macleay valley FOODBOWL

Agribusiness Investment Guide

macleayvalleyfoodbowl.com.au

Contents

Aromatic fresh garlic bulbs

Blueberry Greens producer Caitlin Williams inspects her crop

Prepared by RMCG, published July 2016

Kempsey Shire Council acknowledges the support of NSW Department of Industry.

Cover images (main image): The Macleay's clean and green environment, combined with its subtropical weather, make it ideal for growing a wide range of produce.

Bottom left: Burrawang Gaian Farm north of Kempsey produces ducks that are highly sought by some of the country's leading chefs, including Kylie Kwong.

Bottom right: Pipers Creek Grove producers showcase their crop of Blood Limes.

NSW GOVERNMENT | Department of Industry

KEMPSEY Shire Council

1 Message from the Council

When it comes to investment, timing is key, along with having a quality product, strong market demand, a supportive environment, professional networks and solid relationships. The Macleay Valley is already the location of choice for some of Australia's most recognised products and brands. Legendary Akubra hats has manufactured from its Kempsey plant for the past 40 years, while Nestle's iconic Milo brand was invented at the village of Smithtown 80 years ago and is still produced here today.

The Macleay is also home to a growing industry of high value food producers, a trend Kempsey Shire Council proudly supports, in partnership with industry, through the Macleay Valley Food Bowl brand and its Agribusiness Investment Project. The region's clean, green environment, including its soils and climate, produces top quality produce that, put simply, tastes sensational.

Our history of beef, dairy and timber production has today given rise to a vibrant new generation of high value and value-added primary production. From our prosperous organics industry, to native bush foods, intensive horticulture, high grade beef, dairy and pasture-raised poultry, the Macleay Valley is well suited to a broad range of agribusiness ventures.

All investment carries a degree of risk, but the Macleay Valley offers some unique characteristics to increase your chance of success. Firstly, your up-front costs are lower, with property prices some of the most affordable on the NSW east coast. Secondly, you will have access to a ready workforce. Thirdly, you will become part of a strong and vibrant Macleay Valley Food Bowl network of producers who enjoy the competitive advantage of a branded destination with a reputation for the best produce money can buy. Fourthly, our highway transport links to major markets are first rate and will continue to improve as upgrades are completed, further reducing travel times. And finally, the Macleay's pristine and picturesque hinterland-to-coast environment offers a beautiful place to live and build your dream home and business.

Kempsey Shire Council, with support from NSW Department of Industry, has invested in producing this Investment Guide because the research tells us there is a significant opportunity for investment. This view is shared by those already investing and is evidenced by the unprecedented market demand for Macleay Valley Food Bowl produce.

There is no better time or opportunity to invest right here, right now, in the Macleay Valley.

Cr Liz Campbell
Mayor, Kempsey Shire Council

Crescent Head east of Kempsey is a nationally recognised Surf Reserve and a growing hub for high quality produce and dining experiences.

2 Why invest in the Macleay Valley Food Bowl?

The Macleay Valley is on the Mid North Coast of NSW, mid-way between Sydney and Brisbane and only an hour in either direction to the regional centres of Port Macquarie and Coffs Harbour.

The Macleay is suitable for a wide range of agricultural products associated with animal husbandry and crop production, with many natural and strategic factors benefiting the region compared to neighbouring areas on the Mid North Coast and other productive areas around Australia. These include:

✓ **High quality agricultural land**

High quality land can be found on the rich alluvial plains, upriver of Kempsey outside of the alluvial plains, and in the surrounding hinterland. This geographic diversity provides opportunities across multiple agricultural activities.

✓ **Affordable land values**

Agricultural land is typically priced at a discount of 20% or more compared to similar land in neighbouring areas.

✓ **A sub-tropical climate**

A mild and largely frost-free coastal climate with few extremely hot days makes the Macleay Valley well suited to a wide range of agricultural enterprises, and provides opportunity for counter-seasonal supply of agricultural products.

✓ **High rainfall and abundant water supplies**

The Macleay Valley has high and consistent rainfall, positioning the region well for both rain fed and irrigated systems.

✓ **Strategic location**

Located half-way along the Sydney-Brisbane corridor, primary producers in the region can easily access both local regional markets at Port Macquarie and Coffs Harbour, as well as larger markets in Sydney and Brisbane.

✓ **Excellent infrastructure and services**

Recent upgrades to the Pacific Highway have reduced road transport times to major markets. Both nearby regional centres offer regular commercial passenger and freight air services. The region is also home to an abattoir, a publicly available commercial kitchen, transport services and agronomic services.

✓ **Enviable lifestyle**

The Macleay Valley offers a quality lifestyle with community infrastructure that includes a recently upgraded hospital, schools and TAFE, and university campuses in Coffs Harbour, Port Macquarie and Armidale. As a tourist destination the region is well-known for the laid back mix of coastal and hinterland experiences.

Kempsey Shire Council is strongly supportive of agricultural innovation and has led the development of the Macleay Valley Food Bowl, seeking to provide tangible support the Macleay's agribusiness industry. Already, the Macleay Valley Food Bowl brand is becoming well known in the Sydney, Melbourne and Brisbane markets, where the region's produce is being sought by leading chefs and gourmet retailers.[1]

Rising export demand from China for Australian milk products, including those from Norco, which all dairy farmers in the Macleay Valley supply to, is also resulting in renewed investment in the local dairy sector.

No matter what your interest or area of agricultural expertise, opportunities exist for you in the Macleay Valley. This Guide has been prepared to outline what the region has to offer, and to help you identify what opportunities might suit you.

[1] For further information see: macleayvalleyfoodbowl.com.au

3 The Macleay Valley Food Bowl Region

Regional snapshot

The Macleay Valley is located on the Mid North Coast of NSW, between Port Macquarie and Coffs Harbour.

The major urban centre is the town of Kempsey, which is around 450km from both Sydney and Brisbane. The town has a population of around 9,000, and the broader Shire's population is around 30,000.[2]

The region's agriculture has traditionally focussed on animal husbandry, with beef cattle and dairy industries remaining the dominant sectors by land use, employment and production. However, the mild climate, high rainfall and low land cost makes the region suitable for a vast range of crops and livestock.

Agriculture at a glance

- Largest industry in Kempsey Shire in terms of number of businesses, comprising 29% of the total (2,191)
- Contributes $54.1 million, or 4% of the total Gross Regional Product (GRP), for the Kempsey Shire
- Productivity average of $42.39, which was higher than the sector averages for the Mid North Coast ($41.37) and NSW ($38.81)
- Comprises 4.9% of the total workforce of the Kempsey Shire (8,807 persons)
- Has a greater industry concentration (i.e. location quotient greater than 1) than the national economy – and therefore has net exports from the region (1.98)
- Grazing is the most prominent land use type in Kempsey Shire, comprised 114,003 ha, or 83.3% of the total area of holdings, followed by Land set aside for conservation (10,633 ha, or 7.8%), Other areas not used for agricultural production (3,200 ha, or 2.3%) and Crops (2,946 ha, or 2.2%)
- Gross value of agricultural production of $42.4 million.[3]

[2] For more details see: profile.id.com.au/kempsey/highlights

[3] Lawrence Consulting (2014) Kempsey Shire Agricultural Industry Profile 2014, report prepared for Kempsey Shire Council

A sale in progress at Kempsey Regional Saleyards

Location and transport

Road

The Pacific Highway passes through the Shire on the outskirts of Kempsey, connecting the Macleay Valley to neighbouring towns, as well as to Sydney and Brisbane:

- 35 minutes' drive south to Port Macquarie (49kms via the Pacific Highway)
- 1.5 hours' drive north to Coffs Harbour (112kms via the Pacific Highway)
- 4.5 hours' drive to south Sydney (428kms via the Pacific Highway)
- 6 hours' drive to north Brisbane (538kms via Pacific Highway).

Upgrades to the Pacific Highway will further reduce travel time to major centres, with the major town of Kempsey bypassed in 2013 and additional upgrades to the south and north scheduled for completion in 2016 and 2017. The former highway is being progressively upgraded to dual carriageway. Completion of the Pacific Highway will reduce travel time from Brisbane to Sydney by 2 hours.

Air

Kempsey Airport is a registered airport with an airstrip capable of handling commercial airline services, although no commercial services currently operate from the airport. It has recently undergone a $2.5 million upgrade to create a new Aviation Business Park and is home to a major international pilot training school.

Port Macquarie Airport located 35 minutes south of Kempsey receives daily flights from Sydney, Brisbane and Canberra with Qantas and Virgin.

Rail

The Kempsey Railway Station connects the region by rail to Brisbane and Sydney along the North Coast Line.

Transportation companies

Multiple transportation companies and established networks operate within the valley including Macleay Valley Transport.

Services available to new businesses and people

Council services

Kempsey Shire Council's Economic Sustainability Unit is responsible for economic development, tourism and commercial asset management. The ESU team is available as a first point of contact for new and existing businesses keen for information about the local economy and business environment, or advice from Council's planning team.

Overview of general services

The Kempsey region has a number of services that support a vibrant agricultural sector.[4]

Table 3-1: Overview of general services in the Kempsey region

Service	Description
Saleyards	The Council owned Kempsey Regional Saleyards have been upgraded and accredited under the National Saleyards Quality Assurance Program since 2001. Kempsey is one of 22 saleyards with full accreditation. Approximately 40 sales are held annually and attract vendors and buyers of all forms of livestock throughout the Mid North Coast.
Abattoirs	Eversons Food Processors is an abattoir and meat packer based in Frederickton, north of Kempsey, that services the local area. It is a multi species abattoir processing lamb, sheep, cattle, pigs and goats.
Education	The region has a strong education sector with TAFE, the University of New England at Armidale, Southern Cross University at Coffs Harbour and Lismore, and Charles Sturt University and the University of Newcastle at Port Macquarie.
Health	Kempsey Hospital's $80 million upgrade was completed in 2016 and the region also offers numerous privately-owned medical practices.
Community	Sports grounds and recreational facilities • 11 licensed clubs • 4 public swimming pools • 10 registered clubs • 4 golf courses • Horse and greyhound racing tracks • Indoor cricket and ten pin bowling • 14 tennis court complexes and 3 squash complexes • Service clubs including Rotary, Lions, Apex, Quota, Probus and View Clubs.
Shopping	Shopping centres and stores including Big W, Country Target, Woolworths, Coles, IGA, Aldi and many specialty and gift retailers. The Kempsey town centre has recently undergone a $3.6 million upgrade featuring new paving, lighting, plantings and street furniture.

[4] For further information see the Macleay Valley Welcome pack 2015-2016: kempsey.nsw.gov.au/econodev/pubs/macleay-valley-welcome-pack-2015-2016.pdf

Agricultural production advice

Advice and support for a range of industries is provided by Local Land Services (lls.nsw.gov.au). For regional support, contact North Coast Local Land Services on 1300 795 299 or 02 6563 6700, or send an mail to admin.northcoast@lls.nsw.gov.au or PO Box 108 NSW 2440. The office is located at 83 Belgrave Street Kempsey.

NSW Farmers (nswfarmers.org.au/home) can also be of assistance.

