skills development packages for mixed farmers either unilaterally or multi-laterally.
 - d) **Research** - liaison on research priorities and opportunities and commissioning of projects - national and regional.
- These should be clearly quantifiable against agreed performance measures that emphasise and uncover the benefits of collaboration.
- 8) The Outcomes from the creation of a new Program could be:
- a) Significant productivity and profitability gains from sustainable mixed cropping and grazing system
 - b) Reduced duplication and cost savings for RDCs, research providers and producers.
 - c) Recognition by the producers of the individual RDC contributions to the overall program.
 - d) Plugging the gaps in the research and delivery mechanisms for producers.

Next Steps

Following consideration of this Report, RDC's should decide upon either of two options. They are:

1. Abort plans to move toward a joint initiative for mixed farming enterprises.
2. Progress plans to undertake a joint initiative. To pursue this process would require:
 - a. Commission the preparation of a Business and Operating Plan for a new Program including

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- i. Conduct a research Gap analysis.
 - ii. Coordinate the conduct of a Benefit Cost Analysis prior to submitting the Plans to each RDC for their consideration.
 - iii. Produce a Business Plan and Operating Plan.
- b. Establishment of a new Program Coordinating Group incorporating:
- i. Appropriate senior managers to oversight program.
 - ii. Appropriate program managers to consider common benchmarking and protocol development for R & D undertaken in the zone.
 - iii. A Joint Communications and Product Service Delivery Group to consider across RDC extension messages on sustainable farming in sheep-wheat zone.
 - iv. A call/commissioning of research proposals for some key national priorities
 - v. Coordinator and general administration costs of \$50K
- c. Approval of an investment of up to \$60K in the first year per RDC.

Proposal for Stage 2 - 'The Way Forward'

The reviewers are of the opinion that:

1. The proposed program as described in the Scoping study and Implementation Plan ("Mother" document) should be completely overhauled.
2. That there is recognition of the need for the immediate implementation of agreed activities prior to the completion of an agreed business and operational plan.

The Solution:

The following activities are recommended as possible ways forward providing that the joint Chief Executives/Executive Directors of the AWI, GRDC, LWA and MLA agree to pursue collaborations in the area as proposed above.

A. Business Plan Development

1. The current terms of reference for this consultancy should be reviewed to adequately address the problems identified above and proposals below. The development of a Business Plan should then be commissioned.

Timeline: Immediate

Implementation: 4 months

Costs: Estimated \$40K up to 60K (inc. broadened consultation)

B. Implementation of Immediate Activities

The process for the development of the proposed *Grain and Graze* initiative has been too long. The RDC's now have an imperative to not only to be seen as delivering but

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actually doing work on the ground - this requires immediate actions that can be easily folded into the business development process. The reviewers recommend;

1. Immediate consideration to be given to commissioning a desk review of current programs operated within this general field of R, D & I. This review should not be aimed at the appropriateness or otherwise of the current past activities - this is a role for the respective organisations. This review should take the form of a gap analysis with particular emphasis on identifying the problems, tactical and strategic issues at the interface between the various RDC's current or proposed investments in sustainable farming systems. Ideally this would be conducted within the auspices of the consultant(s) undertaking the Business Plan. Each RDC would benefit from having this analysis available.

Timeline: 3 months

Cost: Estimated \$30K-\$50K

2. In addition to the need to examine the gap in R,D and I at the interface between the investments by the RDCs, there should be immediate recognition of the need to address;
 - a) Appropriate protocols and benchmarking to provide a methodology to enable the four RDC's to share information about research priorities (or proposals), research outputs, outcomes and identify opportunities for co-investment.
 - b) New cost-effective methods to reduce soil acidification.
 - c) Better understanding of the interface between animal and grain production using enhanced sustainability practices.
 - d) Methods to (and varieties for) increase perennial species in rotational situations.
 - e) Increased use of available rainfall and reductions in nutrient loss.
 - f) Methods to increase biodiversity in rotational situations.
 - g) Simple tools or models that mixed farmers can use to measure their performance from an environmental point of view.

These are problems that are not just at the interface between the RDC current investments but the core of sustainability for all farming enterprises. Particular interest already exists in immediate multi-lateral investment by MLA, LWA and AWI in this area. GRDC would be interested as funds became available. LWA could be requested to call for or commission research for these issues on behalf of the MLA, AWI and itself. The general call for submissions from research providers would aid each RDC in formulating its investments. Each RDC could potentially manage part of the overall research within their existing operating structures

Timeline: Call 2 months

Implementation: 4 months

Project Co-ordination Costs: from existing resources of RDC's.

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Evaluation of Proposals: \$10K

Project Cost: to be determined.

3. Establishment of a Program Coordinating Group reporting directly to the combined RDC CEO's through an appropriate Program Manager or Consultant. The PCG should bring forward and liaise on developing consistent extension and training methods for mixed farming enterprises (see point 4 below); develop benchmarking and common research protocols; and call for and liaise on new research projects which may be jointly funded.

Timeline: Immediate:

Costs: up to 50K pa.

4. Development of a working group of the Communications and Product Delivery managers of each of the RDCs to investigate alternative methods and vehicles for delivery of products to growers and producers paying levies to more than one RDC. This working group should report to the PCG. It must recognise the need for each RDC to maintain an appropriate profile - 'branding' - with its shareholders and stakeholders; that highly effective grower-advisor groups already exist; and that each RDC has recognised and well respected publications as communication tools. There needs to be a *clear* message that: *duplication is out – adding value is in.*

Timeline: Immediate

Implementation: 1 January 2003 or sooner.

Project Co-ordination Costs: internal minimal

Project Costs: Determined by an agreed implementation strategy.

