

December 2020



Inland BURNETT

Agricultural Resource Audit & Strategic Gap Analysis

Farming smarter, not harder in a knowledge intensive global environment

Inland Burnett

Resource Audit and Strategic Gap Analysis

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Acknowledgements

We acknowledge the traditional owners of the lands and waters that support our region and recognise their continued spiritual and cultural connection to land, water and community. We pay our respects to Elders past, present and emerging.

The Inland Burnett Resource Audit and Strategic Gap Analysis was developed by Burnett Catchment Care Association in partnership with the North Burnett Regional Council (NBRC), South Burnett Regional Council (SBRC), Burnett Inland Economic Development Organisation (BIEDO), Monto Growers Group and the Inland Burnett community.

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Australian Government

BUILDING OUR FUTURE



Monto Growers Group

Contents

- Background 5
- Inland Burnett Regional Profile..... 6
- Economic Profile 8
 - North Burnett* 8
 - South Burnett* 9
- Why focus on agriculture? 10
- Why a Resource Audit and Strategic Gap Analysis is Needed 11
- Methodology..... 12
- Audit Results 14
 - Agricultural Producer consultations*..... 14
 - Stakeholder & Service Provider consultations*..... 18
- Analysis of Gaps and Expectations..... 21
 - Key Takeaways*..... 23
- Recommendations..... 23
- References 24
- Appendix 1: SMART-Hub..... 26
- Appendix 2: Survey Questions 29

Background

Effective and efficient access to relevant information, resources and tools has the ability to revolutionise agriculture, improve environmental protection and accelerate change. Staying at the forefront of new information is becoming increasingly important in a rapidly changing global environment (Eadie, et al., 2012; Lokeswari, K., 2016; Food and Agriculture Organisation of the United Nations, 2016)

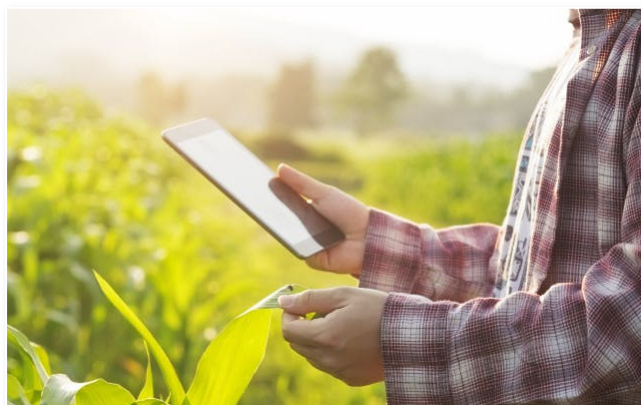
The Food and Agriculture Organisation of the United Nations: E-Agriculture Strategy Guide also states “the agriculture sector faces many challenges posed by climate change, loss of biodiversity, drought, desertification, increase in food prices and inefficient supply chains. The sector is increasingly becoming knowledge-intensive, and the availability of the right information, at the right time, in the right format, and through the right medium, influences and affects the livelihoods of many stakeholders involved in agriculture and related fields. The availability, accessibility and applicability of agricultural research outputs are keys to addressing a range of issues related to food security.”

However, with the increase of online access and content, the inevitable ‘information overload’ and lack of internet connectivity in regional and remote areas means reliable resources needed to continually improve farming businesses, if they are available, may be difficult to search and obtain.

Furthermore, the unique climatic conditions that varies from surrounding regional areas and property isolation, along with the cumulative impacts of multiple natural disaster and flooding events over the last 10 years has left the Inland Burnett agricultural industry in dire need of timely, accurate, relevant and paddock-accessible, information and resources to support recovery and resilience building processes.

Compared with coastal counterparts the Inland Burnett is relatively poorly serviced by agricultural agencies, despite the high volume and value of agricultural products produced and the vast quantity of land and natural resources that are managed here.

Support is needed to address the findings of the local government community consultations, other government and independent research that indicates a strong correlation between economic security and psychological/social wellbeing, including depression and family cohesion. By assessing the gaps and overlays in services, resources and support throughout the Inland Burnett, via a comprehensive regional resource audit, opportunities for service collaborations, advocacy and improvements can be formulated and executed.



For these reasons, it was determined that a comprehensive regional resource audit and strategic gap analysis of Inland Burnett farming resources was required. This audit aims to determine the gaps in resource availability and effectiveness, along with identifying the impediments farmers face in accessing and engaging these resources.

In addition, it seeks to provide quantitative and qualitative information as a platform for the strategic planning of effective and improved service delivery as a driver for greater regional productivity, community resilience and economic growth, along with improved connectedness to resources for improved economic, environmental and social outcomes for the Inland Burnett agricultural industries.

The resources collated during this audit are presented via '[SMART-Hub](#)' (Sustainable Management & Agricultural Resources & Tools) - an online hub designed to enhance user accessibility & connection to regionally relevant, smart farming resources and form the basis of its development. The development and ongoing maintenance of this centralised online resource hub is of immense value to the regions long-term productivity, economic growth and stronger communities.

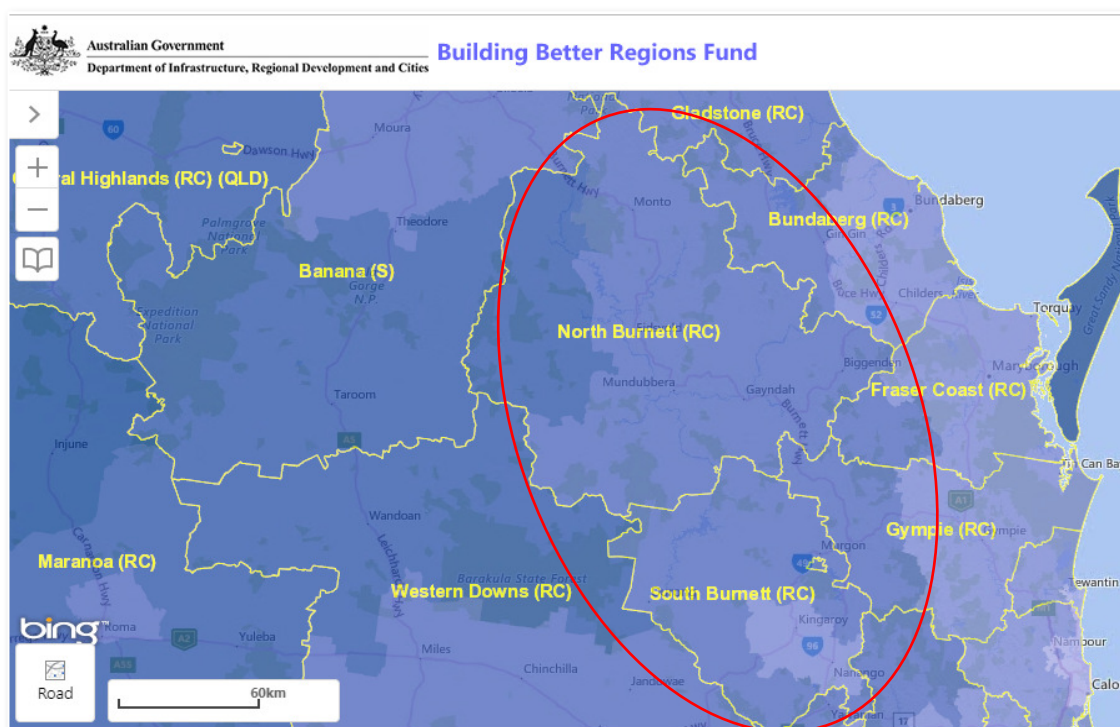
BCCA remains committed to utilising organisational resources and intellectual property to fund its development and ongoing maintenance to facilitate landholder connection to regionally relevant information from one consolidated user-friendly, paddock accessible online location, without the need to sift through endless amounts of irrelevant online material.

Inland Burnett Regional Profile

The North Burnett Regional Council (NBRC) and the South Burnett Regional Council (SBRC) together make up the entire Inland Burnett Region. This area encompasses the head waters of the Burnett River catchment ending at the mouth near Bundaberg. These two regions comprise of a total land area of 28,105km² (four times larger than Bundaberg region - 6,444km²) and feeds directly into the Great Barrier Reef basin, an industry worth \$6.4 billion per annum.

The **North Burnett Regional Council** area comprises of six districts. Monto, Eidsvold, Mundubbera, Gayndah, Biggenden and Mt Perry districts combine to form the North Burnett Regional Council Area. Named after the Burnett River that flows through the area, the North Burnett region has a population of 10,623 (population density of 0.01 pp/ha).

The **South Burnett Regional Council** area is located about 200 kilometres north-west of Brisbane and completely surrounds the Cherbourg Aboriginal Shire. The region is named for its location that is south of the Burnett River. The region covers 8,397km² with a population of 32,707 (population density of 0.04 pp/ha).



Please see map of the Inland Burnett region above. This area comprises of North Burnett Regional Council and South Burnett Regional Council.