Council, Macleay Valley Business Chamber and North Coast Local Land services are able to put newcomers to the region in touch with local producer groups, including for dairy, beef, organics or other specialist producers located within the Macleay Valley Food Bowl. Council's macleayvalleyfoodbowl.com.au website contains a comprehensive and up-to-date local producer contact list.

The Macleay Landcare Network is active in the region and welcomes newcomers. Joining a Landcare group can be a good way to meet like-minded people, learn about opportunities and overcome challenges. Macleay Landcare has a Resource Kit for Rural Landholders: macleaylandcare.org.au/#!farming-and-soil-health/c12ae.

Fee-for-service agronomic advice is available from several agribusiness service providers and rural produce stores in the area. Currently, there is greater expertise in livestock production with specialist staff focussing more so on beef and dairy cattle than in horticulture. For this reason, specific horticultural expertise may need to be sourced from outside of the immediate area in adjacent regions such as Coffs Harbour.

Business support

General information is available from the Department of Industry, Innovation and Science (business.gov.au). This includes guidance on starting, running and exiting a business, as well as grants and assistance, advisory services and events.

Enterprise Connect can also offer advice and support to eligible Australian small and medium-sized businesses, including a comprehensive, confidential and independent Business Review at no charge. (businesscentre.com.au/item/enterprise-connect)

Small business support services are available in the Kempsey area, along with all major Australian banking services. Information is available from Kempsey Business Chamber (macleayvalleychamber.com), South West Rocks Chamber of Commerce (southwestrocks.org.au) and Kempsey Shire Council (kempsey.nsw.gov.au).

The NSW Department of Industry, through the Office of Regional Development and Office of Small Business, offers regional business support and advice, including advice on funding programs, and has a regional office at nearby Port Macquarie (industry.nsw.gov.au).

AusIndustry also provides advice on a range of business, employment, finance, insurance, tax and export matters, with regional officers servicing the Kempsey area from the Newcastle, Tamworth and Sydney offices (business.gov.au).

Other key industry contacts are available on the Macleay Valley Foodbowl website under 'Links'.

Kempsey's CBD has recently undergone a major multi-million dollar upgrade

Kempsey Shire Council's planning staff are available to provide advice all the way through the planning approval process

4 Commercial information

NSW Right to Farm Policy

The NSW Right to Farm Policy highlights the value of agriculture and the principle of shared obligations as well as the importance of certainty, resource access and critical mass, infrastructure, processing facilities and markets for agriculture.

Social licence to operate and community engagement are important aspects to long-term agribusiness success.

New agribusiness development should be located, designed and operated so as to avoid or minimise potential for land use conflict with neighbours and adjoining or other local land uses.

Land availability, property sizes and value

Land availability and property sizes

The Macleay Valley has quality, affordable land available for agriculture. One quarter of the properties in the region contain 99% of the land area. This means there are properties of an appropriate size to suit most commercial agricultural enterprises, including annual and perennial horticulture (11-50ha), dairy, animal husbandry and grazing (51-100ha), and cropping (>100ha). The average property size is approximately 16ha.

(Refer Appendix 1, Property Size Range Map (Figure A1-1).)

While property size is important, it is not the only determinant of potential land use and productivity. Commercial beef cattle grazing enterprises would generally be associated with large to very large properties. Large land holdings may also be necessary for some enterprises to create buffers for odour, organic waste reuse or other potential amenity issues.

Land Value

The rural land value in the Kempsey region is generally lower than in surrounding municipalities in Coffs Harbour and Port Macquarie-Hastings. The average price for rural land is approximately $2,500 per hectare at the time this Guide was published.

Table 4-1: Property size range[5]

Property size range (ha)	Number	Proportion number (%)	Area (ha)	Proportion area (%)
0 - 10	10,642	82%	9860	5%
11 - 50	1708	13%	43,763	21%
51 - 100	357	3%	24,630	12%
> 101	322	2%	128,890	62%
Total	**13,029**	**100%**	**207,143**	**100%**

[5] Note: excludes public land such as national parks and state forests. Based on Geographic Information System (GIS) analysis of the Kempsey Shire Council property layer.

To value representative rural properties, valuers in NSW compare sales evidence with the land they are valuing. Valuers consider all factors that influence the land's value, such as:

- Land classification
- Land size
- Productivity of the land
- Property market conditions as at 1 July in the year of valuation
- Most valuable use of the land.

Land classifications are common land classes based on general use such as cropping, grazing, irrigation and horticulture. They are further defined by consideration of physical features of the land such as soil, topography or timber. Properties may contain different land classes. When valuing these properties, a rate for each land class will generally be determined and applied.

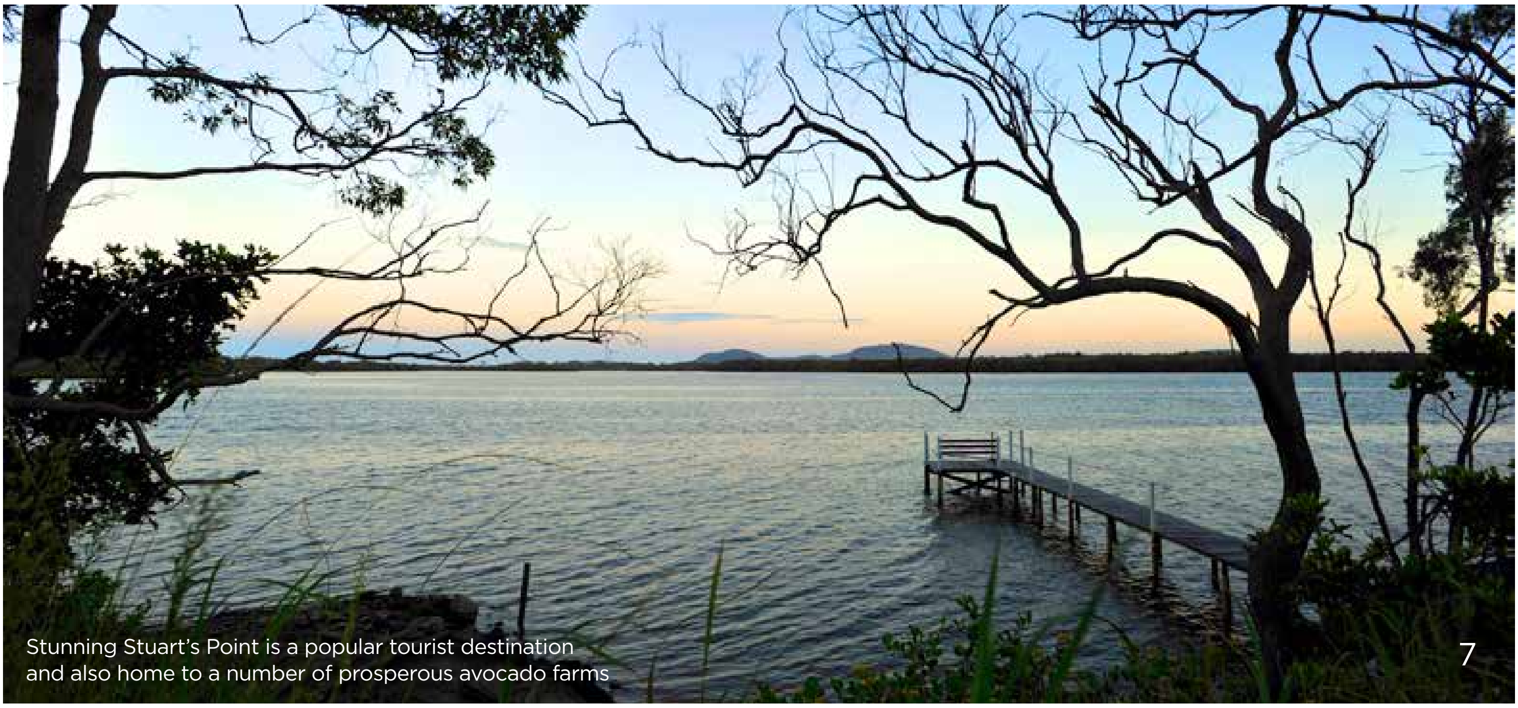
The NSW Land Valuation Service can be contacted by phone: 1800 110 038 during business hours or in writing:
Valuation Services, Land and Property Information, PO Box 745, BATHURST NSW 2795
email: valuationenquiry@lpi.nsw.gov.au.

It is strongly recommended that you investigate and compare current land values when looking to buy a rural property, and that you talk to several real estate agencies. In addition to the factors considered for land valuation purposes, investors will have additional considerations, including:

- Infrastructure
- Closeness to markets
- Labour availability
- Access to supplies
- Planning support/restrictions
- Access to services such as education, health care, legal/accounting services, recreation opportunities
- Opportunities related to tourism
- Lifestyle, aesthetic appeal of landscape and townships.

This Investment Guide provides further information on some of these additional aspects. Others are not covered within the Guide, as Kempsey Council has information available through other resources.

Each investor has to conduct their own due diligence and assessment of land values, as well as other aspects of specific interest to the business and its people.



Stunning Stuart's Point is a popular tourist destination and also home to a number of prosperous avocado farms

Infrastructure capability

Transport services

A number of freight service providers operate in the area, taking produce to regional markets as well as to Sydney, Brisbane and Melbourne.

Air freight can be sent from Port Macquarie Airport, which has daily services to Sydney.

Other infrastructure

A Council-owned commercial kitchen is available for hire for food production. The kitchen offers two commercial ovens and gas cook tops and large range hood. Equipment includes a fridge and freezer, pots, pans and cookware together with a dishwasher.

Local or regional markets for produce can be found in the following centres:

- Gladstone: Gladstone Quality Markets, Kinchela Street, Gladstone
- Kempsey: Market at Riverside Park, Kempsey, with numerous other markets detailed at macleayvalleycoast.com.au
- Port Macquarie: Hastings Farmers Market at Port Macquarie Westport Park, Port Macquarie: growersmarket.net.au, or Wauchope Markets Wauchope Showground High Street: wauchopefarmersmarket.com.au
- Coffs Harbour: Coffs Coast Growers' Market City Square Harbour Drive, Coffs Harbour
- Bellingen: Growers Market, corner of Hammond St & Black St, Bellingen.

Information on growers markets nationally can be found at markethere.com.au.

Fresh horticultural produce (fruit, vegetables, herbs, flowers) wholesale markets exist in all major centres:

- Sydney: sydneymarkets.com.au
- Newcastle: newcastlemarkets.com.au
- Brisbane: brisbanemarkets.com.au
- Melbourne: melbournemarkets.com.au
- Adelaide: saproducemarket.com.au
- Perth: perthmarket.com.au/wholesale-markets.

Information to assist in export considerations can be found in the following resources:

- NSW Government export assistance
- NSW Government Export Accelerator Toolkit
- Austrade guide to exporting
- Export Council of Australia market research advice
- AUSVEG export readiness checklist.


The Green Room cafe at Crescent Head is a popular eatery with both locals and visitors

Gladstone Markets are a popular place to buy and sell fresh local produce

L-Bo St Butcher Josh Ball proudly produces his own paddock to plate retail range of meats

Market information

General market trends

The table below provides an overview of current trends that agriculture investors should consider.

