

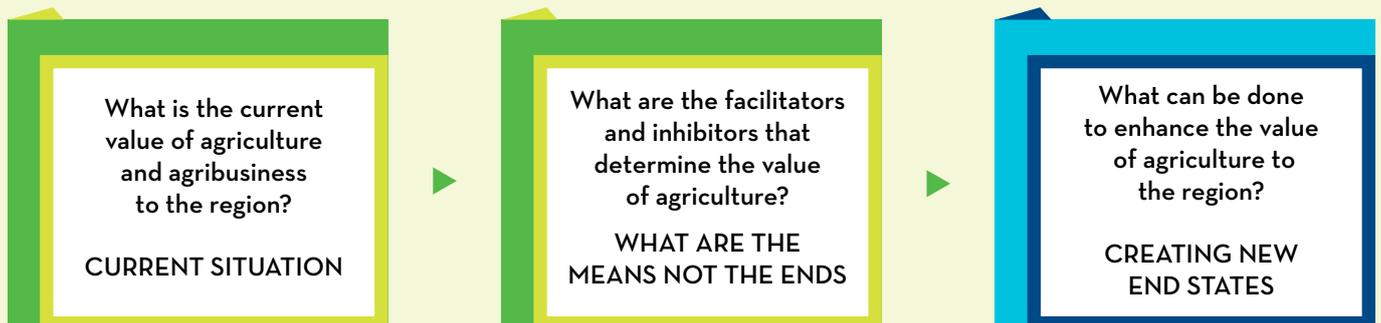
PROMOTING AGRICULTURE IN NORTH WEST TASMANIA



RURAL INDUSTRIES
Research & Development Corporation

The Rural Industries Research and Development Corporation (RIRDC) has undertaken a regional study of the role and value of agriculture to the North West area of Tasmania. The project sought to achieve two things: firstly, it aimed to identify a framework that could enable the contribution of the agricultural sector to be consistently and effectively considered and enhanced. Secondly, the project sought to apply this framework to assess the role and value of agriculture in the North West area of Tasmania.

Three key questions helped to shape the project:



About the North West Tasmanian Region

The North West Tasmanian region considered in the project covers an area of 22,492 square kilometres, approximately one third of the area of Tasmania.

The focus area includes eight Local Government Areas: King Island, Circular Head, Waratah/Wynyard, Burnie, Central Coast, Devonport, Kentish and Latrobe. The West Coast Local Government Area was excluded from this analysis due to there being little agriculture.

These areas were selected due to agriculture being a significant industry in the region's economy, it exhibits broad community diversity and includes significant agricultural marketing chains.

The characteristics of the North West Region of Tasmania are not only attributable to its rich resources, natural beauty and industrious people but also to its history and the constraints of its rugged topography. Areas of the North West have been able to be cleared. However the steep topography in the North-South ridges and valleys affect land-use and transport access.

The region's core economy is based on advanced manufacturing, food and agriculture, forestry, mining and mineral processing and tourism. The region is in transition from a strong reliance on commodity production to a more diversified economy.

The regional economy depends on the strength and prosperity of the traditional, core economy for its survival. There is significant inter-dependence between primary, secondary and service-based industries and among the urban activity centres and the region's rural areas.

The North West Tasmanian region has 21 per cent of the state's population (113,996) (ABS, 2012), is relatively homogeneous, ageing faster than any other in the nation, has shortages of those in the child raising age groups and has the lowest labour participation rates in the country.

Labour market conditions are weak with high unemployment, low labour force participation and declining full-time jobs. Low educational attainment levels under-pin youth disengagement and the high level of jobless families because there is a mis-match between capability and job demand (Department of Economic Development Tourism and the WArts 2012).

The economic contribution of the North West Tasmania region's agriculture to Gross Regional Product (GRP) is at least \$440 million for the regional economy (\$5.35 billion), directly employing approximately 3,850 people but indirectly, through flow-on effects, probably at least 7,038 or 17.4% of the working regional population of 40,370.



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The Value Assessment and Development Framework

The process for establishing a meaningful framework to consider the current value of agriculture and agribusiness to the region identified complexities of the many factors that influence regional economies and the difficulty isolating these factors for analysis. It also identified the lack of consistent data at the appropriate scale and timing for effective use in this context.