STATISTIC	WIDE BAY BURNETT	INLAND BURNETT
Population/Demographics		
Estimated Resident Population	291,068	43,370
Employment	111,184	17,170
Unemployment	10.3%	5.3% (NBRC) & 7.4% (SBRC)
Employed by Agriculture, Forestry and Fishing	4.7%	31.7% (NBRC) & 11.6% (SBRC)
SEIFA – disadvantage (Note: Australia = 46 th , Qld = 43 rd , Regional Qld = 34 th)	13 th percentile	18 th (NBRC) & 11 th (SBRC)
Tertiary Qualified (% of pop.)	9.1%	7.3% (NBRC) & 8.5% (SBRC)
Economy		
Gross Regional Product	\$11.96 Billion	\$2.465 Billion
Key Industry Output		
Agriculture, forestry and fishing	\$2,945 million	\$767 million
Construction	\$3,350 million	\$311 million
Manufacturing	\$3,049 million	\$501 Million
Mining	\$982 million	\$602 million
Health Care	\$1,687 million	\$134 million
Investment		
Residential building approvals \$	\$194 million	\$22 million
Residential building approvals Qty	1,541	93

Sources: economy.id by .id the population experts via RDA Wide Bay-Burnett, North Burnett Regional economic profile (NBRC) and South Burnett Regional economic profile (SBRC).

Further to this, according to RDA Wide Bay Burnett 2016 Census Results, the Inland Burnett region has an index of relative socio-economic disadvantage as low as the 18th and 11th percentiles for NBRC and SBRC respectively, meaning that most of Australia is ranked 82%-89% higher.

Health statistics for the greater Wide Bay-Burnett region include an obesity rate of 33.2%; more than 15% of people over the age of 18 years are daily smokers and between 52.9% and 65.9% of the Wide Bay Burnett population live in disadvantaged areas (Source: RDA Wide Bay Burnett Regional Roadmap 2016-2019). In addition, 2016 Census results show that the North Burnett Region has an ageing population and a decline in persons aged between 20 and 29 years. Twelve percent (12%) of the population have an education of Year 8 or below, 51.3% have no qualification post schooling and university attendance rate is just 1%.

Between 2011 and 2017, the number of people employed in the Inland Burnett Region decreased by 1306 and the number unemployed increased by 159. During the same time period household incomes compared to the whole of Qld diminished with 65.6% falling into the bottom 2 quartiles. In addition, the region has an aging workforce with almost 50% currently over the age of 45 and growing. In a low populace regional area these statistics are alarming and not surprisingly apply directly to the years when the region has been repeatedly disaster declared.

Cocklin et al. argue that people in rural communities are ‘caught in a cycle of poverty and disadvantage brought on by lack of access not only to resources but also to services...’ and that this polarisation between rural and urban areas is increasing the disadvantage divide and making it difficult for governments to respond appropriately (Cocklin, C., et al., 2005 pp. 157-158).

Economic Profile

The Inland Burnett region is a complex mixture of metamorphic, igneous and sedimentary rocks. Large areas of granite outcrops occur throughout the region as steep scarps and rolling hills. Basalts are prominent in the south with small occurrence in the north. The region is located on the edge of the Great Dividing Range and has two of the largest inland waterways (Lake Boondooma and Bjelke-Peterson Dam). A sub-tropical climate and annual rainfall of 600-900mm, paired with a significant deep red volcanic soil type makes the Inland Burnett region incredibly fertile and productive. The topography of the region is diverse, ranging from fertile farmland and rich alluvial flats to rugged geographical formations and areas of environmental significance.

Agriculture in the Inland Burnett region is both abundant and diverse and is the leading employment sector in the region. Primary industries account for the major income and include beef (both grazing and feed-lotting), dairy, pork, poultry, peanuts, macadamia nuts, soy beans, sugarcane, timber, fodder crops, cereals and pulses, broad acre cropping along with many different types of fruit (citrus particularly and some of the largest vineyards in Queensland) and vegetables. It also boasts a “State of the Art” pig processing facility and is home to a significant wine manufacturing region producing premium estate-grown and alternate varieties of table wines. Timber production, viticulture, coal mining and electricity generation are also important industries.

The table below provides a snap shot of Statistics for Agriculture, Forestry & Fisheries for the Wide Bay-Burnett and Inland Burnett.

AGRICULTURE, FORESTRY & FISHERIES STATISTICS	WIDE BAY-BURNETT	INLAND BURNETT
Gross Value of Production	\$2,945m	\$686.7 million
Employment actual	9,373	2,883
Employment %	9%	31.7% (NBRC) & 12.2% (SBRC)
No of Businesses %	26.1%	64.4% (NBRC) & 44.4% (SBRC)

Sources: economy.id by .id the population experts via RDA Wide Bay-Burnett, North Burnett Regional economic profile (NBRC) and South Burnett Regional economic profile (SBRC)

North Burnett

‘Registered businesses by industry’ from the North Burnett Regional Economic Profile 2017 can be seen below; note agriculture is the largest industry accounting for 64.4%. The next largest industry is construction at 7%:

Registered businesses by industry								export	reset	
North Burnett Regional Council - Total registered businesses				2017			2015			Change
Industry	Number	%	Queensland %	Number	%	Queensland %	2015 to 2017			
Agriculture, Forestry and Fishing	1,083	64.4	9.4	1,084	64.6	10.0	-1			
Mining	3	0.2	0.4	6	0.4	0.5	-3			
Manufacturing	39	2.3	3.7	37	2.2	4.0	+2			
Electricity, Gas, Water and Waste Services	3	0.2	0.3	3	0.2	0.3	0			
Construction	118	7.0	17.2	121	7.2	17.1	-3			

Sources: economy.id by .id the population experts via RDA Wide Bay-Burnett, South Burnett Regional economic profile (SBRC)

'Industry sector of employment statistics' presented below. Note that agriculture is the largest sector employer at 31.1%. The next largest industry employer is retail trade at 7.4%.

Employment (total) by industry								export	reset	
North Burnett Regional Council		2016/17			2011/12			Change		
Industry (Click rows to view sub-categories)	Number	% Queensland	Queensland%	Number	% Queensland	Queensland%	2011/12 to 2016/17			
Agriculture, Forestry and Fishing	1,534	31.1	2.8	1,602	31.4	3.1	-69			
Mining	219	4.4	2.8	157	3.1	2.8	+62			
Manufacturing	262	5.3	7.0	286	5.6	8.2	-23			
Electricity, Gas, Water and Waste Services	45	0.9	1.3	66	1.3	1.5	-21			
Construction	247	5.0	9.4	339	6.6	9.4	-92			
Wholesale Trade	132	2.7	2.9	144	2.8	3.6	-11			
Retail Trade	368	7.4	10.0	438	8.6	10.4	-71			
Accommodation and Food Services	195	4.0	7.3	251	4.9	7.0	-56			
Transport, Postal and Warehousing	192	3.9	5.4	230	4.5	5.6	-37			
Information Media and Telecommunications	34	0.7	1.5	35	0.7	1.5	-1			
Financial and Insurance Services	73	1.5	2.6	52	1.0	2.7	+20			

Source: Australian Bureau of Statistics, Census of Population and Housing 2011 and 2016. Compiled and presented by .id

South Burnett

'Registered businesses by industry' from the South Burnett Regional Economic Profile 2017 can be seen below; note agriculture is the largest industry accounting for 44.4%. The next largest industry is construction at 11.5%:

Registered businesses by industry								export	reset	
South Burnett Regional Council - Total registered businesses		2017			2015			Change		
Industry	Number	% Queensland	Queensland%	Number	% Queensland	Queensland%	2015 to 2017			
Agriculture, Forestry and Fishing	1,340	44.4	9.4	1,345	43.2	10.0	-4			
Mining	9	0.3	0.4	12	0.4	0.5	-3			
Manufacturing	87	2.9	3.7	89	2.9	4.0	-2			
Electricity, Gas, Water and Waste Services	8	0.3	0.3	11	0.4	0.3	-3			
Construction	347	11.5	17.2	353	11.4	17.1	-6			

Sources: economy.id by .id the population experts via RDA Wide Bay-Burnett, South Burnett Regional economic profile (SBRC)

'Industry sector of employment statistics' presented below. Note that agriculture is the second largest sector employer marginally behind Health Care and Social Assistance.

Employment (total) by industry								export	reset	
South Burnett Regional Council		2016/17			2011/12			Change		
Industry (Click rows to view sub-categories)	Number	% Queensland	Queensland%	Number	% Queensland	Queensland%	2011/12 to 2016/17			
Health Care and Social Assistance	1,670	13.5	13.3	1,481	11.3	11.6	+189			
Agriculture, Forestry and Fishing	1,503	12.2	2.8	1,464	11.2	3.1	+39			
Retail Trade	1,456	11.8	10.0	1,542	11.8	10.4	-87			
Education and Training	1,291	10.4	9.4	1,162	8.9	8.2	+129			
Manufacturing	1,190	9.6	7.0	1,238	9.5	8.2	-48			
Accommodation and Food Services	696	5.6	7.3	698	5.4	7.0	-2			
Construction	691	5.6	9.4	845	6.5	9.4	-154			
Public Administration and Safety	583	4.7	6.6	606	4.6	6.7	-24			

Source: Australian Bureau of Statistics, Census of Population and Housing 2011 and 2016. Compiled and presented by profile.id by .id, the population experts.