Most fresh produce is in oversupply at certain times of the year. It is important to find a market niche or advantage based on timing, a special variety, service, product offering or relationship.

Observation	Opportunity
Consumers show a preference for local products and local providers, as well as other personal and social aspirations such as environmental stewardship or ethical animal husbandry.	*Opportunities exist where there is an ability to capitalise on tailored marketing of local products, providers and practices.* *A 'local' supply chain can offer the benefit of increased flexibility and tailoring to meet local demand, and potentially shorter lead times.* *This trend may also be a way to galvanise the advantages held by local or domestic processing supply chains against competitive threats from greater volumes of imported products.*
Demand for convenience remains a strong consumer preference, despite fluctuations in sentiment and discretionary spending on food.	*There is an opportunity to expand the offering of ready-meal products, across a range of price points to meet the consistent demand for convenience.* *This is particularly true where it helps manage portion size, offers 'wholesome' nutrition and reduces waste.* *An opportunity exists to use produce that does not meet Grade 1 market specifications, due to size or shape, to manufacture quality convenience food.*
The development and growth in alternative distribution channels (including for meals, fresh produce and dining out options) makes this an increasingly viable option, including for 'provenance' branded food products.	*These alternative channels, such as the delivery of 'fruit and vegetable boxes', hampers and other internet or application ('app') based sales, can be cost-effective alternatives to some traditional channels.* *Suppliers can capitalise on available and emerging technologies to improve consumer convenience in access, ordering and delivery.*
Institutional food service provision could be improved in terms of both variety and quality of products and services when compared to what is currently available.	*There is an opportunity for a group of producers, with capacity to operate with sufficient scale, to create 'meal solutions' to improve the efficiency and meal options for the institutional health care sector and other institutions. This would be especially attractive if nutritional, logistical and administrative challenges were reduced for institutional buyers.* *This may provide scope for producers to utilise nutritious ingredients that do not meet Grade 1 market specifications due to size and shape.*
There is an increase in the size of the 'mature aged' consumer market and the health conscious market segments who demand convenient, healthy and functional food.	*There are opportunities to meet the demands of the ageing, health-conscious population through an expanded range of convenient, nutritious, healthy and functional food.* *Further, through the institutional sector such as aged care homes, there is demand for tasty, nutritious food, including part-prepared food.*
Building on practices already in use, there is potential for expansion of food service convenience, further reducing some of the in-house preparation requirements and costs for providers.	*Labour remains a significant cost component for many food service providers. There is potential to reduce this cost, improve energy efficiency, food safety and make operators more competitive and responsive through products that enable reduced in-house preparation in restaurants.* *There can be an opportunity to combine convenience with provenance, health and quality attributes and new flavour experiences, eg for restaurants, catering and take-away businesses.*
Despite strong retail competition, there is an ongoing opportunity for specialist providers where they can provide high-quality specialty products supported by strong customer service to local markets, into specialty stores or to selected wholesalers.	*The strong patronage by value, health and quality-conscious consumers means there is an opportunity for specialist providers who are able to improve the shopping experience and widen the appeal to retain and grow their customer base.*

Where to get market and other information on various industries

The table below summarises sources of market information for the major types of enterprises. Most links also provide production information and details about learning opportunities.

Enterprise types	Market information sources
Dairy	Dairy Australia: dairyaustralia.com.au Dairy processing companies, eg Norco, Bega Cooperative Fonterra
Grazing (red meat)	Meat and Livestock Australia: mla.com.au
Animal husbandry (eg poultry, rabbits)	Everson's Food Processors: eversons.serverau.com Australian Chicken Meat Federation: chicken.org.au Poultry Hub: poultryhub.org Australian Egg Corporation Limited: aecl.org AusMeat Limited: ausmeat.com.au Specialised small farm advice: farmstyle.com.au/news/farming-meat-rabbits-introduction
Animal husbandry (pigs)	Pork CRC: porkcrc.com.au – research Australian Pork Limited (APL): australianpork.com.au – producer organisation PROOF: australianpigfarmers.com.au – free range grower association
Perennial horticulture (fruit and nuts)	Horticulture Innovation Australia Limited: horticulture.com.au provides links to fruit and nut peak industry bodies who provide market information
Annual horticulture (vegetables and herbs)	Horticulture Innovation Australia Limited: horticulture.com.au – research AUSVEG: ausveg.com.au – vegetable and potato peak industry body ausveg.com.au/intranet/vegetable-market/project-harvest-2015.htm
Cropping	Grains Research and Development Corporation (GRDC)
Game	Rural Industry Research & Development Corporation (RIRDC): rirdc.gov.au Aussie Game Meats: gamemeatprocessing.com.au
Niche and native crops	Rural Industry Research & Development Corporation (RIRDC): rirdc.gov.au Australian Native Food Industry Limited (ANFIL): anfil.org.au
Nursery	Horticulture Innovation Australia Limited: horticulture.com.au provides links to nursery peak industry body
Protected cropping, hydroponics	Protected Cropping Australia (PCA): protectedcroppingaustralia.com
Aquaculture (oyster and fishing industries)	The Macleay River estuary supports a large recreational fishery, an estuary general fishery with upwards of 12 professional fishers and an oyster aquaculture industry. Kempsey Council actively supports this industry and works collaboratively to protect water quality in the Macleay River. Further information can be sought directly from Council.
General agricultural market information	Website promoting local, free range and organic produce (milk, eggs, pork, garlic, chicken, turkey, fruit and vegetables): flavourcrusader.com Examples of free range meat marketing with similar approaches possible for other types of produce: freerangebutcher.com.au Rabobank: rabobank.com.au ANZ Rural: anz.com/small-business/agribusiness ABARES: agriculture.gov.au/abares Austrade: austrade.gov.au Export Council of Australia: export.org.au Market Insider: intracen.org/itc/market-insider Fresh Plaza: freshplaza.com for fruit and vegetables Horti Daily: hortidaily.com for crops grown in greenhouses and tunnels
Processing/Value adding	The NSW Food Authority should be consulted by anyone intending to undertake value adding such as processing/food manufacturing www.foodauthority.nsw.gov.au

5 Land suitability

Sub-regions

The Macleay Valley is extremely diverse and offers something for everyone. Its competitive advantages, including access to natural resources such as water, as well as its favourable soil and climate, combine to support a range of agricultural enterprises. These conditions vary across three distinct sub-regions:

1. **Alluvial plains** east of Kempsey to the mouth of the Macleay River
2. **Upriver** west of Kempsey to Willawarrin
3. **Hill country** from Willawarrin west to the shire boundary.

Land capability and soil types

A landscape map of Kempsey by land capability can be found in Appendix 1 (Figure A1-2).

The Kempsey region has a large area of high (Class 3) and moderate (Class 4) land capability capable of supporting a range of agricultural enterprises.

Land capability is defined as the inherent physical capacity of the land to sustain a range of land uses and management practices in the long-term, without degrading soil, land, air and water resources. The Land and Soil Capability (LSC) assessment scheme uses the biophysical features of the land and soil, including landform position, slope gradient, drainage, climate, soil type and soil characteristics, to derive detailed rating tables for a range of land and soil hazards. Class 1 is the best and highest capability land, while Class 8 is the worst or lowest capability land.[6] The different Classes, areas and indicative soil types for the region are shown in Table 5-1 on the next page. There is no Class 1 or 2 land in the region, which is not unusual.

[6] Officer of Environment and Heritage (2013) The land and soil capability assessment scheme; Second approximation; A general rural land evaluation system for New South Wales, NSW Government, Sydney


The Macleay Valley is proud of its strong agricultural history


A crop of organic garlic thrives at Sweet Water Farm, located 10 minutes west of Kempsey

Table 5-1: Land and soil capability class areas and indicative soil types [7]

Class	Description	Area (ha)	Proportion area (%)	Indicative soil types
3	High	17,952	8%	Non-calcic Brown soils
4	Moderate	25,427	12%	Brown Earths
5	Moderate-low	28,026	13%	Alluvial Soils – Light Sandy Textured
6	Low	60,023	28%	Solodic Soils
7	Very low	45,775	21%	Calcareous Sands
8	Extremely low	35,899	17%	Acid Peats
Total		**213,102**	**100%**	

Different land and soil capability classes are able to support different types of agricultural enterprises, as shown in the table below. Class 3 (high) is able to support the full spectrum of agricultural activities from intensive irrigated annual horticulture to low intensity dryland grazing. However Class 7 (very low) is only able to support low intensity (extensive) grazing activities.

Table 5-2: Land and soil capability class and compatible agricultural enterprises

Class	Description	Grazing	Animal husbandry	Dairy [8]	Cropping	Perennial horticulture	Annual horticulture
3	High	✓	✓	✓	✓	✓	✓
4	Moderate	✓	✓	✓	✓	✓	✓
5	Moderate-low	✓	✓	✓	✓	✓	X
6	Low	✓	✓	X	X	X	X
7	Very low	X	X	X	X	X	X
8	Extremely low	X	X	X	X	X	X

Decreasing intensity

Decreasing intensity

Land capability is generally higher in the alluvial plains and upriver areas compared to the hill country, and is able to support a wider range of agricultural enterprises. The variations in land and soil capability by sub-region are outlined below.

Table 5-3: Variation in land and soil capability by sub-region

Sub-region	Land and soil capability description	Generally suitable enterprises
Alluvial plains	Areas of high (Class 3) bordering the Macleay River, with predominantly moderate (Class 4) and moderate-low (Class 5) away from the waterway. These are inter-dispersed with large areas of low (Class 6) and very low (Class 7) near public land boundaries.	Annual horticulture, perennial horticulture, cropping, dairy, animal husbandry, grazing Flood risk needs consideration
Upriver	Predominately moderate-low (Class 5) and moderate (Class 4) with isolated areas of high (Class 3) along the Macleay River, mainly in the east towards Kempsey.	Perennial horticulture, cropping, dairy, animal husbandry, grazing
Hill country	Predominately low (Class 6) and very low (Class 7) in the central area south of Bellbrook, with very small areas of high (Class 3) along the river. The western area is dominated by extremely low (Class 8) toward the boundaries of National Park.	Animal husbandry, grazing

[7] Note: excludes public land such as national parks and state forests

[8] Dairy cows or goats

Specific considerations relating to soils and land capability

Soils

Individual sites located within otherwise suitable areas of the Macleay Valley may have more limited land uses due to particular aspects with specific management requirements. These include, for instance, potential acid sulphate soils in the lower lying parts of the alluvial plains.

Many of the region's soils that have not been intensively used are likely to be acidic and this, along with low inherent fertility, is a typical feature of Australian soils. Plants other than natives, such as blueberries, would require an initial investment in soil improvement. This could include liming and the addition of fertilisers to reach the required pH and fertility status for the selected crop or pasture. Organic soil amendments may also be beneficial in some cases.

It is important that you seek out expert advice when selecting a specific site for a particular land use (refer Section 3.3, Services).

Soil on steeper hill slopes can be shallow and easily eroded. It is not advisable to clear slopes by more than 15% for cropping or grazing purposes on north-facing slopes, even if permissible.

Further information is available from the Resource Kit for Rural Landholders in the Nambucca, Macleay and Hastings Valleys, 2008 Landcare, DAFF, NRCMA.