To identify the current situation and the potential changes and facilitators influencing agriculture in the region, the project adopted and tested the use of three complementary frameworks, each bringing a way to focus analysis and identify where opportunities and challenges specific to the region may lie.

Firstly, the 7 Capitals by Emery & Flora (2006) aims to inter-connect attributes that shape vibrant, diverse and robust economies, social equity and empowerment and healthy ecosystems. The 7 Capitals are natural, cultural, human, social, political, financial and built. Agriculture in the region is analysed against each of the capitals to draw out the current situation, strengths and weaknesses of the region.

Building on this analysis, innovation considerations were assessed. Innovation is critical for improving competitiveness in world markets as globalisation accelerates

(Arumapperuma, 2006) as well as necessary to maintain access to supermarkets and stay relevant to the modern retailing system (Keogh, 2013; Reardon & Timmer, 2012). A broad definition is essential for understanding agrifood innovation. It can be categorised as product, process, marketing, supply chain and strategic management or governance of the firm or chain (derived from Schumpeter, 1934). Innovation should also be considered in relation to the magnitude of the innovation – whether it is a radical change or continuous improvements (Miles, Paul, and Wilhite, 2003). Understanding current performance and attributes of agriculture in the North West Tasmania focus area in relation to each of these categories can help understand where the agricultural sector is at now and potentially identify opportunities or barriers.

The third incorporated framework, which aims to complement the 7 Capitals and Innovation analysis, is the use of Cooke's (2007) Policy Elements which sought to consider possible actions to assist the development of 'constructed advantage' in the region through agriculture. Cooke is a highly regarded architect of the regional innovation systems policy in Europe. Four action areas were considered – economy, governance, knowledge infrastructure and community culture.

Applying the Framework in North West Tasmania

This *Value Assessment and Development Framework* was piloted in the North West Tasmania area drawing on:

- Existing available data and research (such as demographic analysis, other government reports and data, and industry resources), and
- Input from stakeholders was obtained through
 - Interviews with 13 agribusiness executives and 10 farmers
 - Four focus groups with a cross section of community members, farmers and scientists
 - A small Innovation and Entrepreneurship Survey – capturing input from 11 agribusinesses and 49 farmers.

A state of the region report was developed to obtain feedback from stakeholders through focus groups and interviews. To consider future directions and opportunities for the region, scenario planning was used to identify possible scenarios and what might be required to achieve those preferred end points for the region and agriculture's contribution to the region.

The three components that make up the *Value Assessment and Development Framework* ensure that a one dimensional economic perspective is avoided and adopts approaches that both help the agricultural sector assess and communicate their contribution to the region but also provide information on strengths and weaknesses that can assist planning for the future.



CURRENT SITUATION

What is the current value of agriculture and agribusiness to the region?

7 CAPITALS

Regional endowments: driving and restraining forces



Natural Capital

Air, soils, water (quality and quantity), climate landscape, biodiversity, environmental evidence



Cultural Capital

Demographics, history, mindsets about change, education and agriculture



Human Capital

Agricultural expertise, numeracy and literacy, managerial skills, leadership, ability to source knowledge, breadth of agricultural labour, land ownership knowledge



Social Capital

Benchmarking groups, social connections, relationships, social license for farming, local and international networking



Political Capital

Regulatory environment, industry associations, voting powers of farmers, local govt, access to state/fed govt, green lobby



Financial Capital

Business access to finance, investment culture, financial institutions, support from institutions, grants for innovation



Built Capital

Physical assets and infrastructure, Transport infrastructure, water supply, waste management, processing equipment, telecommunications

WHAT ARE THE MEANS NOT THE ENDS

What are the facilitators and inhibitors that determine the value of agriculture?

INNOVATION*

Facilitators & inhibitors of regional agri-food productivity



Product

New products, features, benefits, presentation and forms



Progress

Management innovations involving new or new to industry changes to the process of how the product is created, produced and marketed producing novelty in the product increased efficiency of the process



Marketing

This includes both market development by entering new markets and market creation by offering radical new products and thereby creating a new market



Supply chain

The development of new sources of inputs or the creation more efficient and effective supply chains



Governance

Strategic innovations that change the businesses' position in the market, the value proposition and even the domain of the business

*** magnitude of innovation may be radical, or it may be continual/cumulative**

WHAT CAN BE DONE?