Why focus on agriculture?

Agriculture, Forestry and Fishing is the leading employment and economic sectors of the region (~22% compared to Qld 2.8%). Additionally, global food demand is set to increase by 70% by 2050 thereby putting more pressure on our regions to produce.

Agriculture is also one of the five pillars of Australia's economy and is a key priority for the Federal Government. The Agricultural Competitiveness White Paper outlines the initiatives and commitment by the Government to Australia's agriculture sector of which 'Farming Smarter' is one of the key themes. This theme highlights the need for agribusinesses to have access to the most advanced technologies and practices to continue to not only 'farm smarter' but to develop resilience to a changing climate.

Both the North Burnett Regional Council (NBRC) and the South Burnett Regional Council (SBRC) confirm that the Inland Burnett region is well positioned to increase exports into expanding global food markets while further growing domestic markets for their produce.

Unfortunately, however, the Inland Burnett region is currently under-resourced and under-supported by agricultural and NRM agencies/institutions/support businesses and services when compared many other agricultural and coastal regions. This further inhibits the ability to capitalise on this potential.



The regions unique climatic conditions, that varies from surrounding regional areas, along with property isolation and the cumulative impacts of multiple natural disaster and flooding events over the last 9 years has left the Inland Burnett agricultural industry in dire need of timely, accurate, relevant and paddock-accessible, information and resources to support recovery and resilience building processes.

Furthermore, the need for economic development and long-term sustainability of the community was identified as the most crucial need by a large cross-section of residents as part of the North Burnett Regional Council (NBRC) Community Needs Analysis following Tropical Cyclone Marcia (Feb 2015), as the most crucial need. Agriculture, forestry and associated industries underpin the economy of the Inland Burnett and therefore will continue to be major drivers of economic development.



Run-off into the **\$6.4Billion** Great Barrier Reef, especially following droughts, is fundamental if corals are to endure the dual impacts of anthropogenic disturbance and warming ocean temperatures as a result of climate change (McCulloch, M., Wyndham, T., 2002; Queensland Government, 2014).

According to the 2017 Scientific Consensus Statement: Land use impacts on Great Barrier Reef water quality and ecosystem condition, the Burnett Mary is one of the top five sediment-contributing catchments to the Great Barrier Reef Lagoon at approximately 15% (Queensland Government, 2017).

Queensland Government's Reef Water Quality Research, Development and Innovation Strategy highlights the importance of enhanced extension services to support enhanced on-farm management practices and land condition (including economic analyses demonstrating cost-effectiveness of management responses during drought) as an effective prevention for erosion in reef catchments and as a priority for investment. The strategy also emphasises that improving land condition, including weed control, is not only essential for improving water quality outcomes for the Great Barrier Reef but is also vital in advancing agricultural productivity and resilience to natural disasters such as drought.

Why a Resource Audit and Strategic Gap Analysis is Needed

"Farming Smarter, Not Harder: Securing our agricultural economy" (Eadie, L., et al. 2012) identifies that farmers require support "to diversify their revenue sources to reduce financial risk and ensure more reliable farm incomes" and should "act now to prepare for future risks, particularly more frequent droughts under climate change. Without action to adapt to more variable and extreme weather, by 2050, Australia could lose \$6.5 billion per year in wheat, beef, mutton, lamb and dairy production."

The Food and Agriculture Organisation of the United Nations: E-Agriculture Strategy Guide demonstrates that enhancing the ability of farming communities to connect with knowledge banks, networks and institutions via Information Communication Technology (ICTs) improves productivity, profitability, food security and employment opportunities substantially.

It also states that by providing ICTs tailored to specific locations and conditions not only assists its target audience, but via the development of agriculture, ICT's indirectly benefit rural development, banking, insurance, transportation, R&D, technology industries, employment, service industries, conservation, tourism, individuals, communities and local businesses.

Organisation for Economic Co-operation and Development also confirms that agriculture investment has benefits far beyond the agricultural sector in its paper 'Economic Importance of Agriculture for Sustainable Development and Poverty Reduction'.



The first step in improving economic and social outcomes is understanding what is currently available, via the enhanced connection and avoidance of duplication to knowledge, information, services and resources.

Social science research (Tymon et.al., 2002) suggests a strong correlation between economic security and psychological/social wellbeing, including rates of depression, family cohesion and risk of suicide. Therefore, it could be assumed that successful human/social recovery following disruptive events is heavily reliant on long term economic wellbeing of both the individual and boarder community. Rapid economic recovery has the potential for significant savings in human/social support following natural disaster events.

Social Capital is the 'accumulated resources that one can access based on the relationships that aid or can be leveraged in accomplishing an end or furthering a pursuit' and can be broadly defined into 2 areas:

- Bonding: generated or shared by similar members of the same group
- Bridging: generated or shared through connections of diverse members of various groups

Case studies in a regional Australian setting (Woodhouse,2006; Tymon et.al., 2002) suggests that high levels of both forms of social capital in a community facilitates high levels of economic development. This is due, in part, to expanding the use of resources and distributing information and innovative ideas more broadly throughout the community. This project will audit the availability of current social capital resources and identify the gaps, providing a platform for the strategic planning of effective and improved service delivery to the agricultural sector, a driver for improved productivity and economic growth.

Methodology

Local producers, community, industry and government were vital in the development of this audit and gap analysis. The methodology for identifying the gaps and overlaps in agricultural services, resources and support of the Inland Burnett Region centred on two primary activities:

- 1) Community and stakeholder consultations
- 2) Literature reviews and industry research

Producer surveys were distributed via email, social media, local newspapers and collaborators to the entire Inland Burnett Region. In total, 2472 agricultural businesses were provided the opportunity to respond to the survey and provide input into the audit to update knowledge. A total of 65 responses received. The survey asked questions to help determine:

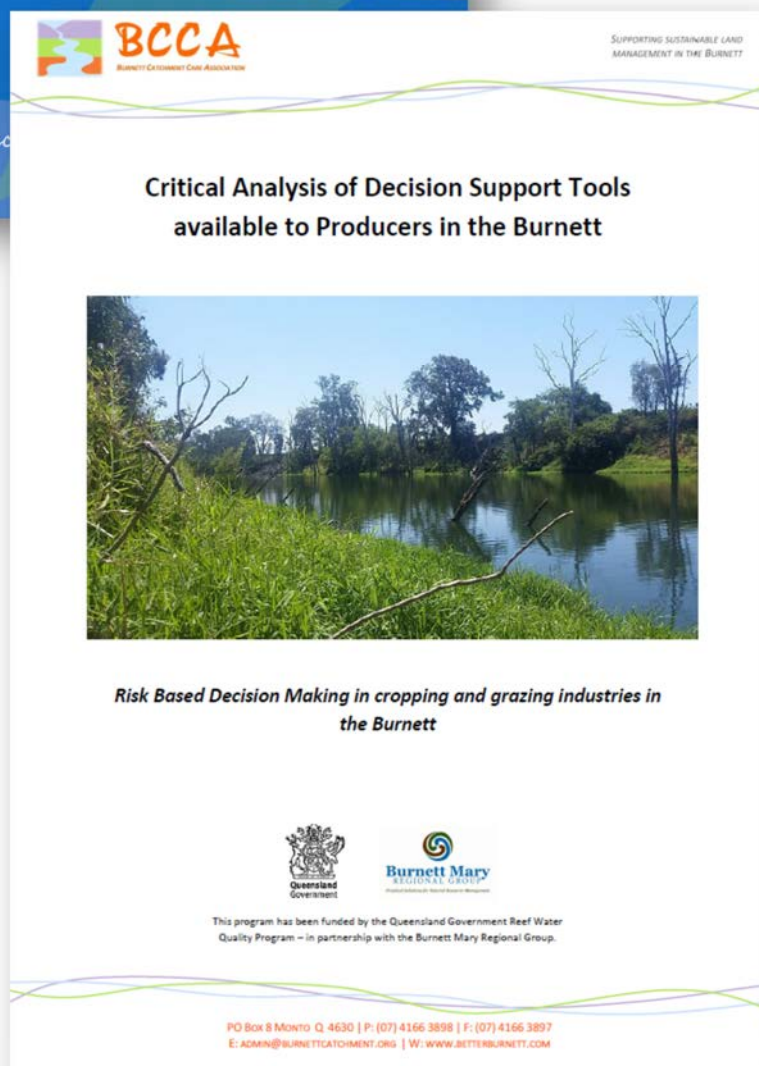
- Locality of respondents by postcode
- Industry
- Current sources of information accessed (magazines/newspapers, workshops, peers, NRM groups etc.)
- Topics currently searched online
- Usefulness of current sources of information
- Factors limiting the use of online information
- Types of information required
- Support for a regionally specific ICT online hub

Stakeholder and service provider surveys were distributed via email and Facebook messenger to stakeholders and service providers throughout Inland Burnett Region. In total, 47 consultants and organisations were provided the opportunity to respond to the survey and provide input into the audit to update knowledge with free text options also available. A total of 16 responses received. The survey asked questions to help determine:

- Respondents professional affiliations
- Service area and coverage
- Whether respondents maintained a permanent presence in the region or operated via outreach services
- Services, information and resources provided
- Method of service, information and resource delivery
- Factors limiting delivery
- Support for a regionally specific ICT online hub

Surveys were designed to collect specific baseline information to help build a more robust picture of the types of agricultural resources sought and provided along with the gaps and limitations to access. Both quantitative and qualitative methods were employed to capture specific data about key components of resource variety, availability and delivery. Opportunities were provided to enable people to provide feedback and further information.