Land capability

Class 5 land is suitable for cropping and dairying, with some specific considerations. The land needs to be managed carefully and in a site-specific manner to prevent soil degradation, for example via compaction, organic matter loss or erosion. Generally, this means that cropping requiring intensive tillage would only be practical once or twice within eight years, unless soils are ameliorated and managed with care, for example via suitable soil amendments, drainage as required and minimum tillage, controlled traffic, cover cropping and erosion control. Rocky soils are usually not suitable for conventional cropping.

Dairying may require drainage, higher inputs than on better class land, or lower stocking rates to prevent soil degradation. Animals should not be grazed on waterlogged pastures. Goats are especially susceptible to foot diseases if kept on wet ground. However, smaller animals could be easily kept.

Perennial crops would be easier to manage but would still require good soil preparation to the main rooting depth, which could include a 1-year cover crop to start with.

Flood risks need to be considered within the vicinity of the river and estuary, with permanent structures to be built and positioned accordingly. Perennial crops are not recommended, and animals may require standoff areas or shifting to higher ground.

Higher labour inputs are usually required on sloping land.

Adequate skills and knowledge are required to manage Class 4 and especially Class 5 land, as indicated in Table 5-3.

Green Leaf Farm at Clybucca is a significant new agribusiness in the Macleay Valley

Climate

Kempsey's location on the Mid North Coast of NSW provides it with a number of climatic advantages. This includes a mild temperature range, with few days above 35°C, and few below 2°C. There is also high and consistent rainfall, averaging over 1,200mm annually, with a monthly average minimum of 55mm (September) and a high of 158mm (January).

A mild climate with high rainfall allows for a broad range of crop and livestock production, including the potential to produce 'counter-seasonal' crops.

Table 5-4: Average climate data [9]

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Temperature													
Mean maximum (°C)	29.2	28.8	27.8	25.5	22.6	20.0	19.7	21.3	24.0	25.6	27.1	28.5	**25.0**
Mean minimum (°C)	17.7	17.9	16.6	13.3	9.7	7.1	5.7	6.3	9.0	11.8	14.4	16.6	**12.2**
Days ≥35°C (#) [10]	0.7	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.8	0.9	**3.5**
Days ≤2°C (#)	0.0	0.0	0.0	0.0	0.2	1.2	3.2	2.6	0.1	0.0	0.0	0.0	**7.0**
Rainfall													
Mean rainfall (mm)	133.1	158.1	151.4	115.3	91.6	99.4	65.2	62.6	55.4	78.0	95.3	110.0	1215.7
Mean days ≥1mm (#)	9.3	9.8	10.5	8.2	6.8	6.1	5.1	4.8	5.2	7.0	8.0	8.8	**89.6**

The climate varies from subtropical on the coastal alluvial plains (12-25°C, 1,216 mm rainfall), to subhumid on the slopes upriver (12-24°C, 1,272 mm rainfall), to temperate in the western hill country (8-18°C, 1,515 mm rainfall). The variation in climate by sub-region is outlined below.

Table 5-5: Variation in climate by sub-region

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Alluvial plains [11]													
Mean max. (°C)	29.2	28.8	27.8	25.5	22.6	20.0	19.7	21.3	24.0	25.6	27.1	28.5	**25.0**
Mean min. (°C)	17.7	17.9	16.6	13.3	9.7	7.1	5.7	6.3	9.0	11.8	14.4	16.6	**12.2**
Mean rainfall (mm)	133.1	158.1	151.4	115.3	91.6	99.4	65.2	62.6	55.4	78.0	95.3	110.0	**1215.7**
Upriver [12]													
Mean max. (°C)	27.7	27.4	26.4	23.9	20.9	18.9	18.3	20.2	22.2	24.7	27.1	28.3	**23.8**
Mean min. (°C)	17.2	18.1	16.7	12.9	9.3	7.6	6.1	6.3	8.3	11.4	13.9	16.1	**12.0**
Mean rainfall (mm)	149.4	191.3	145.7	96.2	64.2	109.9	70.1	101.2	45.0	77.6	95.6	120.1	**1272.2**
Hill country [13]													
Mean max. (°C)	23.7	22.6	20.8	17.9	14.6	12.2	11.7	13.0	16.2	19.4	22.1	23.8	**18.2**
Mean min. (°C)	12.3	12.9	11.2	7.9	4.7	2.8	1.6	2.5	4.8	7.9	10.2	11.7	**7.5**
Mean rainfall (mm)	205.9	209.8	209.0	106.3	79.9	119.8	76.1	81.7	64.7	98.1	111.6	151.0	**1514.5**

[9] Bureau of Meteorology (2016) Climate statistics for Australian locations; Monthly climate statistics; Kempsey (Wide Street) site number 059017, bom.gov.au/climate/averages/tables/cw_059017.shtml

[10] Weather Zone (2016) Kempsey Climate, weatherzone.com.au/climate/station.jsp?lt=site&lc=59017

[11] Bureau of Meteorology (2016) Climate statistics for Australian locations; Monthly climate statistics; Kempsey (Wide Street) site number 059017, bom.gov.au/climate/averages/tables/cw_059017.shtml

[12] Bureau of Meteorology (2016) Climate statistics for Australian locations; Monthly climate statistics; Tanban Forestry site number 059031, bom.gov.au/climate/averages/tables/cw_059031.shtml

[13] Bureau of Meteorology (2016) Climate statistics for Australian locations; Monthly climate statistics; Jeogla (Jeolga Old. SF.Site) site number 057017, bom.gov.au/climate/averages/tables/cw_057017.shtml

Water availability

Water availability in the Macleay Valley is less of a challenge than some other productive regions in Australia, due to high rainfall, availability of both surface water and groundwater entitlements, and catchment in on-farm dams.

Surface and groundwater extraction is governed by Water Sharing Plans (WSP) in NSW. An updated Water Sharing Plan for the Macleay Valley is expected in mid-2016, with the following features:

- Almost 3,500ml of surface water entitlement in the Macleay Valley (no additional entitlement available)
- No additional groundwater allocation for commercial use, however many properties already have groundwater entitlement in use.

The new WSP separates land and water rights, facilitating trade of entitlement within the Valley, and also upstream from the broader Extraction Management Unit (a further 20,000ml of entitlement). This will increase the potential pool of surface water entitlement available for use in the Macleay Valley.

Many farms source water from on-farm dams which do not require a licence if sized according to its maximum harvestable right.

It should be noted, particularly for irrigation use, that surface water downstream of the town of Kempsey can be affected by salinity. While water availability is not an issue, flood risks need to be considered for land located within the vicinity of the river and estuary.

The NSW Office of Water has an office in Kempsey and can provide further information on water infrastructure and water availability for irrigation.

Topography

The majority of the Kempsey region is flat (0% slope) or slightly undulating (1-2% or 3-5% slope), making it ideal for agricultural land use (Refer Appendix 1, Figure A1-3). Topography is important to consider, as this determines the risk of soil erosion, nutrient and sediment runoff, and the ability to safely farm the land with machinery and avoid potential off-site impacts.

Slope generally needs to be less than or equal to 15% for sustainable agricultural land use, however this varies depending on the enterprise. It is preferable for annual horticulture to be undertaken on slopes less than, or equal to, 5%. Cropping and pasture for dairy, animal husbandry and grazing is best undertaken on slopes less than, or equal to, 10%, while perennial horticulture can be undertaken on slopes of up to 15%.

Land is flattest in the alluvial plains sub-region, followed by slightly sloping land upriver. Land becomes more undulating and steeper further west in the hill country. The variation in slope by sub-region is outlined below.

Table 5-6: Variation in slope by sub-region

Sub-region	Slope description	Most suitable enterprises
Alluvial plains	Predominately flat (0%) on the areas surrounding the Macleay River, with small areas of slightly undulating land (3-5%) around Grassy Head in the north and Crescent Head in the south. Very small isolated area of steeper land (6-10%) on the municipal boundary in the north.	Annual horticulture, perennial horticulture, cropping, dairy, animal husbandry, grazing
Upriver	Concentrated areas of flat land (0%) close to the river, increasing in slope westwards towards Willawarrin (1-2% and 3-5%). Small areas of steeper land (6-10%) in the north and south away from the valley.	Perennial horticulture, cropping, dairy, animal husbandry, grazing
Hill country	Undulating land, primarily 3-5% inter-dispersed with steeper (6-10%) and flatter (1-2%) land. Moderate areas of steep (11-15%) and very steep (16-20% and 21-25%) land south west of Bellbrook towards the national park boundaries, with isolated areas extremely steep (26-40%).	Perennial horticulture, animal husbandry, grazing

6 Key investment opportunities - Overview

The table on the following page summarises investment opportunities by enterprise type and Macleay Valley sub-region, outlining the competitive advantages and key considerations for each. Further details about opportunities for each type of enterprise, along with market considerations, are provided in Section 7.

When it comes to practical decision-making for specific investments, key opportunities will be found where there is adequate land capability and property size to support your particular agricultural commodity of interest. This is shown at a regional scale in Table 6-1, with further analysis provided in Table 6-2. For example, this could include higher value (Class 3) land on 11-50ha properties for annual horticulture and speciality crops, or moderate (Class 4) land on properties greater than 100ha for grazing purposes. Indoor animal husbandry and hydroponic production may be placed on poorer quality land.


Blood Limes, pictured at Pipers Creek Grove farm at Dondingalong

Kempsey Farmers Markets in Belgrave St, Kempsey

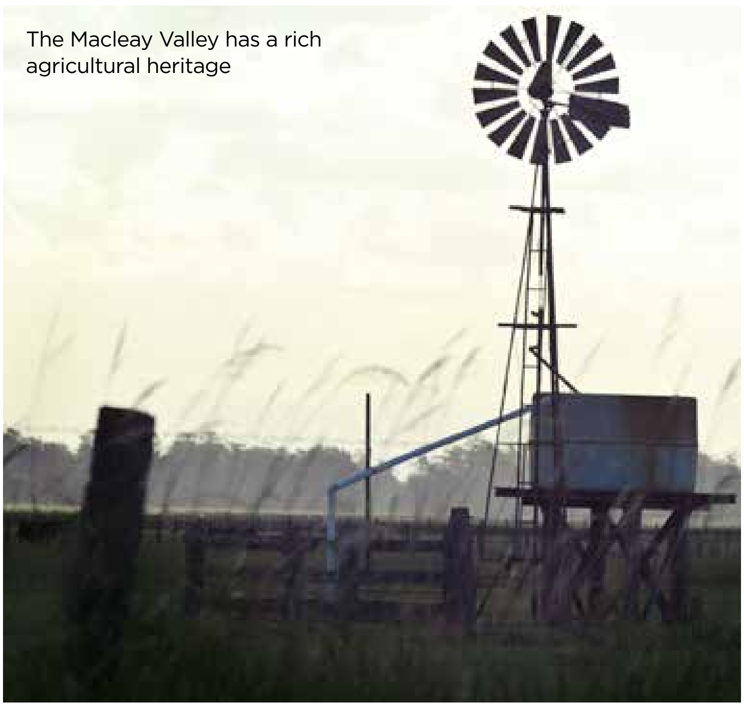

The Macleay Valley has a rich agricultural heritage

Table 6-1: Key investment opportunities by enterprise type and Macleay Valley sub-region