To enhance the value of agriculture to the region? Creating new end states/outcomes via plans, strategies and policies

POSSIBLE ACTIONS



Economy

Constructing future sources of economic competitiveness in the region



Governance

Governance mechanisms that support a proactive approach to the region's future



Knowledge

Enhancing knowledge development, exchange and utilisation to construct advantage in the region



Community and culture

Developing the skills, capacity and commitment to create more efficient and effective industries and region



Potential, possible, plausible and preferred futures

CURRENT SITUATION:

What is the Current Value of Agriculture and Agribusiness to the North West Tasmania?

Conclusions for the North West Tasmania area against the 7 Capitals and Innovation considerations are presented below. These conclusions made by the University of Tasmania researchers and its research team draw in desktop information, interviews and focus group feedback and an innovation and entrepreneurship survey.

7 CAPITALS CONCLUSIONS FOR NORTH WEST TASMANIA

 <p>Natural Capital Air, soils, water (quality and quantity), climate landscape, biodiversity, environmental evidence</p>	<p>The region's mild climate, soils, abundant water and environmental credence are a wonderful asset to agriculture that, whilst there are inherent constraints associated with island isolation, leveraging the region's natural capital for advantage presents future opportunities.</p>
 <p>Cultural Capital Demographics, history, mindsets about change, education and agriculture</p>	<p>Whilst there is a deep cultural pride in the region and a resilient, supportive community, the region's culture is not outward looking so lacks global understanding, is resistant to change and tend to blame others for the region's problems.</p> <p>There is widespread belief that "... why should we have to change, if we hang in there long enough, it will come right..." a potentially misplaced optimism.</p>
 <p>Human Capital Agricultural expertise, numeracy and literacy, managerial skills, leadership, ability to source knowledge, breadth of agricultural labour, land ownership knowledge</p>	<p>There is considerable commitment to the region and substantial professional expertise exists within the advisory inputs to agriculture. However, farmers lack the education and skills necessary to be able to improve their competitiveness in world markets. Local labour inputs to agriculture could be significantly improved.</p>
 <p>Social Capital Benchmarking groups, social connections, relationships, social license for farming</p>	<p>There are strong, mutually supportive relationships between the broader community and agriculture per se and large agribusiness, as well as within agriculture itself, but paradoxically this strong individual competitiveness amongst farmers works against collaborative efforts that would assist domestic and international competitiveness.</p>
 <p>Political Capital Regulatory environment, industry associations, voting powers of farmers, local govt, access to state/fed govt, green lobby</p>	<p>Although access to politicians is good, there is a general feeling of disempowerment amongst farmers because they feel they are unable to influence the business environment which they blame for their problems. Government generally but local government, in particular, is regarded as slow, siloed, unresponsive and lacking in understanding of modern farm business management.</p>
 <p>Financial Capital Business access to finance, investment culture, financial institutions, support from institutions, grants for innovation</p>	<p>There is an almost universal reliance on banks for financing and little understanding of broader sources or financial instruments.</p>
 <p>Built Capital Physical assets and infrastructure, transport infrastructure, water supply, waste management, processing equipment, telecommunications</p>	<p>Built Capital is generally regarded as adequate but Taswater scheme water, electricity and Bass Strait Freight serves are regarded as too expensive and customer service quality poor.</p>

An innovation and entrepreneurship survey of agribusiness and farmers in North West Tasmania was conducted in partnership with the Tasmanian Farmers and Graziers Association (TFGA) and the support of the Tasmanian Agricultural Productivity Group (TAPG), an association of 43 agribusinesses in the region. The survey obtained feedback from 49 farmers and 11 agribusinesses in the North West Tasmania region.

INNOVATION CONCLUSIONS FOR NORTH WEST TASMANIA

The key conclusions made from the survey analysis which builds on the 7 Capital assessments are:

- The average farm size of 154 ha utilised as a mixed farming enterprise, is too small for the large scale production required for profitable commodity production.
- A generally low level of education was observed supporting the key conclusion related to Human Capital previously assessed.
- Most of the chain relationships are based on spot markets or specifications contracts.
- North West Tasmania regional agrifood chains are governed by price-based mechanisms and inflexible specifications-based contracts that are often inadequate for the complexities of collaborative innovation or 'co-innovation'.
- For many of the region's value chains there is a general lack of strategic alignment, coordination and co-innovation necessary to create consumer value.
- Chain participants are opportunistic and lack the long term commitment necessary to develop their value chain.
- There is very little evidence of vertical market coordination with the exception of the packing house contracts. Some farmers in the North West Tasmania region have attempted to create their own vertical marketing systems through some farm gate marketing and value added production, but success is highly related to location and proximity to tourist traffic.
- There appears to be insufficient information sharing about chain issues and this is consistent with the form of governance. This has implications for claims made regarding the perception of moderate levels of innovativeness.
- There was trust in North West Tasmania region agrifood chains which indicates chain participants believe that their partners would not deliberately do harm to their business interests, but there was little confidence in partner's supply performance.
- Marketing and evidence of a strong marketing orientation where agribusiness leverage market intelligence to create value for consumers and themselves is largely absent.
- Little evidence of any form of systematic sharing of information within value chains. Likewise, there appears to be a lack of focus by agribusiness on understanding customers' explicit and implicit needs.
- There is a lack of sharing of the benefits of innovation with those who create added value through innovation, a fundamental incentive for co-innovative value chains. This is consistent with the form of spot market or contract form of governance and the apparent lack of innovativeness, conservatism and resistance to change indicated in the survey responses and interviews.
- There were examples of positive innovations starting to emerge in the region. These were observed for both continuous and radical innovations. Building on these innovations will play a role in positioning agriculture in the region.



WHAT ARE THE MEANS AND NOT THE ENDS?

What are the Facilitators and Inhibitors that determine the value of agriculture and its contribution to the region?

The conclusions for the region against the 7 Capitals and Innovation were then used to identify foundations and the possible levers or constraints for agriculture within the North West Tasmania region. These can be used to help identify opportunities for agriculture and the region to strengthen any weaknesses and position themselves better to take advantage or create opportunities.

KEY FACILITATORS AND CONSTRAINTS AGAINST THE DIFFERENT INNOVATION FORMS

Innovation	Possible Facilitators or Enablers	Possible Constraints
Product 	<ul style="list-style-type: none"> • Strong local business networks, social connectivity • Existence of a few highly innovative companies as mentors or hubs • Forums for co-competition¹ between agribusinesses • Co-innovation² between the businesses within value chains • Construction of a verifiable Tasmania brand e.g. GMO-free, hormone growth promotant-free beef • Government support to facilitate policy initiatives e.g. Tasmanian Innovation Fund 	<ul style="list-style-type: none"> • Competition between processor networks • Increasing economic non-viability of many medium to small farms • Growers reluctance to share ideas or source info from local networks • Reliance of many businesses on 'someone else' (the government) to assist • Historic reliance on the easy solution of processed commodities
Process 	<ul style="list-style-type: none"> • The development of production & marketing clusters • Unassisted evolution of new farming business models • New TIA exemplars of alternative business structures and business models 	<ul style="list-style-type: none"> • Legislative roadblocks, green/red tape • Siloed government information • Lack of understanding of all levels of government about modern agriculture and the needs of innovative businesses per se
Markets 	<ul style="list-style-type: none"> • Establishment of farm benchmarking groups • 'Big data' projects as part of <i>Sense-T</i> • The TIA strategy to broaden its engagement with whole chain systems and inform policy development • The development of multi-faceted private research capacity in North West Tasmanian businesses • Emerging productivity and value chain focus in government & corporate sectors • Private-public research collaboration • Private/DEDTA sponsored agric. travel 	<ul style="list-style-type: none"> • Lack of take-up and persistence of farm benchmarking groups • Decline of the VET training capability at Burnie • Increasing disempowerment and hopelessness by some farmers • Lack of skills to increase economic non-viability of medium to small farms • Rapidly declining enrollments in VET agricultural training • Poor existing knowledge and skill levels

² Co-competition occurs when companies who are otherwise competitors collaborate to solve common problems.

³ Collaborative innovation between the companies in a value chain, a more sustainable form of innovation.