Literature reviews and additional industry research (including the [Monto Agricultural Strategy](#) and the Critical Analysis of Decision Support Tools Available to Burnett Producers) was then conducted to further understand the findings analysed from the consultation results and explore their regional context.



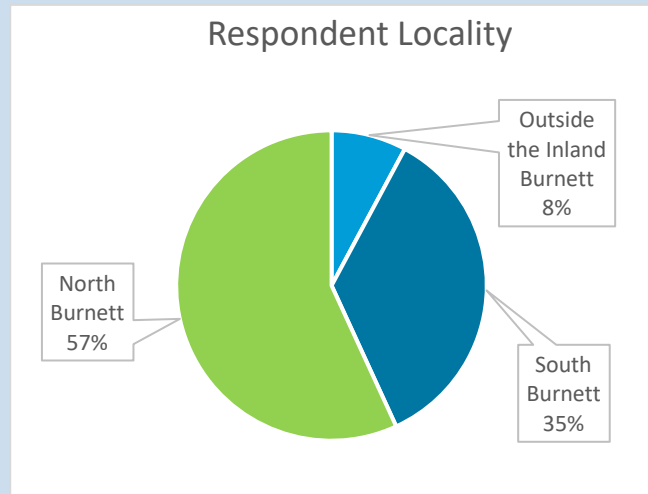
Audit Results

Agricultural Producer consultations

Locality

A broad and diverse distribution of respondent localities were captured. They were then grouped into areas broadly based on local government and catchment boundaries.

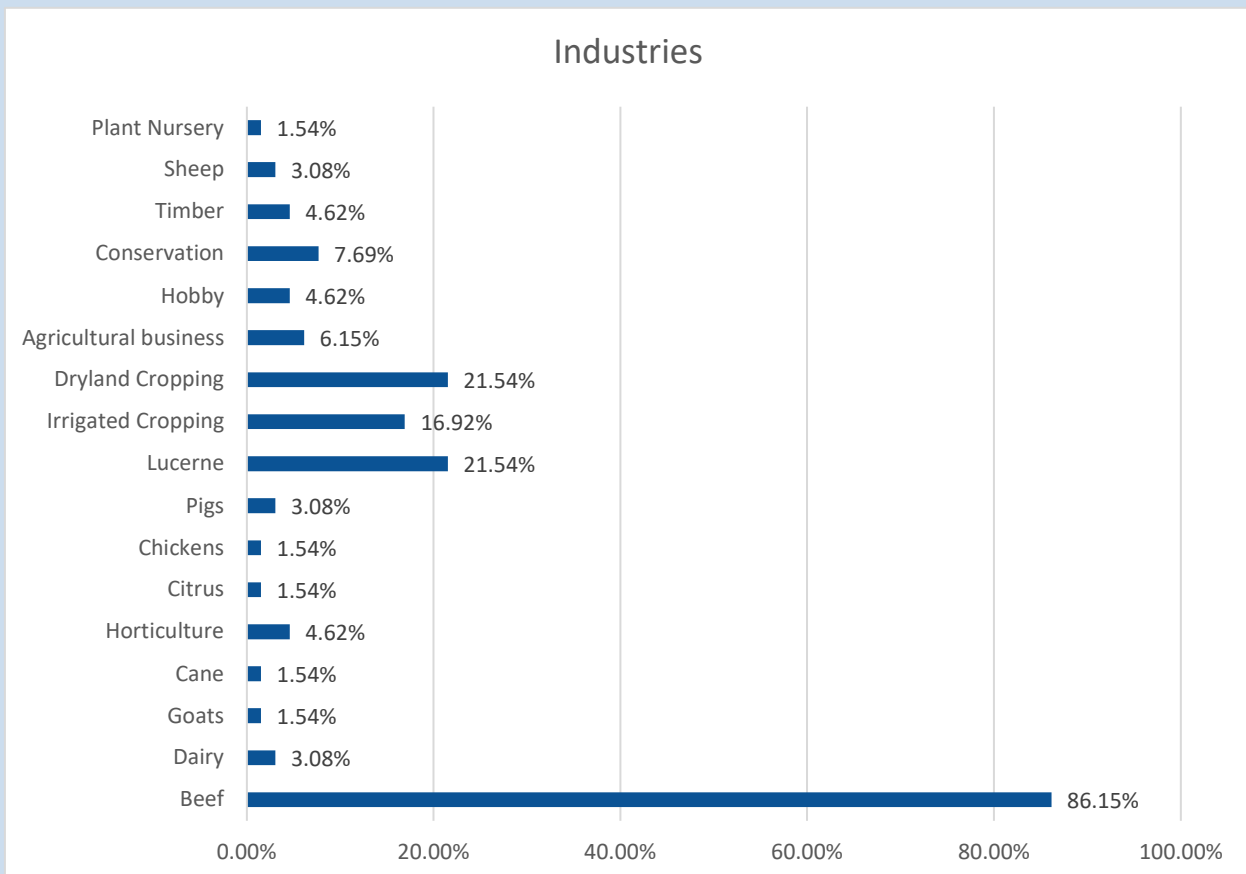
More than half of the respondents were from the North Burnett region at 57%, 35% were from the South Burnett while the remaining 8% were from outside the target area from Bundaberg, Baffle Creek area and Gympie.



Industry

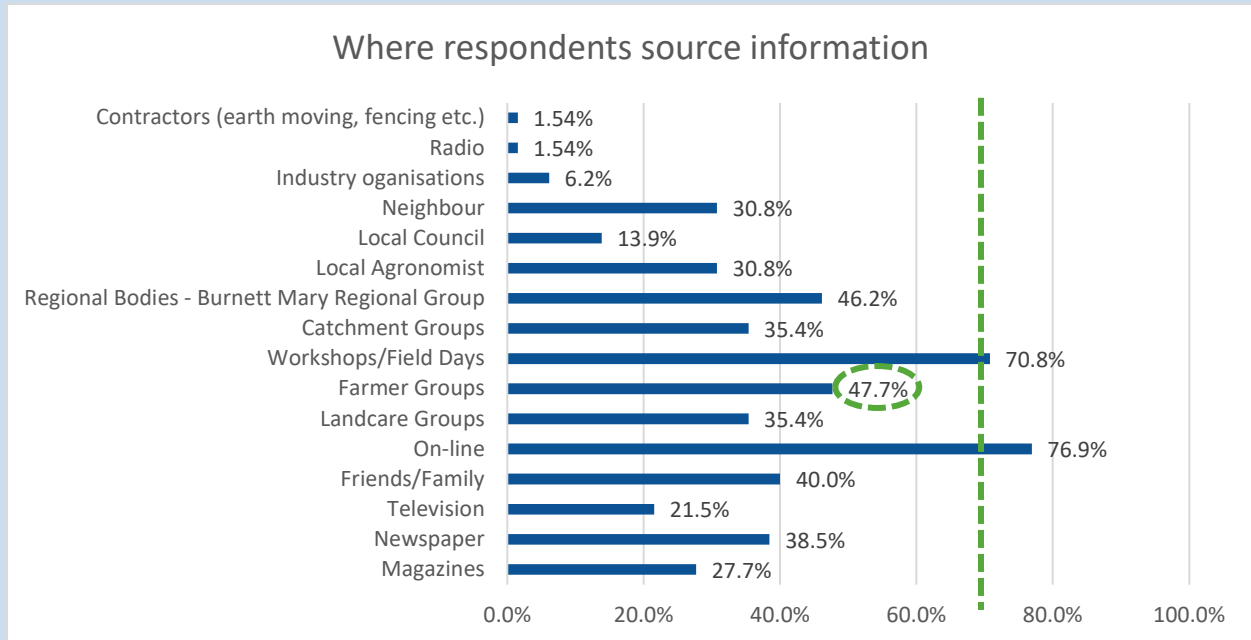
A diverse range of industries was captured in the producer consultation process with many being mixed farming practices. However, the vast majority were from the beef and grazing industry, followed by both dry and irrigated cropping at a combined 38.46% and Lucerne production at 21.54%.

Other industries included: Timber, conservation, hobby farms, agribusinesses, sheep, piggeries, poultry, goats, dairy, citrus, horticulture and cane.