Enterprise	Alluvial plains	Upriver	Hill country	Competitive advantage	Key considerations for production
Grazing (red meat)	Yes cattle	Yes, mainly cattle	Yes	• Beef is a well established, predominant industry and a historic agricultural land use in the region • Networks or cooperation with other producers possible • Local domestic abattoir	• Land management on steeper hill country • Standoff areas or some higher lying land needed due to flood risk on alluvial plains • The climate is not suitable for larger scale sheep and goat production in lower lying areas (wet soils, humidity) • Shelter and riparian fencing recommended
Animal husbandry (poultry, pigs)	Yes	Yes	Yes	• Favourable climatic conditions • Smaller size properties available • Local domestic abattoir	• Land management on steeper hill country • Effluent and manure management if animals are housed or on small areas with little rotation • Farming rabbits has become expensive due to virus vaccination needs • Shelter needed for free range animals
Dairy	Yes	Mainly smaller scale, Heifers	Limitations in most areas - refer to land capability	• Established industry and processor • Good pasture and fodder production country	• Scale, agistment potential • Effluent and manure management • Water availability for animals and pastures • Technology, eg milking shed, electricity generation • Processing choice • Standoff areas or some higher lying land needed due to flood risk on alluvial plains • Shelter and riparian fencing recommended
Cropping	In non-flooding areas	Small scale	No	• Good growing season • Rainfall • Mild climate	• Flood risk on alluvial plains • Land management on undulating upriver country • Small farm sizes and landforms may be limiting • Profitable crop rotations needed • Seed crops (pasture, grain, vegetables) grown in isolation from commercial crops could be explored
Perennial horticulture (fruit and nuts)	In non-flooding areas	Yes	Suitable crops on very small scale	• Potential to grow a wide range of subtropical mild temperate/ Mediterranean and native crops • Access to good quality water for irrigation	• Flood risk on alluvial plains • Irrigation water availability • High rainfall can damage crops during harvest • Wind protection needed • Limitations posed by undulating country • Product grading, packing and cool storage needs • Cool transport availability and costs
Annual horticulture (vegetables, herbs)	In non-flooding areas	Yes	Suitable crops on very small scale	• Potential to grow a wide range of subtropical and mild temperate (Mediterranean) crops • Access to good quality water for irrigation • Protected cropping possible in cooler areas (e.g. tunnels)	• Flood risk on alluvial plains • Irrigation water availability • Erosion risk on slopes due to exposed soil • Profitable crop rotations needed • Product grading, packing and cool storage needs • Cool transport availability and costs • Greenhouses or tunnels should be on flat areas and well ventilated • Wind protection recommended
Nursery, turf & ornamentals	In non-flooding areas	Some sites, not turf	Suitable native plants in limited small areas	• Supply to Brisbane and Sydney	• Greenhouses or tunnels should be on flat areas and well ventilated • Wind protection recommended

Table 6-2: Guidance on key opportunities considering land capability and property size for a commercially viable operation [1]

Enterprise	Land capability (LSC)	Property size (ha)	Considerations
Grazing (red meat)	• 3-5 suitable	• Medium to large size	• Higher Land and Soil Capability (LSC) required to grow fodder crops, hay and silage • Sheep and goats can be grazed on lower LSC land, eg hill country • Adjust stocking rates to pasture productivity, which declines with increasing LSC number
Animal husbandry (pigs)	• 3-5 suitable • 6, depending on location and type of enterprise	• Medium size preferable for pigs	• Pigs are very destructive to soil structure if managed free range, so sufficient area is needed to rotate them and reinvigorate pastures • If pigs are housed, lower LSC is acceptable if land is flat. Sufficient productive land is needed to deal with piggery effluent, for example via irrigation or manure use
Animal husbandry (poultry)	• 3-5 suitable • LSC 6 depending on location and type of enterprise	• Small to medium size suitable	• Poultry may be destructive to the soil if managed free range, so sufficient area is needed to rotate them and reinvigorate pastures • If poultry is housed, lower LSC is acceptable if land is flat. Sufficient productive land is needed to deal with manure
Dairy	• 3-5 suitable	• Medium to large size	• Higher LSC required to grow fodder crops, hay and silage • Adjust stocking rates to pasture productivity, which declines with increasing LSC number. This, and potently higher inputs, are likely to prevent economically viable dairy production, especially for conventional milk processors on LSC 4 & particularly LSC 5
Cropping	• 3-4 suitable	• Medium to large size	• Lower margin crops require larger areas • Higher value crops such as seed crops (pasture, grain, vegetables) may be produced profitably on smaller size properties
Perennial horticulture	• 3-4, some 5 may also be suitable	• Medium	• Production systems, tree sizes and crop values vary and should be well researched to determine optimum property size
Annual horticulture	• 3-4, lower LSC land for greenhouses	• Depending on crop type	• Intensive, high value production in greenhouse structures requires less land than, for example, vegetable production or easily grown, lower value crops
Nursery, turf & ornamentals	• 3-5, lower LSC land for greenhouses	• Small to medium	• Access to high quality water integral • Low saline soils a necessary requirement

[1] Lifestyle farms having off-farm income may be smaller than indicated in Table 6-2.

7 Key aspects of selected investment opportunities

Ten investment opportunities are outlined in this section, including:

7.1 Grazing - red meat production from beef
7.2 Animal husbandry – poultry, meat chickens
7.3 Animal husbandry – pigs
7.4 Dairy
7.5 Buffalos
7.6 Goat and sheep milk production
7.7 Cropping
7.8 Perennial horticulture
7.9 Annual horticulture crops
7.10 Other potential opportunities

7.1 Grazing - red meat production from beef

Beef cattle have traditionally been produced in the Macleay Valley. It is a well-suited enterprise for the region and any scale of production. Opportunities exist to develop a local, high quality beef brand.

Current industry context

As at June 30, 2012, Australia's national cattle herd stood at 28.5 million head, of which 13.6 million were beef cows and heifers. These cattle were run on 77,164 cattle properties across Australia. Australia produced around 2.2 million tonnes of beef and veal in 2012-13, of which 67% was exported to more than 100 countries at a value of over AU$5 billion. Australia is the world's seventh largest beef producer, producing 4% of the world's beef supply and is the third largest beef exporter. Australia's largest beef export market is Japan, followed by the US and South Korea.

Beef industry bodies include:

- Meat & Livestock Australia (MLA)
- Cattle Council of Australia (CCA)
- Australian Meat Industry Council (AMIC)
- Australian Meat Processor Corporation Ltd (AMPC)
- Australian Livestock Export Corporation Ltd (LiveCorp)
- Australian Lot Feeders Association (ALFA)
- Red Meat Advisory Council Limited (RMAC).

Competitive advantage

Nearly year round rainfall means there may be little need to buy in feed, providing that pastures, fodder crops and stocking rates, and grazing are well managed throughout the year. When production is based on traditional improved pasture systems, based on introduced tropical and sub tropical warm season dominant perennial grasses, the area has a significant winter/spring feed gap due to low pasture productivity and feed quality.

Specific winter growing pastures such as rye and other fodder crops would have to be planted. Low winter rainfall means that annual winter growing species may be required. The rainfall distribution may make maintaining legumes in mixed pastures challenging. NSW Department of Primary Industries has conducted research on winter fodder crops. Information can also by found at futurebeef.com.au/knowledge-centre/pastures-and-forage-crops/ as well as from resources produced by Meat and Livestock Australia (MLA).

The development of suitable, productive pasture based systems may be challenging but worthwhile for the region. There is a market for quality pasture-fed beef and the Macleay Valley may be suited to developing a new, local beef brand that is based on MSA grading and provenance.

As always, before investing in beef production, seek out advice from people with the required experience.

Markets - Selling red meat

A range of options are available for marketing livestock for red meat. Refer to the below table and explanatory notes for further information.

Table 7-1: Sale options, red meat

Option	Cattle	Sheep / lambs	Goats
Saleyard auction	✓	✓	✓
Meat Standards Australia (MSA) eligible sales	✓		
Stockyard sales	✓		
Paddock sales	✓	✓	✓
Over the hooks (OTH)	✓	✓	
Forward price contracts	✓	✓	
AuctionsPlus	✓	✓	
Value-based marketing	✓		
New selling options		✓	
Producer alliances	✓	✓	✓
Sheep sales		✓	

Saleyard auction - Livestock are transported to central saleyards and sold to the highest bidder. Prices reflect supply and demand in the market on the day.

Meat Standards Australia (MSA) eligible sales - Cattle can only be sold only through MSA licensed saleyards or livestock exchanges. Producers and agents must be registered.

Stockyard sales - Livestock are weighed, graded and priced for sale.

Paddock sales - Livestock are inspected on the vendor's property by a buyer or agent and sold from the paddock.

Over the hooks (OTH) - Livestock are delivered directly to the abattoir with change of ownership taking place at the abattoir scales. Terms of sale vary between abattoirs. Livestock must be accurately assessed for sale to avoid price penalties.

Forward price contracts - A contractual agreement between a seller (eg, producer) and buyer (eg, processor) to supply a given product, at a future point in time, for a given price. In some cases the price is fixed, reducing the producer's exposure to a fall in market price.

AuctionsPlus - An electronic online auction for the sale of livestock by description (previously CALM). Combines the best features of the saleyard system and allows direct consignment to the abattoir or buyer.

Value-based marketing - The principle of being paid for the inherent value (quality and quantity) of the product to the buyer and the end user, such as systems that provide clear feedback from the consumer to the producer and has a pricing system supporting these signals.

New selling options - A payment system based on lean meat yield is available in two Australian and eight New Zealand processing plants. It rewards those producers who carefully manage stock for optimum weight, muscle and fatness of their slaughter lambs.

Producer alliances - A group of producers working together to service market requirements.

Sheep sales - The buyer will pay on an estimated or actual weight of carcase with a skin value added, regardless of the selling method used.

Key considerations

Initial investment, infrastructure requirements and time to break even are all important considerations when investing in or expanding an agribusiness enterprise. When you purchase a grazing property, look for good existing infrastructure, especially fencing, to rotate grazing and provide cattle with water access other than allowing cattle to access streams.

Regulatory considerations

Requirements exist in relation to various regulations relating to animal welfare, on-farm animal welfare, requirements in feedlots and animal transportation. The regulations apply to both domestic and live export animals. Meat & Livestock Australia's Animal Welfare page provides further information on these regulations.

The beef industry has also initiated numerous supply chain measures to ensure meat safety and traceability. These measures are essential to ensure consumers continue to demand Australia's red meat products.

Future outlook

Like any primary production enterprise, there are a range of risks associated with the commercial production of beef cattle. These include the loss of vital export markets, weather, disease and pests, input prices and sale prices. While most of these are beyond the producer's control, there are a range of tools that can assist you to manage the risks.

For current information on markets and prices, refer to the industry bodies and organisations listed in this Guide.