Innovation	Possible Facilitators or Enablers	Possible Constraints
<p>Supply chain</p> 	<ul style="list-style-type: none"> • Influx of external ideas – Influence of the ‘kiwis’ on innovation in the dairy sector • New venture networking – cluster emergence • Value chains adopting co-innovative practices • ‘Lead businesses’ in value chains leading change i.e. transformational leadership • Suppliers willing to be ‘transformational followers’ 	<ul style="list-style-type: none"> • Expressed conservatism & risk aversion of farmers • Average age of farmers in the high 50s militating against new venturing • Low motivation and skill levels amongst young people • Poor image of careers in the agrifood industry, particularly in farming • Corporate secrecy regarding value chain management benefits
<p>Strategic management or governance</p> 	<ul style="list-style-type: none"> • Stakeholder forums visioning, planning and facilitating the implementation of new ideas through sharing or developing new knowledge, skills and resources – innovation platforms • Marketing clusters to improve market knowledge, access and performance • Targeted government policies and facilitation to support innovation platforms and marketing clusters • Design of chain level interventions which target business/individual self-interest 	<ul style="list-style-type: none"> • Culture of independence • Consultation fatigue • Resistance to change • Lack of whole-of-government approaches



WHAT CAN BE DONE?

What are the Facilitators and Inhibitors that determine the value of agriculture and its contribution to the region?

The project provided the opportunity for stakeholders to suggest ideas about the future of agriculture and the region. These ideas were formulated into three plausible scenarios. The development of scenarios helped stakeholders in the region to focus their goals and desires. It also allowed subsequent planning to be focused and targeted around these future desires. Each scenario was analysed against the identified facilitators and constraints to assess and identify preferred future and how the 'constructed advantage' may be developed.

The 'Diversity Rules' scenario was identified as the preferred future for the North West Region (presented in Box 1). If this preferred future is adopted, what actions may be necessary to support and overcome the constraints to its development? Mapping this preferred scenario against the four key directions (or policy platforms) identified by Cooke (2007) helped understand what is needed to facilitate development in agriculture in North West Tasmania and where the gaps lie.

Possible Actions

Economy

The development of a few highly innovative companies

- Continued creation of opportunities for development & strengthening of social capital
- When issues arise, use these local networks to bring people together to explore their resolution
- Tell the success stories – celebrate the achievement of these innovative companies
- Understand & communicate the elements of their success
- Provide opportunities for exposure to new research, technologies & opportunities

Formation of the TAPG as a forum for co-competition between agribusinesses

- Continue action in this area

Collaboration between retailers & marketers (e.g. on cool climate broccoli; purple carrots & heritage vegetable lines)

- Continue activity in this area
- Identify areas where collaboration may bring highest advantage (& match programs & support to these)

Review of Tasmanian GMO status could lead to a proactive construction of future advantage

- Watching brief

DEDTA will fund innovation, expansion for export, not local domestic e.g. Tasmanian Innovation Fund

- Ensure DEDTA program meets & understands the requirements of agribusiness

Governance

The development of production & marketing clusters

- Undertake a project to identify agribusinesses in the region according to product/scale/market, bring potential participants together and explore models for the development of production/marketing clusters that offer synergy with regional situation & businesses.

Unassisted evolution of new farming business models

New TIA exemplars of alternative business structures & business models

- Ensure that new farming business models & TIA exemplars are communicated broadly to industry; Provide opportunities for farmers to understand & skill up to adopt them where appropriate.

Possible Actions (cont)



Knowledge Infrastructure

Emerging productivity & value chain focus

- Support

Emergence of 'big data' projects as part of Sense-T

- Ensure Sense T team have regular contact with agribusiness interests
- Provide opportunities for farmers to understand & potentially participate in the roll out of Sense T
- Ensure that farmers have access to data generated by the project

The establishment of TIA with distributed biophysical research capacity

- Promote opportunities for information sharing &/or participation

Establishment of some farm benchmarking groups

- Promote existence of groups & opportunities for involvement
- Ensure that they are farmer driven

The development of multi-faceted private research capacity

Private-public research collaboration

- Communicate & encourage information & sharing between organisations
- Create opportunities for industry to explore & collaborate with public research organisations

Privately sponsored agricultural travel tours

- Travel scholarships for innovative farmers

DEDTA business development workshops e.g. 'Business with China'

- Continue to progress



Community and Culture

Small longstanding networks that meet to generate ideas

- Facilitate continuation if necessary

Consultancy that organises focused international farm travel tours

- Work with industry bodies to target potential areas for exploration & expand

Influence of the 'kiwis' on innovation in dairy

- Ongoing learning – offer study tour to NZ, Europe, USA?