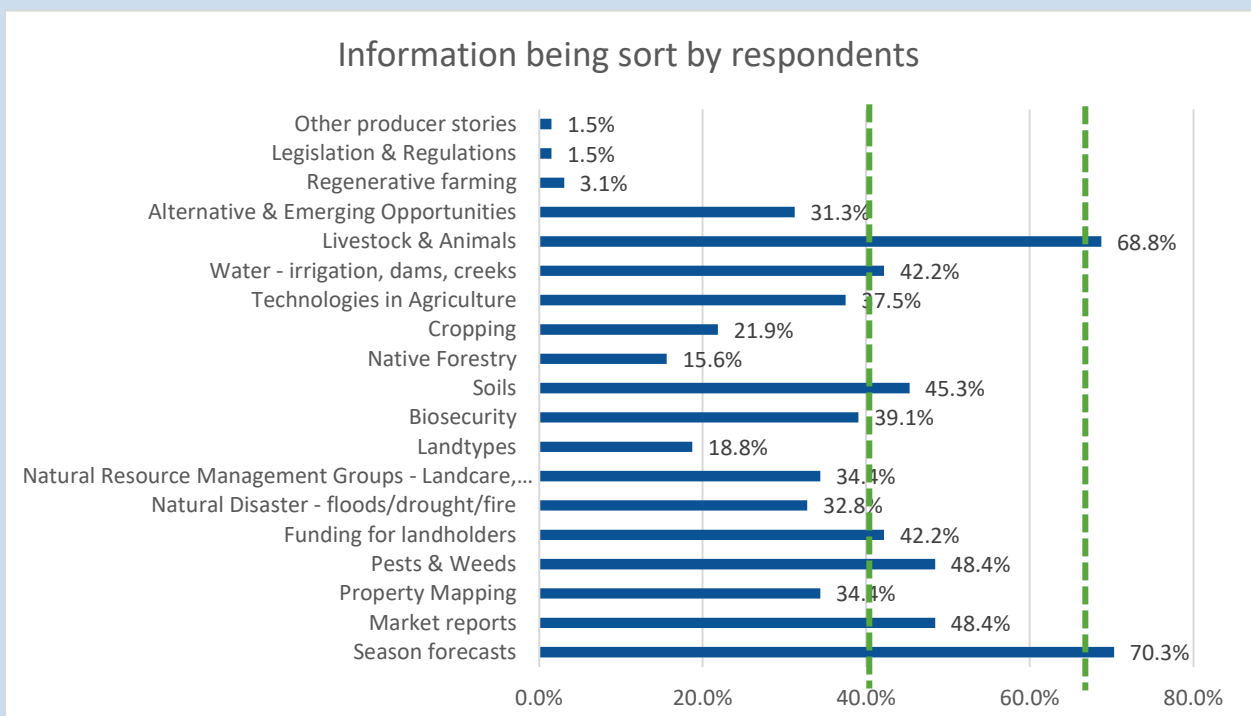
Information Sources

Respondents generally sourced information from multiple avenues. However, the majority of producers preferred to seek information from online, this was closely followed by interactive educational opportunities such as workshops and field days. Peer to peer learning via farmer groups was the next most favoured source of information among producers.



Topics currently searched online

The most popular resource topics currently used by respondents are seasonal forecasts and animals/livestock. Other popular topics included water, soils, pests and weeds, market reports and funding.



Usefulness of current sources of information

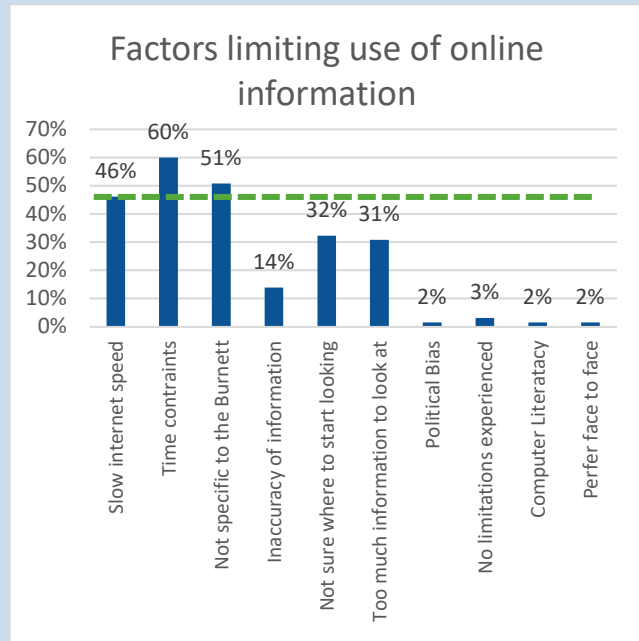
53.13% of respondents rated the current sources of information that they can access 3 stars or less, providing an average rating of 3.5 stars across all respondents. This allows significant room for improvement.



Factors limiting the use of online information

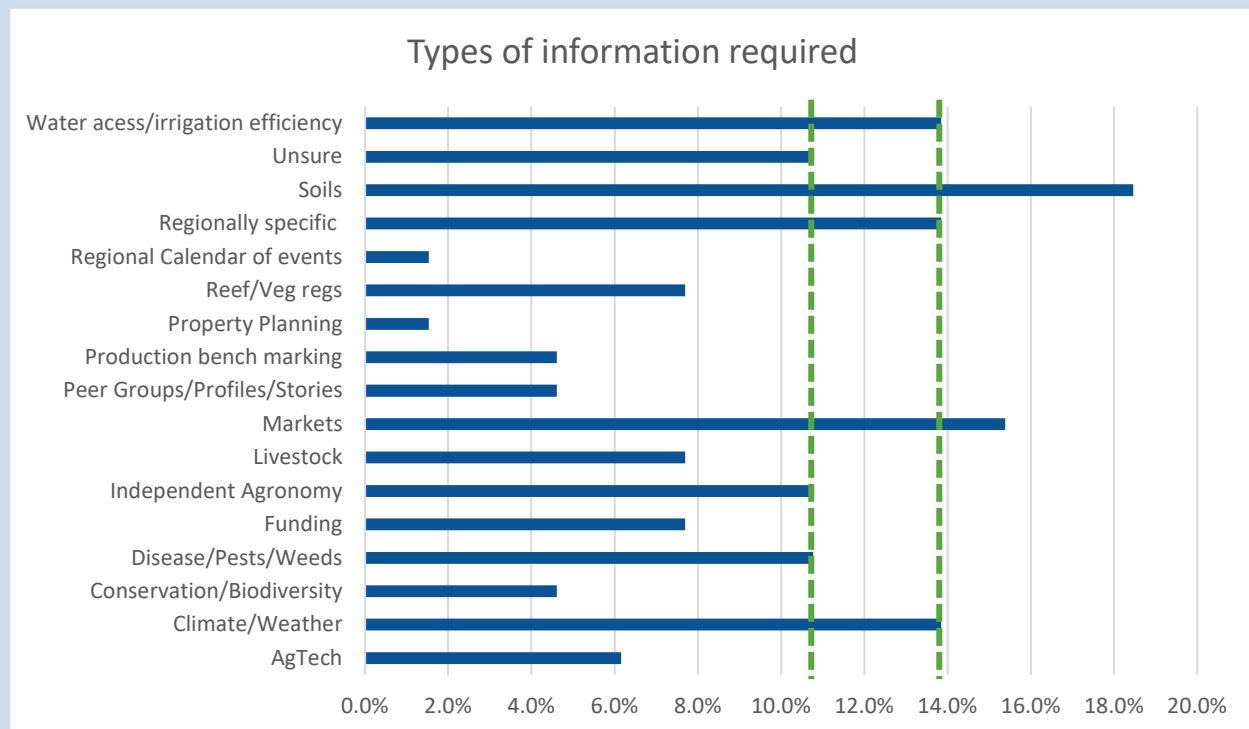
Many respondents identified multiple factors limiting their use of online information, however, the three most common factors identified were time constraints, information not being regionally specific and slow internet speed at 60%, 51% and 46% respectively. One third of respondents stated too much information to search through and not knowing where to start looking limited their current use of online resources.

Only 3% of respondents listed they currently experience no limitations to assessing online resources and 2% identified as preferring face to face or computer literacy as factor affecting access. This result may be skewed as the survey was only available to online participants, limiting the demographic available to respond.



Types of information required

Many producers reported multiple types of resources and information as priorities for improvements in accessibility. The free text responses were broadly grouped into themes with soils being the most popular



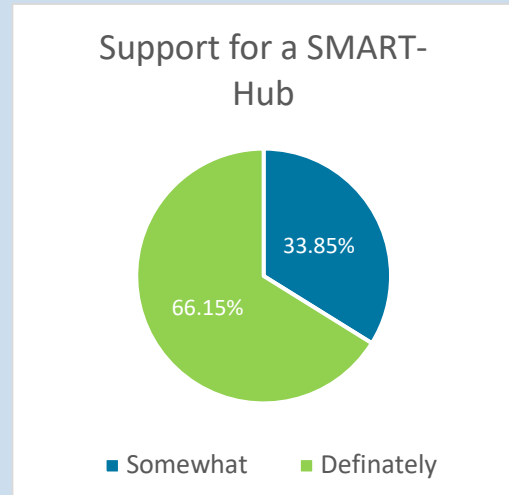
followed by market reports, climate/weather forecasts, water access/irrigation efficiency and information that was regionally specific.

An equal number of respondents were unsure what information and resources they required access to as those who reported independent agronomic advice and biosecurity resources/information covering disease, pests and weeds as priorities.