Cattle grazing in the Macleay Hinterland


Kempsey Regional Saleyards offer regular sales for buyers and sellers

L Bo Street Butchery

7.2 Animal husbandry – poultry, meat chickens

Current industry context

About 560 million chickens are produced and processed annually for chicken meat in Australia, which equates to more than one billion kilograms of chicken meat. The gross value of poultry meat at the time of slaughter was AU$2.2 billion in 2013. Chicken meat is the most popular form of meat protein consumed in Australia, with per capita consumption averaging more than 44kg/year. Chicken meat has a relatively small environmental footprint compared with other land-based meat protein sources. Australia produces around 1% of the world's chicken meat, with the USA, China and Brazil being the largest chicken meat producing countries. There are a number of ways chickens are reared and marketed in Australia, but the most common are conventional, free range and organic.

Australia has strict trade policies and biosecurity measures in place to ensure the country, and its domestic poultry industries, are protected from diseases not usually found in Australia. Imports of chicken meat are subject to stringent conditions, resulting in very limited imports of processed chicken meat and no imports of fresh chicken meat. This means virtually all chicken meat eaten in Australia is grown in Australia. Also, almost all chicken meat produced in Australia is consumed locally, with less than 5% being exported. 90% of the population eats chicken meat at least once a week, and a third eat it three or more times a week. Per capita, consumption of poultry meat has soared from 10.5 kg (1969–70) to 44.6 kg (2012-13).

Conventional chicken farming

Unlike other animal husbandry industries, the chicken meat industry is mostly vertically integrated. Typically, this means individual companies own almost all aspects of production, including breeding farms, multiplication farms, hatcheries, feed mills, some broiler growing farms, and processing plants.

Two large integrated national companies supply more than 70% of Australia's broiler chickens. They are Baiada (with brands Lilydale and Steggles) and Inghams (owned by US-based TPG Capital), with enterprises in all 6 states. The majority of 834,000 tonne-a-year chicken meat is sold on supermarket shelves.

Another six medium-sized, privately owned companies supply the balance of the market, with each supplying between approximately 3-9% of the national market. There are a myriad of other smaller processors.

Processing companies generally contract growers to grow broiler chickens, from day-old chicks to the day of processing. Approximately 800 growers produce about 80% of Australia 's meat chickens under these contracts. Other meat chickens are produced on large company farms, or on farms owned and managed by 'intermediary' companies. These companies own a number of farms, each managed by a farm manager, and enter into contracts with processing companies to grow out chickens on a larger scale.

Burrawang Gaian Farm's Hayden & Beth McMillan at home

Burrawang Gaian Farm's produce is proudly certified 'Humane Choice'

Free range chicken farming

There is a niche market for free range chickens, with some consumers happy to pay more for free range birds. Free range birds are matured for an extra 10-12 days and have less fat than conventionally farmed birds. Examples of niche, high value poultry production already exist in the Macleay Valley (see the Macleay Valley Food Bowl website for information on Burrawong Gaian poultry farm).

Organic chicken farming

Certified organic chicken farming must follow the rules of organic certification bodies.

Game birds

Game birds include species of birds traditionally hunted in various parts of the world for food or sport. They include pheasants, partridges, guinea fowl, quail, geese and pigeons (squab).

Opportunities may exist to produce game birds for specialty markets, including restaurants or butchers.

Competitive advantage

The main advantage of the Macleay Valley region for chicken meat production is the mild climate and access to major markets for those who do not want to grow under contract for the major producers.

Markets - selling chicken meat

If you do not want to go through the major chicken meat producers and supermarkets, try to link with local producers and producer groups. One option is to list your farm at http://flavourcrusader.com/ or with similar organisations. Try to collaborate with existing local producers to get started. In the Macleay, there is strong market demand for Humane Choice accredited chicken, with the owners of Burrawong Gaian poultry farm at Barraganyatti willing to train others in how to raise pasture-raised, Humane Choice accredited birds.

Key considerations

If you are considering getting into chicken production, be sure you consider your initial investment costs, infrastructure requirements and time to break even.

Growing meat chickens under contract to a processor can provide a regular income compared to many other types of agricultural enterprises, but it does require a high level of initial capital investment.

Emergency and other diseases present some risks, particularly as it is not possible to control the movements of wild birds, which can often be the hosts of disease agents. However, adherence to accepted industry biosecurity measures significantly mitigates this risk.

Approval for a poultry farm development needs to be obtained from Kempsey Shire Council and Development Applications invariably need to be supported by a strong case that the environment (including for the neighbouring human population) will not be significantly adversely impacted. Not all sites will be suitable for a poultry farm development. A consultant can be engaged to assist in the preparation of a DA (including an Environmental Impact Study). The costs of this will need to be taken into account when calculating your operation set-up costs.

Fresh eggs from Burrawang Gaian Farm

Pasture-raised poultry at Burrawang Gaian Farm

It is strongly recommended that anyone interested in establishing a meat chicken farm contact their closest chicken processing/marketing companies to find out what opportunities exist for growing and supplying, as well as any additional advice on the best way to proceed.

Regulatory considerations

Poultry farming, as with any intensive animal farming, can only be undertaken in designated zones. New farms will normally need both planning approval from Kempsey Shire Council as well as environmental approval from local government, the State Environment Protection Authority (EPA) or the State agriculture department or equivalent.

State departments responsible for agriculture can assist new entrants to understand the various regulatory requirements that need to be met by chicken farms (such as planning and environmental) to gain approval to operate. They can also provide guidance as to other regulatory requirements that need to be met once the farm is operational (such as bird welfare standards and food safety requirements).

Further information

The Department of Primary Industries (DPI) NSW provides support to the poultry industry through its extension officers, research scientists, diagnostic laboratories, publications, poultry keeping courses and regulatory services (refer to: dpi.nsw.gov.au/agriculture/livestock/poultry).

DPI NSW published a practical AgGuide handbook "Getting started in free range poultry". To order, visit: dpi.nsw.gov.au/aboutus/resources/bookshop/poultry-agguide-free-range

Also check out: Poultry Hub: poultryhub.org and www.chicken.org.au.

The industry bodies are:

- Australian Chicken Meat Federation Inc.
- Australian Chicken Growers Council.

Future outlook

Forecasts currently uniformly predict continued steady growth in both production and domestic consumption of chicken meat. One driver for increased consumption is the fact that chicken meat has continued to get cheaper compared to other meat. This is due to improved breeds and bird management. Chicken meat exports are projected to remain relatively low, with most production consumed domestically.

The positive outlook for the industry and potential increased demand for free range poultry may provide opportunities for those who want to run a hatchery or grow meat chickens.

Up-to-date information on markets and prices should be obtained from the organisations suggested in this Guide, including industry bodies.

Burrawang Gaian Farm

Poultry egg production (layers)

The best way to obtain information on opportunities and requirements for poultry egg production is to obtain a copy of the 2015 NSW Poultry Egg Industry Overview, published by the NSW Department of Primary Industries (NSW DPI). It can be obtained at: dpi.nsw.gov.au/__data/assets/pdf_file/0010/578422/poultry-egg-industry-overview-2015.pdf

NSW DPI has also published information specifically for small holders, which can be found at: dpi.nsw.gov.au/content/agriculture/livestock/poultry/production-small-scale.

Burrawang Gaian Farm

7.3 Animal husbandry – pigs

Opportunities may exist to produce free-range pigs for specialty markets, including restaurants or butchers.

Download a free copy of the PROOF e-book, 'Getting Started in Free Range Pigs' at: australianpigfarmers.com.au.

7.4 Dairy

The dairy industry is well established in the Macleay Valley region, with good networks, support and a path to market. An opportunity may exist to produce locally branded specialty cheeses. There are already a number of small-scale, niche market dairy operators in the area to the south of the Macleay, with Ewetopia and Comboyne Culture both producing cheeses and other dairy products.

Other examples of this type of development include King Island Cheeses or Ashgrove Cheese, Tasmania.

Current industry context

About 40% of Australian milk production is exported to Asia, predominantly Japan and Greater China. Currently milk is transported outside the Macleay region for processing.

A well-established processor, Norco, supports growers in the region and explores market opportunities. Strong networks exist. Dairy NSW and Dairy Australia provide strategic direction, research, development and extension support to the local dairy industry.

Competitive advantage and opportunities

- Climate and alluvial soils support rain-fed pastures
- Growing conditions for fodder crops are good
- Good agronomy and support networks exist
- Local manufacturing of branded speciality milk products has potential.

Markets for milk

The dairy industry in Australia is largely vertically integrated. Processors contract dairy farmers to produce certain volumes of milk. Taking this route to market suits people who do not want to process and market their own produce. The best way to get information on the supply chain is to talk to local producers, advisers and a Norco representative, as they are regionally located.

Key considerations

Major considerations include markets, initial investment, infrastructure requirements and time to break even. Globally, production exceeds demand most of the time, while current export trade agreements are favouring competitors. Fluctuations in key input prices can occur, especially for fertiliser and fodder, which can affect profitability. Still, speciality cheeses and other milk products with a provenance brand may be able to withstand market fluctuations. Existing regional operators should be consulted to confirm this.

Future outlook

The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) prediction is for short-term improvement due to increasing demand, but declining real term milk prices in the medium term due to competition from other exporting nations (Source: ABC Rural, 4 March 2015).

Macleay Valley cafés and restaurants, including Netherby House in Kempsey, are keen to use as much fresh local produce as possible

Alastair Smedley with his herd of Robin-Wood Alpacas at his Dondingalong farm

7.5 Buffalos

Buffalos are primarily dairy animals, but can also be a source of meat and leather. Farming buffalo requires a permit or licence in all states and territories except the Northern Territory and farming is banned in some locations, such as the Kimberley in Western Australia.

As at 2011–12, there were 65 buffalo farms in Australia and the national herd was 12,000. In 2014 an aerial survey of Arnhem Land in the Northern Territory estimated a minimum of 100,000 head of free-range buffalo. A buffalo dairy exists just north of Kempsey at Eungai Creek Buffalo, with numerous hand crafted gourmet dairy products being made on site.

Australian commercial buffalo are the swamp and riverine types of water buffalo (Bubalus bubalis), or various crosses of both. The farming of buffalo is very similar to farming beef and dairy cattle, except that buffalo are more efficient at converting poor feed to energy.

While good markets exist for live export and buffalo milk, meat production is limited by the lack of abattoir facilities willing to slaughter buffalo. Buffalo are considered a pest species in some states and on-farm animals must be registered annually. All trade of livestock requires State Government permits.