Co-coordinator: appointed from within RDCs current senior managers.

Overall Costs, Timelines and Reporting Structures

	2002-03 Cost	Timeline	Responsibility	Reports to
New Program Coordinating Group	\$20K	<i>Immediate</i>	<i>CEO</i>	<i>CEOs</i>
Business Plan	\$40-60K	<i>December 2002</i>	<i>Consultant</i>	<i>CEO</i>
Inc. detailed BCA	<i>add \$10K</i>			
Gap Analysis	\$30-50K	<i>November 2002</i>	<i>BP Consultant</i>	
Benchmarking and Common Research Protocols	\$20K	<i>Begin Immediate</i>	<i>Program Managers</i>	<i>PCG</i>
Commissioning and Evaluation of Proposals	\$10-20K	<i>Immediate</i>	<i>LWA</i>	<i>PCG</i>
Communications Working group	\$0-20K	<i>Immediate</i>	<i>Communications and Product Delivery Managers</i>	<i>PCG</i>

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Appointment of Coordinator	\$30K	December 2002	PCG and Managing Agent	PCG
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Total Cost Administration approx. \$50K

Total Cost Consultants Reports and Analyses \$110-180K

Overall Costs 2002-03 \$160-230K or approx \$60K per RDC.

	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Establish PCG											
Appoint Consultants											
Business Plan Preparation											
Research Gap Analysis											
Benefit Cost Analysis											
Develop Research Protocols											
Research Projects - Call											
Communication Work. Group											
Appoint Program Coordinator											
New Program Commences											
Communication Messages											
Research Projects Commence											

Draft Activity Chart - New Program Option - 2002/03

Key

Establishment	
Implementation	

Conclusion

At the completion of this suite of work the outputs would be:

- A Business and Operating Plan, including an appropriate BCA.
- A gap analysis of current sustainable farming problems in the wheat-sheep zone defining areas for potential areas collaboration and co-investment.
- A joint communication strategy for growers-producers in the wheat-sheep zone and rapid visibility of the joint RDC approach.
- A list of potential commissioned projects.
- Benchmarking and common research protocols.
- An identified and appointed program coordinator.

Appendix 1 – Key Elements of Consultants Brief

REQUIRED OUTCOME

A detailed, professionally presented, Business Plan that will provide a foundation for a final investment decision by the four RDCs.

The Business Plan should:

- summarise the need for, and detail the potential outcomes from, a multi-commodity farm systems R&D program;
- emphasise the value proposition of a joint initiative funded by the four R&D corporations/companies;
- identify key audiences and key messages for the initiative, suggesting potential names for the initiative (that to date has been known by the short-hand 'Grain & Graze');
- assess the merit of the draft Implementation Plan as a means to deliver such a program, and make any relevant recommendations;
- provide a preliminary comparison of the proposed joint initiative with any priority investment opportunities nominated by individual RDCs;
- record relevant conclusions and recommendations; and
- be presented in a highly professional format, befitting the scale of the research investment involved.

TERMS OF REFERENCE

1. Review material available regarding Grain & Graze (including the Scoping Study, the draft Implementation Plan, and the Preliminary Cost Benefit Assessment) and the issues it addresses (eg relevant National Land & Water Resources Audit reports).
2. Clarify the focal problems or research issues requiring attention.
3. Prepare a "Situation Analysis" of relevant issues affecting the four RDCs, based on information presented in their respective planning documents (eg 5 Year Plans) and the consultant's understanding of the agricultural R&D environment.
4. Review the relevant R&D programs of the four RDCs;
 - a. their goals and objectives,
 - b. current and proposed research programs and projects, and
 - c. existing and proposed delivery mechanisms.
5. Clarify and distinguish the Research & Development elements and the extension and delivery elements of a possible program; including the identification of different regional and sectorial market segments.
6. Propose a program in the context of the above investigations and document the measurable outcomes it would achieve.
7. Edit, design and layout the draft Business Plan
8. Present the draft Business Plan and Recommendations to the Managing Directors of the four RDCs.
9. Revise, edit and deliver the final Business Plan.

MILESTONES

1. Commencement by Monday July 15th, 2002.
2. Draft Business Plan to be presented within six weeks of commencement; ie Friday August 23rd, 2002.

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3. Final Business Plan delivered within two weeks of the presentation of the draft Plan; ie by Friday September 6th, 2002.

REPORTING ARRANGEMENTS

Land & Water Australia will contract and project manage the consultancy on behalf of the four RDCs.

Direct reporting will be to Andrew Campbell (Executive Director, Land & Water Australia). When addressing relevant issues raised by the consultant he will seek responses from, or direct specific enquiries to, the appropriate RDCs.

Appendix 2 – Documentation Reviewed

- “*Grain and Graze – Total System Health*”, Mother Document (Implementation Plan), June 2002.
- “*Grain and Graze Scoping Project*”, Final Report, April 2002.
- “*Grain and Graze*”, Various Industry Consultation Reports and Meeting Minutes.
- “*Grain and Graze*”, Minutes of Management Committee.
- AWI – Strategic Plan: 2002-2007, June 2002.
- AWI – Operating Plan: 2002-2003, June 2002.
- GRDC – “Driving Innovation”, Five Year Research and Development Plan, 2002 – 2007.
- GRDC – “Productive Solutions to Complex problems”, Farming Systems Groups, May 2002.
- GRDC – Annual Operational Plan: 2002-03
- MLA – “Feedbase and NRM Operational Plan”, 2002
- MLA – Lamb And Sheepmeat Research and Development Program
- LWA, Strategic R & D Plan, 2001 - 2006
- LWA , Annual Operational Plan, 2002 – 03