Support for a regionally specific online hub

One hundred percent (100%) of respondents in the producer survey stated they would utilise an online hub designed to enhance user accessibility & connection to regionally relevant, smart farming resources.

Over 66% expressed strong support of a 'SMART-Hub' (Sustainable Management and Agricultural Resources & Tools) stating they would definitely use the resource, while the remaining producers stated they would utilise the online hub somewhat.

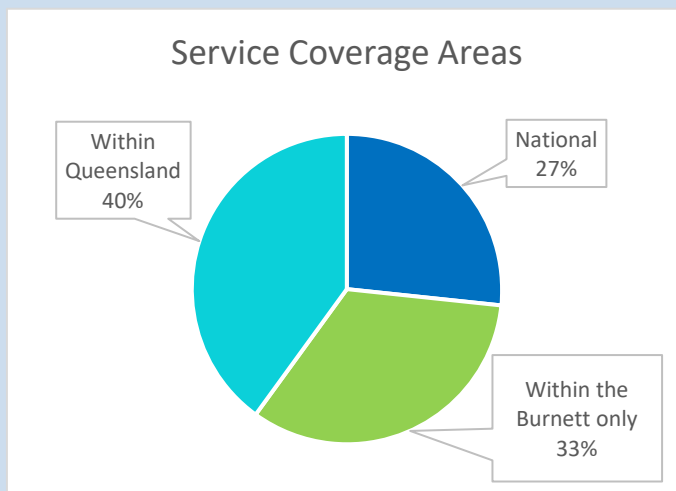


Stakeholder & Service Provider consultations

Service coverage areas

A broad and diverse distribution of respondent service areas and coverage were captured. They were then grouped into areas broadly based on local government divisions and catchment boundaries.

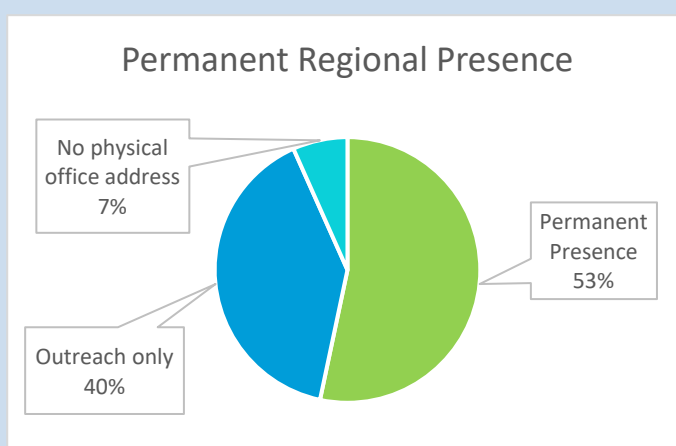
Three service coverage areas were recorded with 33% of the respondents servicing within the Burnett catchment specifically. The remaining 67% covered Queensland and Australia more broadly.



Permanent presence versus outreach services

A permanent presence within the Inland Burnett was reported by a little over half of the respondents at 53%.

Of the remaining 40% performed outreach services and 7% reported not having a permanent physical presence at all.

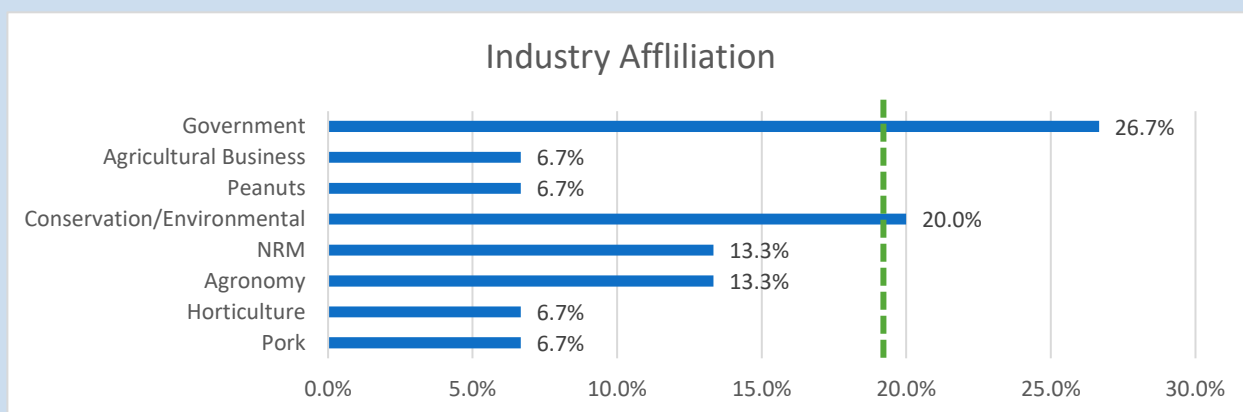


Professional Affiliations

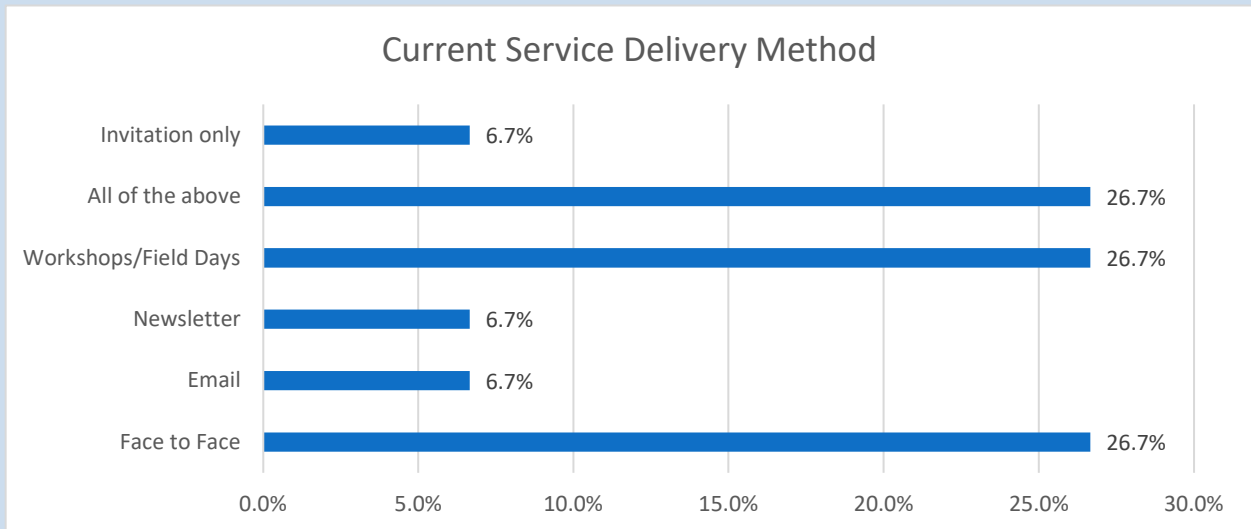
A broad and diverse distribution of respondent affiliations were captured. They were then grouped into industries/themes.

The majority of respondents were affiliated with government bodies at 26.7% followed closely by conservation and environmental at 20%.

Other industry affiliations included: Agronomy and natural resource management at 13.3% each and Peanuts, Horticulture, Pork and Agricultural business at 6.7% each. It was noted that no respondents were affiliated with the beef industry, grains or broad acre cropping.



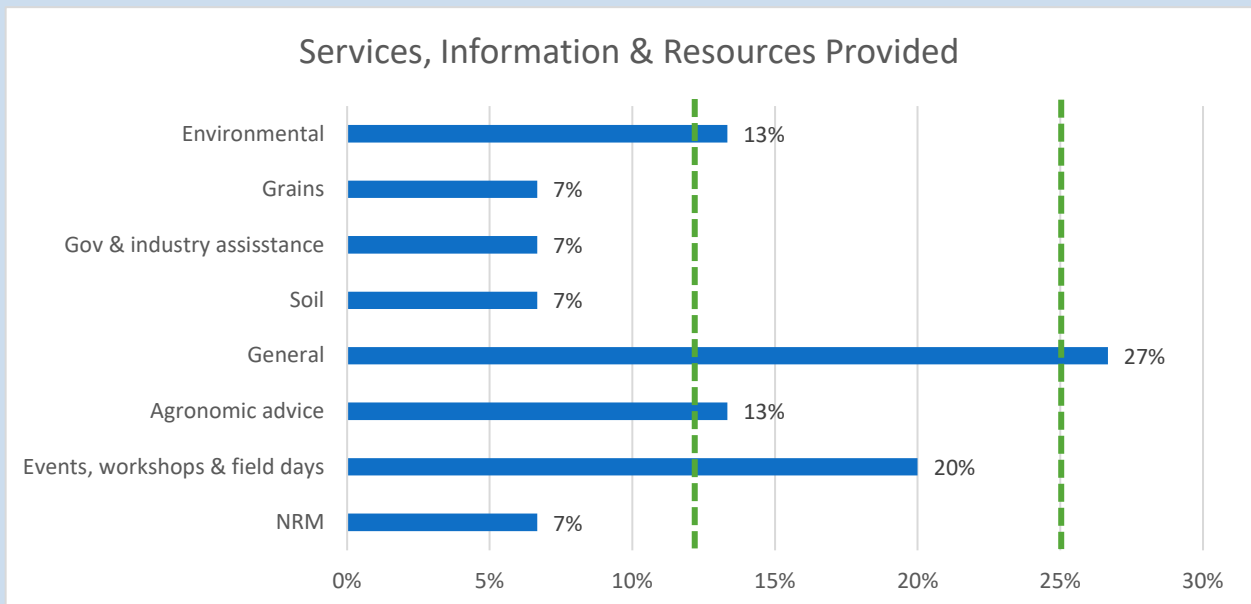
Service delivery method



Respondents generally delivered information by multiple avenues. However, the majority of providers preferred to deliver information via workshops/field days or face to face at 26.7% each. Other methods were via emails, newsletters and by invitation only at 6.7% each. Online delivery of information was not recorded.