7.6 Goat and sheep milk production

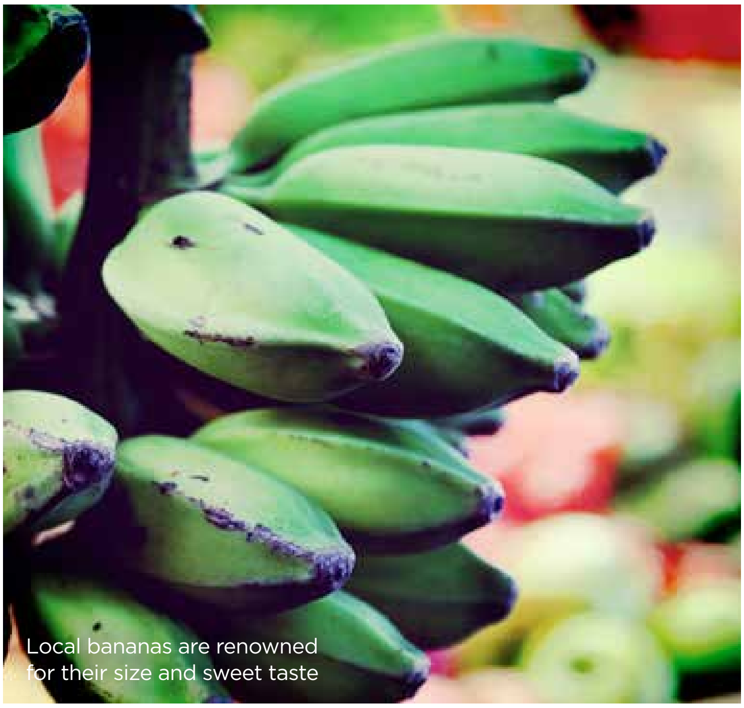
Good information about farming and marketing goat and sheep milk products can be obtained via the RIRDC Publication No 08/207 available through https://rirdc.infoservices.com.au/downloads/08-207 or contacting RIRDC via 02 6271 4160, or publications@rirdc.gov.au.

The NSW branch of the Dairy Goat Society of Australia can provide regionally relevant information. Find information via dairygoatnsw.com.au or contact the branch via (02) 9826 1371 or write to byerst@nswfarmers.org.au.

7.7 Cropping

Due to its climate, the Macleay is capable of producing a broad range of crops. The two variables that you need to research are market opportunities and the availability of suitable land. Soils, microclimate and land parcel information contained in this Guide provides some direction on the suitability of specific locations for wheat, barley, grain sorghum, maize, chickpeas, lentils, fava beans, sweet sorghum and soybeans.

Typical broad acre crops require scale of production and most current farm sizes in the Macleay do not provide the required scale. Specialty markets for organic grains may exist and should be explored on an individual, case-by-case basis.



Local bananas are renowned for their size and sweet taste

Bush tucker grown at Wigay Farm in Kempsey is a popular tourist attraction

7.8 Perennial horticulture – fruit, nuts, flowers, and speciality crops

Based on the region's climate and soil types, there are a number of perennial crops that can be grown on suitable farms in the Macleay Valley. Market opportunities should be identified on a case-by-case basis. Soils, land capability, and microclimate information from this Guide can be used for initial direction on the suitability of specific locations. Details on the specific production requirements for each of the crops listed below can be undertaken by doing a comprehensive internet search, beginning with the organisations suggested in this Guide. It is recommended that you follow up your desk research with site visits, advice from the local and industry service providers listed in this Guide and suggested by Kempsey Shire Council. For some crops, financial information is available online. However, it is essential to get individual advice from a registered financial adviser.

Suitable fruit crops

- Avocado
- Blueberry
- Cacao
- Citrus, eg
  - Native citrus types
  - Grapefruit
  - Lime
- Custard apple
- Dragon fruit (Pitaya)
- Native Davidson plum
- Fig
- Grape
- Kiwi fruit
- Lychee
- Melon
- Persimmon
- Pawpaw/ papaya
- Pomegranate
- Raspberry
- Riberry
- Tomato (field or hydroponic)
- Native bush tomato
- A range of exotic subtropical fruit from around the world could be grown if planting stock is available in Australia

Suitable nut crops

- Almond
- Chestnut
- Hazelnut
- Macadamia nut
- Pecan
- Pistachio
- Walnut

Suitable ornamental crops / flowers

- Banksia
- Eucalyptus foliage
- Flannel Flower
- Kangaroo paw
- Waratah
- Wax flower
- Leucospermum
- Leucadendron

Suitable speciality crops

- Coffee
- Native Anise Myrtle
- Black tea
- Ginger
- Lavender oil
- Lemon myrtle (Myrtle rust free areas)
- Tea tree oil

Macleay Options processes macadamia nuts from throughout the region and also produces its own value-added product line, Momacs

Macleay Options Momacs products

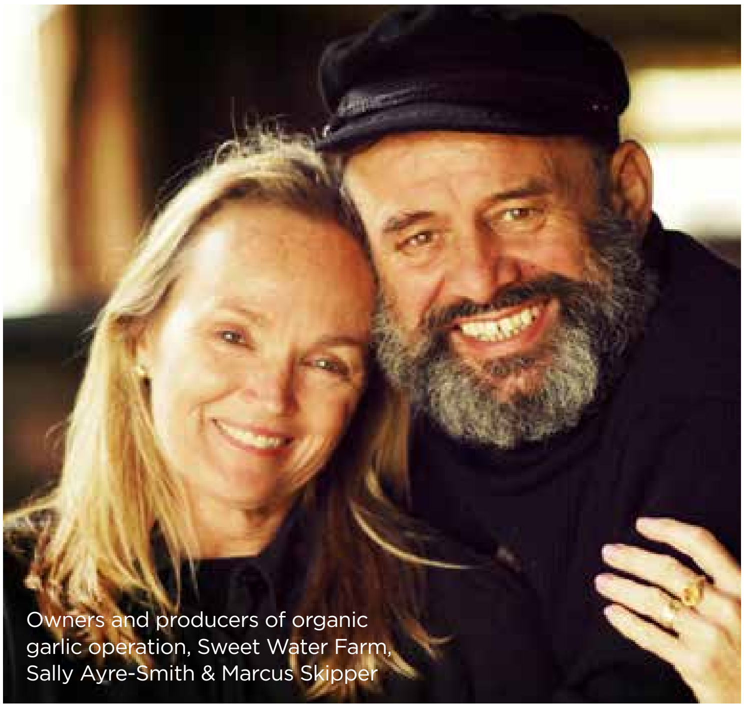
7.9 Annual horticulture crops – vegetables, herbs and spices

The following vegetable and herb crops could be grown in suitable locations in the Macleay Valley if market opportunities have been identified. Similar to perennial horticulture crops, the soils and microclimate information from this Guide can be used for direction on the suitability of specific locations. Details on the specific production requirements of each crop listed below can be obtained via a comprehensive internet search, starting with the organisations suggested in the Guide. For some crops, financial information is available online. However, it is essential to get individual advice from a registered financial adviser.

- Asian leafy greens
- Bitter melon
- Culinary bamboo shoots
- Jerusalem artichoke
- Artichoke
- Green Snake bean
- Capsicum - field or hydroponic
- Chilli
- Cucumber - field or hydroponic
- Eggplant
- Okra
- Pumpkin
- Taro
- Zucchini

7.10 Other potential opportunities

- Nursery, turf and ornamentals
- Industrial hemp
- Wide range of leafy herbs or spices
  – Turmeric (fresh)
  – Garlic (fresh)
  – Ginger (fresh)
  – Seeds (sesame, sunflower etc)
  – Wattle seed
  – Native pepper berries
  – Aniseed myrtle
  – Seed sprouts - hydroponic
- Mushrooms
- Timber (Californian Redwood, River Sheoak, Spotted Gum, Black Walnut, Red Cedar, Sandalwood, Red Ironbark, Silky Oak)
- Organics (local organics producers are strongly supported by the locally based Organic Marketing Company).



Owners and producers of organic garlic operation, Sweet Water Farm, Sally Ayre-Smith & Marcus Skipper

Local garlic racked to dry at Sweet Water Farm

8 Getting started

Before you start diversifying your farm, or setting up a new agribusiness, take a few minutes to answer these questions[1]:

Can you describe the proposed end product to be sold?

If you can describe the product/s accurately, and identify the markets for the product/s, then some of the hard work may be done. If you are unable to describe the product/s accurately, then its marketability may not yet be determined. Although the range of possible products from a new enterprise may be exciting, if there is no established demand or market, or the pathway to market is unclear, then substantial work may need to be done to cultivate these markets. This can take years, financial investment and personal commitment.

Is there an established market or demand for the proposed product?

Researching and understanding the markets for a new enterprise is essential. If the market is not established, you may need to develop demand for your product in order to sell it. If it is an established market, you will need to understand any regulations, such as product standards, that govern the trading of the product. Some questions that can help guide your market research include:

- Who is the customer (agent, wholesaler, retailer, consumer)?
- Is the product currently traded here or overseas?
- Where are the existing markets for the product?
- What type of markets are these, in terms of size?
- Where is the target market for the intended new product?
- Are there any limitations imposed by the market?
- What is the product used for, leading to identification of substitutes for the product and the nature of the substitution?
- What is the estimated market price (price point) that is required for the venture to be viable, taking into account the cost of production, possible prices of substitutes, and import/export prices? Is the price point achievable and sustainable?
- What packaging is required and is there a distribution mechanism available?
- What is the estimated future demand (taking into account economic and demographic factors and factors which may affect this demand)?
- Are there existing and accessible supply chains for the proposed product?
- What marketing and/or promotional strategies will be required, and do you have the experience to deliver these?

[1] farmdiversity.com.au

Fishing vessels at Jerseyville

Are you comfortable with taking risks?

Trying a new enterprise can be a risky business, especially if it is a new or developing industry. A new enterprise should be approached in the same way as any new business venture and the same commercial business principles and practices should be applied. Many farmers have tried a new enterprise, only to find that it failed to return a profit and had to be abandoned. Entering a new business involves risk, which means you may need to be prepared to cut your losses and walk away.

Can you afford to lose the money invested in a new enterprise or venture?

Entering a new enterprise or venture generally requires financial investment that may not return a profit for many years. In some cases, it may never provide any financial return. The high cost of production, climate and environmental factors, poor management, difficult market access and changing markets are just some of the reasons an enterprise may fail. You should only gamble what you can afford to lose.

Can the proposed enterprise/venture be produced in your target region?

If the new enterprise is well established in your area, knowledge about how to produce it is probably well developed. If, however, this information is not clear, you will need to investigate the conditions (eg, environment, infrastructure, logistics) under which it is successfully commercially produced to see if these requirements can be met in your area. For new crops and animals, trials are often used to determine if it can be grown in a new area, even if the environmental conditions are similar.

If you have decided upon a specific industry or venture, do you have easy and affordable access to research and information?

Successful diversification requires research, research, and more research. Before you plant a crop, purchase an animal or make any serious investment, you should understand the product you are selling, how to grow and farm it, what the market demands and access are, what the regulatory requirements are, and the time and money required to get up and running. Farmers who have successfully diversified or begun a start-up business, have undertaken extensive research on their chosen new industry and equipped themselves with knowledge before even starting.

Eversons Food Processing offers local producers a multi-specie processing facility

Is there an established industry and industry body?

If there is an established industry body, they will be an invaluable source of information regarding your new business. They should be one of your first points of contact during your initial research phase. If there is no industry body, this could mean the industry may still be small and difficult to enter. Information may be limited and difficult to source, and your proposed business may carry increased risk.

What is your farming lifestyle?

Diversifying or establishing a farming business requires a commitment of time and resources. If your primary reason for living on a rural property is for lifestyle enjoyment, then you need to give serious consideration to the resources you will need to invest in a new enterprise. Specifics to consider include whether you will be away from the property for extended periods of time? Do you have the time to commit to producing the product? Are you physically able to do the work, especially in the years to come? And will you enjoy the work?

What personal interest do you have in the proposed enterprise or venture?