The role of networking in new industries (e.g. tulips, truffles, whisky)

- Research



Box 1 – Scenario: “ Diversity Rules”

This scenario envisages the growth in the broad diversity of North West Tasmania region Agriculture; diversity of products, methods and business models deriving from the diversity of new entrants (culture, experience, religion and educational background) and the broadening worldview of many local residents. This is driven by increasing corporate investment along with increasing viability of family farms through higher value commodity production and value-adding of commodity products as well as high value niche production:

- Competition for productive land has intensified increasing the use of technology and protected cropping
- Disaggregation of 2013 land holdings into less productive activities has been halted
- Average ROI for commercial North West Tasmania region farms increases above 2%, but unit costs fall and margins increase due to improved scale for commodity production
- Division and professionalisation of labour occurs on larger corporate farms but quality labour inputs are increasingly harder to recruit for small farms, hence greater reliance on labour hire businesses and 457 visas
- Increasingly ALL agrifood producers have tertiary agricultural and business qualifications
- As older farmers reach retirement age they increasingly access new business models (e.g. unit trusts, leasing, equity partnerships) to retain ownership, ‘farmer status’ and achieve retirement annuity
- Corporate dairy companies have expanded into new dairying areas; some land has reverted back from uneconomic smallholder commodity vegetable production; smaller, marginal dairy farms have stayed viable by the use of robotic milking machines
- Increasingly ALL producers use technology to reduce unit costs; improve productivity and sustainability
- Simplot (Australia) Pty Ltd’s factory at Quoiba has been refurbished, other agribusinesses and processors have moved to Tasmania to hedge their exposure to climate risk for fresh produce
- Value-adding of commodities is a growing trend across agriculture to improve margins for domestic markets and gain access to food safety conscious Asian markets
- State Government, recognising the importance of agriculture to the state’s economy, has improved strategic planning and policy and reduced red/green tape
- Freight subsidies have been continued by the Federal Government but are increasingly irrelevant as the large agrifood marketers and processors have collaborated to run a fast ferry service across Bass Strait using a fleet of leased fast ferries
- Provenance and food safety now a prime global consumer value which has increased prices for Tas. produce
- Small North West Tasmania region lifestyle farms increasingly focus on high quality local fresh market supply; larger family farms trend towards niche production and bespoke, direct supply to mainland quality retail outlets
- Wide range of business models now employed to supply a greater diversity of niche, value-added and commodity fresh products to domestic and international markets
- Tasmanian Agriculture at the farm-gate contributes 50% of the GSP

The Research Team

RIRDC supported a research team lead by Dr Laurie Bonney Senior Research Fellow at the University of Tasmania's Tasmanian Institute of Agriculture. He was supported by a multidisciplinary team from the Tasmanian Institute of Agriculture (TIA), the School of Management and the Institute for Regional Development (IRD) at the University of Tasmania that comprises the Australasian Agrifood Value Chain Research Group. This team included Angela Castles, Associate Professor Robyn Eversole, Professor Morgan Miles and Dr Megan Woods.

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Key messages from applying the framework and Project contact

- Focus on small, ad hoc, problem-based interventions addressing high priority problems and removing road-blocks e.g. green/red tape
- Implement strategies/initiatives with short-term, tightly focused, community-based groups made up of the most talented people
- Coordinate consultation by all levels of government with community and business to reduce 'consultation fatigue'
- Where there is evidence of market failure then government needs to consider the co-design of public-private interventions to overcome the constraints to the development of the policy platforms;
- Incentivise critical factors e.g. innovativeness
- Facilitate the development of business and community networks
- Facilitate the development of production and marketing clusters for critical mass and market access
- Facilitate the influx of new ideas and skills to the region
- Facilitate the visioning, planning and implementation of new ideas through sharing or developing new knowledge, skills and resources
- Adopt whole-of-government approaches to whole-of-supply-chain problems
- Construct a verifiable Tasmania brand e.g. GMO-free, hormone growth promotant-free beef etc.

Project Contact:

For more information on this project or other regional studies being conducted by RIRDC, please contact Vicki Woodburn - Senior Research Manager, RIRDC Ph 0410 429 484.

This summary presents the preliminary research findings for the North West Tasmania Agriculture Regional Study. The Value Assessment and Development Framework is being applied to other regions to refine it and then make it accessible for a range of users. Further outputs from the project will be released in mid to late 2014.



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