Services, information & resources provided

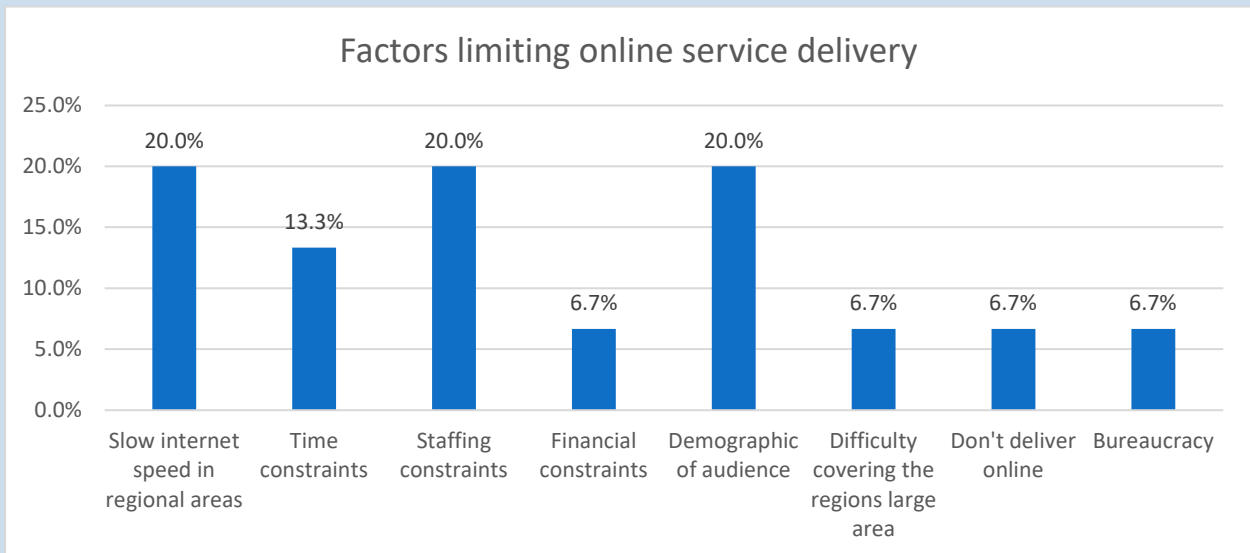
The most popular service provided by respondents is General agricultural information at 27%. Other popular services included Events, Workshops & Field Days, Agronomic & Environmental Advice.



Factors limiting online delivery

The three most common factors identified as the cause of limiting online service delivery were Slow Internet Speed, Staffing Constraints and the Audience Demographic at 20% each. The next most common factor was Time Constraints at 13.3%.

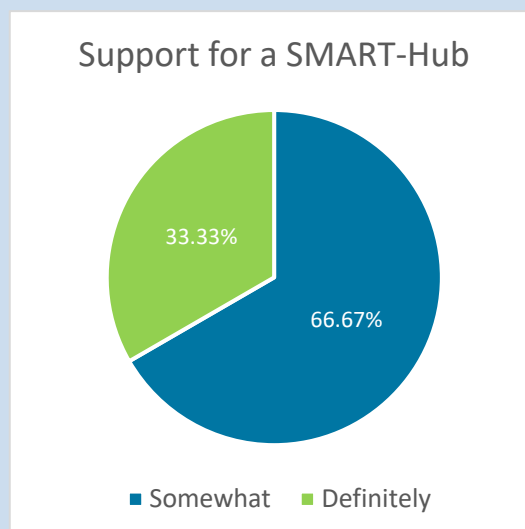
Other factors included Financial Constraints, Difficulty Covering The Regions Large Geographical Area, Not Delivering Online at all and Bureaucracy at 6.7%.



Support for a regionally specific online hub

One hundred percent (100%) of respondents in the provider survey stated they would utilise an online hub designed to enhance user accessibility & connection to regionally relevant, smart farming resources.

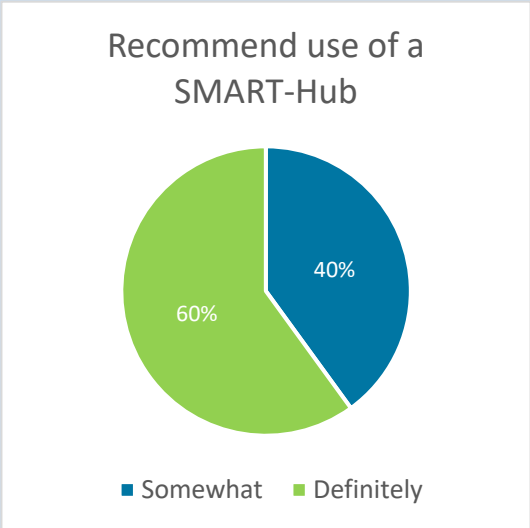
Over 33% expressed strong support of a 'SMART-Hub' (Sustainable Management & Agricultural Resources & Tools) stating they would definitely use the resource, while the remaining providers stated they would utilise the online hub somewhat.



The recommended use of an online hub

One hundred percent (100%) of respondents stated they would recommend the use of an online hub designed to enhance user accessibility and connection to regionally relevant, smart farming resources to their clients, members and landholders.

Sixty percent expressed that they would strongly recommend the use of a 'SMART-Hub' (Sustainable Management & Agricultural Resources & Tools), while the remaining 40% stated they would recommend the use of the online hub somewhat.



Analysis of Gaps and Expectations

Industries & Service Provision

The survey data was able to provide a snapshot indicating diversity of agricultural production in the region, including cropping, horticulture, livestock, timber and agribusinesses. Surprisingly, conservation was reported by producer respondents as the fifth highest activity. Collectively beef cattle production represented the largest agricultural commodity in the Inland Burnett region.



Despite this, the survey did not capture any providers who delivered services to the beef industry as a core focus, though these services may be provided in conjunction with other streams such as the 26.7% that reported as working for government departments and the 27% who reported as delivering 'general' services.

It is uncertain if this disparity reflects a gap in services required by producers or reflective of limited need for support and information in this area.

Regional Specification

While the audit captured data within the Inland Burnett region with most producers being within this target area, only 33% of the service providers surveyed reported operating only within the Burnett and of those 20% within the Burnett catchment more broadly.

These results reliably support information historically gathered by BCCA's community consultations, program feedback and other anecdotal evidence, that the Inland Burnett region is under resourced compared to its coastal counterparts.

Delivery Methods

The survey indicated disparity between the needs and expectations of producers wanting online delivery of information compared to service providers preferring to deliver it via workshops, field days and face to face contact.

Even so, producers indicated that interactive learning opportunities, such as workshops, field days and peer to peer learning, was the second most preferred method of service delivery. Research indicates that producer expectation for online delivery may, in part, be due to:

1. Time constraints, allowing people to schedule learning around their schedules
2. Increased ease of access, cost effectiveness and amount of information available
3. Increased popularity of mobile device usage for mobile learning
4. Increased popularity and preference in the use of social media platforms as a source of information and learning driven by the easier user interfaces

(Jacob, et al., 2008; Kokal, 2020, Louis, 2012; Suchiradipta, et al., 2018)

Needs & Expectations

The online information needs and expectations reported by producers (predominately in the areas of soil, markets, water & climate) appear to be largely unmet by providers. Although these topics may be partially covered by what providers reported as 'general' services and delivered by other interactive mechanisms such as workshops, they appear to be lacking in online availability and persisting as gaps in supply and demand of ICTs.

Limitations of ICTs Utilisation

Many producers reported telecommunication infrastructure, time constraints and lack of regionally specific information as being the major factors limiting their usage of online information. This was generally consistent with the reasons reported by providers.

However, the belief that producer demographics limit extension providers ability to deliver online services, appears to be inconsistent with survey results. Instead results indicate producers strong need, desire and expectation that information be readily and easily accessible online.



The limitation for extension providers to utilise ICTs in their service delivery, may be more indicative of the greater technology challenges faced by extension providers, as outlined in research by Lubell, et al. below.

SMART-Hub Support



The survey results indicated universal support for a regional specific via 'SMART-Hub' (Sustainable Management & Agricultural Resources & Tools). However, providers stated that although they would recommend its use to producers, they were less likely to use it or actively contribute to it themselves.

Research by Lubell, et al. (2018) suggests that extension providers often experience greater technology challenges due to barriers such as time constraints, technical complexity and the potential for misinformation, further inhibiting online adoption and widening the gap between supply and demand of ICT's.

Key Takeaways

When analysing current gaps, the following main themes became apparent:

1. Disparity in the need and expectation of resources to be delivered online by producers and the current preferred delivery method of extension providers
2. A gap in the amount of relevant information available online and the type of information available for the Inland Burnett Region
3. Universal support of a regionally specific SMART-Hub for producer access, though there is continued reluctance to engage in its use by extension providers

Recommendations

As Swaminathan, et al. notes, "*regular extension services usually do not reach the farmer at the right time and place. Modern information and communication technology (ICT) allows new possibilities to overcome the information gap*" in rural, regional and remote locations.

Further to this, collaborative research emphasises that for information to be of value and benefit it must be tailored to local agro-ecological and socio-economic conditions (Food and Agriculture Organisation of the United Nations, 2016; Swaminathan, et al., 2018).

With this and the results of this audit in mind, the following recommendations are made:

1. A systems approach to knowledge and skill dissemination systems be adopted via a regionally specific SMART-hub (*This recommendation has been completed*)
2. The development of the online SMART-hub should have a simple user-friendly interface for both desktop and mobile users to drive both producer and extension provider utilisation of the platform
3. Capacity for producers and service providers to provide feedback and recommendations should be simple and straightforward; this can be achieved via the online SMART-hub interface
4. Maximise the use of social media platforms to take advantage of the current increases in their popularity as a source of information and learning
5. Increase regionally specific training, learning and workshop opportunities.

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Appendix 1: SMART-Hub



Search Burnett Ag Hub ...

- Land
- Pests & Weeds
- Crops
- Water
- Climate
- Livestock & Animal
- Agribusiness
- Contacts

Burnett Ag Hub

Linking Inland Burnett producers to regionally relevant resources

Land	Pests & Weeds	Crops	Water
Climate	Livestock & Animal	Agribusiness	Contacts

About Burnett Ag Hub

Agriculture is fast becoming more knowledge intensive and having access to timely, accurate information, that is specifically tailored to the Inland Burnett conditions, is critical for farmers to be able to make the most of their resources in often changing circumstances.

This is the founding concept behind the "Inland Burnett: Resource Audit and Strategic Gap Analysis" project recently funded by the federal governments Building Better Regions Fund.

However, with the increase of online access and content, the inevitable 'information overload' and lack of internet connectivity in regional and remote areas means reliable resources needed to continually improve farming businesses, if they are available, may be difficult to search and obtain.

For this reason, the findings obtained via the comprehensive regional resource audit and strategic gap analysis of Inland Burnett farming resources will be presented via 'SMART-Hub' (Sustainable Management & Agricultural Resources & Tools) - an online hub designed to enhance landholder accessibility & connection to regionally relevant, smart farming resources.

This project aims to determine the gaps in resource availability and effectiveness, along with identifying the impediments landholders face in accessing and engaging these resources, and to then assist landholder accessibility to available resources by the development a centralised resource tool.



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Burnett Ag Hub is an initiative of the Burnett Catchment Care Association funded by the Australian Government through the Building Better Regions Fund.

The website design and establishment was thanks to funding from the Queensland Government Reef Water Quality Program with support from Burnett Mary Regional Group.

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SMART-Hub Website Menus


Land	Pests & Weeds	Crops	Water	Climate	Livestock & Animal	Agribusiness	Contacts
------	---------------	-------	-------	---------	--------------------	--------------	----------



Land

- Biodiversity
- Fire
- Grazing Land Management
- Mapping
- Native Forestry
- Soils
- Vegetation Management

Land	Pests & Weeds	Crops	Water	Climate	Livestock & Animal	Agribusiness	Contacts
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Pests & Weeds

- Pest Animals
- Pest Plants


Land	Pests & Weeds	Crops	Water	Climate	Livestock & Animal	Agribusiness	Contacts
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Crops

- Grains and Pulses
- Horticulture

Land	Pests & Weeds	Crops	Water	Climate	Livestock & Animal	Agribusiness	Contacts
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Water

- Dams
- Irrigation
- Riparian


Land	Pests & Weeds	Crops	Water	Climate	Livestock & Animal	Agribusiness	Contacts
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Climate

- Drought
- Climate Change
- Floods


Land	Pests & Weeds	Crops	Water	Climate	Livestock & Animal	Agribusiness	Contacts
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Livestock & Animal

- Animal Welfare
- Biosecurity
- Management
- Beef
- Dairy
- Pork
- Poultry

Land	Pests & Weeds	Crops	Water	Climate	Livestock & Animal	Agribusiness	Contacts
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Contacts

- Regional Council
- Assistance
- Natural Resource Management groups

Appendix 2: Survey Questions

Producer Survey

Information sources used to manage your agricultural business in the Inland Burnett

Burnett Catchment Care Association have received funds through the Australian Government's - Building Better Regions Fund, to develop an on-line agricultural resources hub specifically designed for the Inland Burnett. As part of the project we are undertaking a short survey to determine what resources you are currently using and what other information you would like access to.

1. What is your postcode?

2. What industry are you involved in?

- Beef
- Dairy
- Goats
- Cane
- Horticulture
- Citrus
- Chickens
- Pigs
- Lucerne
- Irrigated Cropping
- Dryland Cropping
- Agricultural business
- Hobby
- Conservation

Other (please specify)

3. What sources do you currently use to find information relating to your agricultural business?

- Magazines
- Newspaper
- Television
- Friends/Family
- On-line
- Landcare Groups
- Farmer Groups
- Workshops/Field Days
- Catchment Groups
- Regional Bodies - Burnett Mary Regional Group
- Local Agronomist
- Local Council
- Neighbour

Other (please specify)

4. If you are using online resources to searching for information, what topics are you currently searching?

- Season forecasts
- Market reports
- Property Mapping
- Pests & Weeds
- Funding for landholders
- Natural Disaster - floods/drought/fire
- Natural Resource Management Groups - Landcare, BMRG etc.
- Landtypes
- Biosecurity
- Soils
- Native Forestry
- Cropping
- Technologies in Agriculture
- Water - irrigation, dams, creeks
- Livestock & Animals
- Alternative & Emerging Opportunities

Other (please specify)

5. Overall, rate how useful your current sources are at finding the specific information you are looking for?

Not useful

Very useful



6. What factors limit your use of on-line sources?

- Slow internet speed
- Time constraints
- Not specific to the Burnett
- Inaccuracy of information
- Not sure where to start looking
- Too much information to look at

Other (please specify)

7. What sort of regionally specific information do you need access to for management decisions, productivity and knowledge to help grow your business?

8. Would you use an online resource hub, specific to the Inland Burnett, to source information for your agricultural business?

- Not at all
- Somewhat
- Definitely

Provider Survey

On-line Inland Burnett agricultural information hub - Industry Stakeholders and Service Providers

Burnett Catchment Care Association has received funding from the Australian Government through the Building Better Regions Fund to conduct an agricultural resources audit and strategic gap analysis for the Inland Burnett. As part of the project we are undertaking a short survey to determine what resources as industry stakeholder and service provider you are currently using to engage with clients/landholders/members of your organisation. The resources identified via this project will be used to develop an on-line agricultural resources hub specifically designed for the Inland Burnett region.

1. What organisation/industry group/service provider do you work for or are affiliated with?

2. What locality does your organisation/industry group/services provider service? (e.g. Gayndah only, Kingaroy only, Burnett catchment, Wide Bay Burnett region, Queensland, Nationally etc.)

3. Does your organisation have a permanent physical address and presence in the Inland Burnett?

- Yes
- No
- Occasionally (please specify)

4. What services does your organisation provide to landholders?

- Season forecasting
- Market reporting
- Property Mapping
- Pests and Weed advice
- Funding for landholders
- Natural Disaster
- Natural Resource Management
- Landtypes
- Biosecurity
- Soils - testing
- Native Forestry
- Technologies in Agriculture
- Water irrigation
- Livestock and Animals
- Alternative & Emerging technologies
- Events on around the region - field days/workshops
- Agronomic advice
- Mental Health
- Finance
- Financial Assistance
- Rural property listings
- Tourism
- Other (please specify)

5. Preferred method of information delivery to clients/landholders/members?

- Face to Face
- Email
- Social Media
- Newsletter
- Workshops/Field Days
- Organisations Website
- Phone
- Television
- Radio
- Local Newspapers
- Mail delivery
- All of the above
- Other (please specify)

6. What factors limit your organisations delivery of information online?

- Slow internet speed in regional areas
- Time constraints
- Staffing constraints
- Financial constraints
- Demographic of audience
- Organisation size - membership numbers
- Difficulty covering the regions large area
- Other (please specify)

7. Would your organisation utilise an online resource hub to link to and improve dissemination of your organisations information and services to land managers of the Inland Burnett?

- Not at all
- Somewhat
- Definitely

8. Would your organisation direct clients/members/landholders to use an online resources hub to source information about a specific region, e.g Inland Burnett?

- Not at all
- Somewhat
- Definitely



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