Many farmers who have successfully started a new plant, animal or other venture had a personal interest in their chosen enterprise. A personal interest, or other driving force, helps you to stay motivated to undertake research, establish agronomic/husbandry practices and, in some cases, source buyers and develop a market for the product.

Are there other things that you would rather be doing?

If all this sounds too exhausting and there are other things you would rather do, then you may want to reconsider whether investing in a new enterprise is the right option for you.

Fresh produce from
The Green Room at Crescent Head

Dondingalong Organic Products is a
successful local company that grows
and value-adds indigenous bush foods

9 Further information

The Rural Research and Development Corporation (RIRDC) provides a useful resource as a first step in exploring something different for existing or new farms. This initiative allows searching for crop and animal production enterprise alternatives by type or location to discover which may be best suited to your farm. Please visit: farmdiversity.com.au.

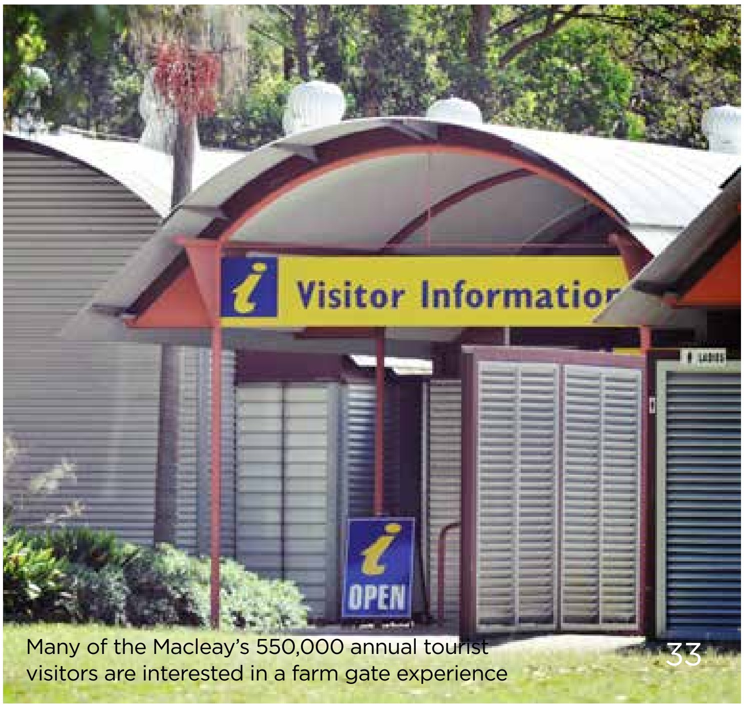
For further information about agribusiness in the region, contact Kempsey Shire Council's Economic Sustainability Unit:

Susannah Smith
Manager, Economic Sustainability
Phone: (02) 6566 3122
Mobile: 0427 271 485
Email: Susannah.Smith@kempsey.nsw.gov.au

Kristy Forche-Baird
Economic Sustainability Officer
Phone: (02) 6566 3113
Email: Kristy.Forche-Baird@kempsey.nsw.gov.au

Council's Customer First Centre is located at 22 Tozer Street, West Kempsey, NSW 2440.

Council's friendly Customer Service Centre team is ready to take your enquiry



Many of the Macleay's 550,000 annual tourist visitors are interested in a farm gate experience

Greenleaf Farm at Clybucca grows large volumes of high quality summer vegetables through the winter months

Kempsey Farmers Markets in Belgrave St, Kempsey

Appendix 1: Maps

Figure A1-1 Property size range map

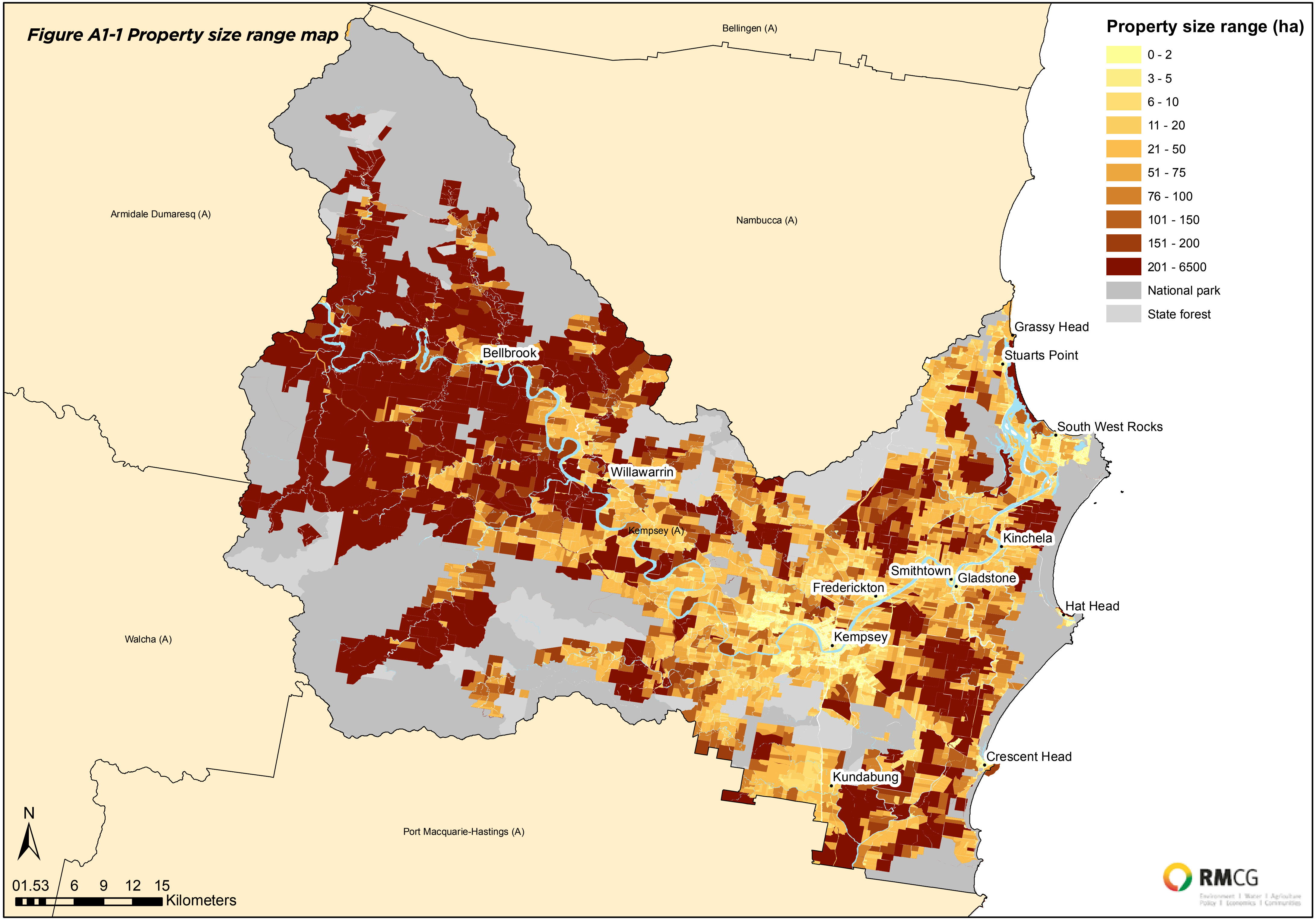


Figure A1-2: Land and soil capability map

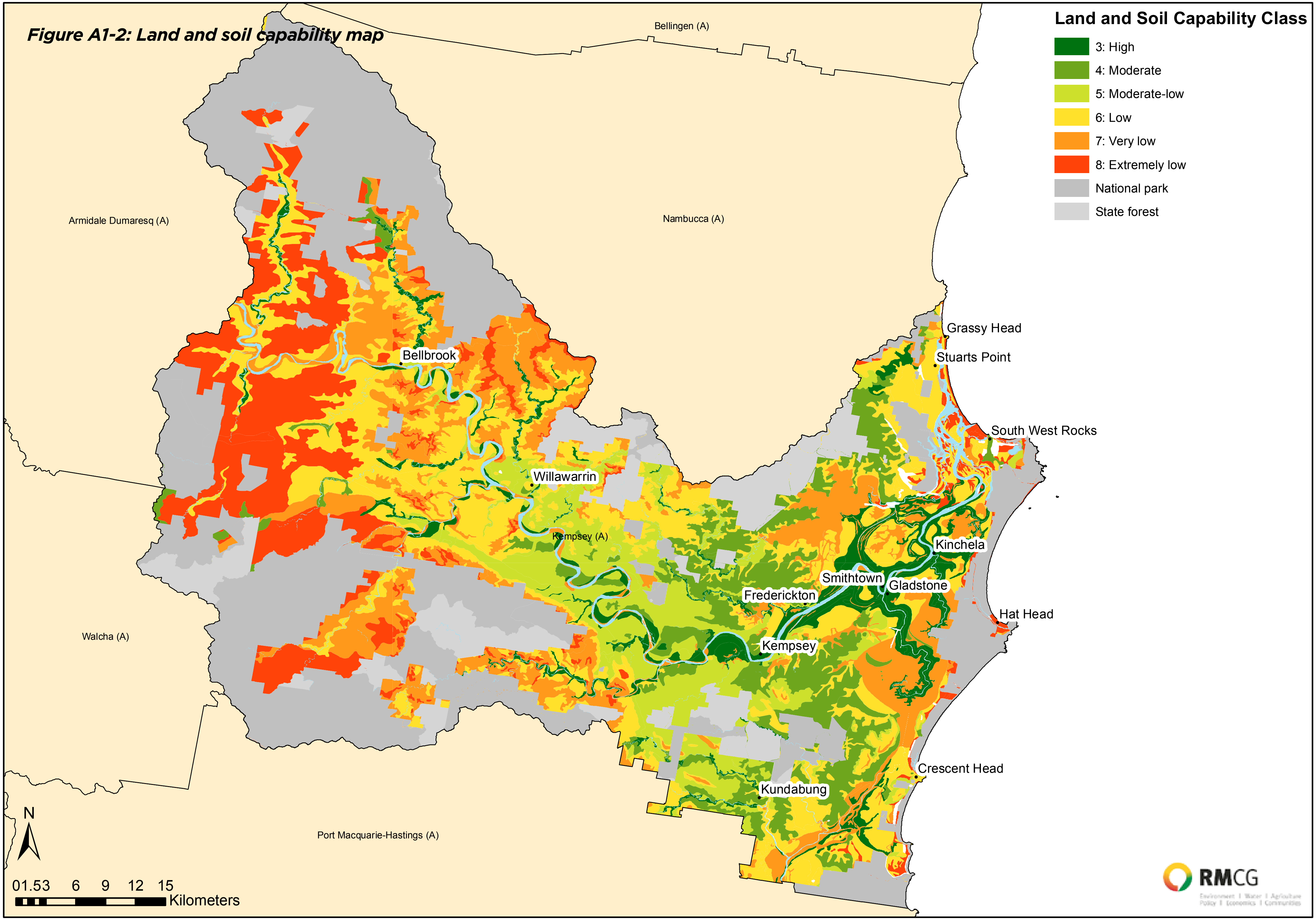
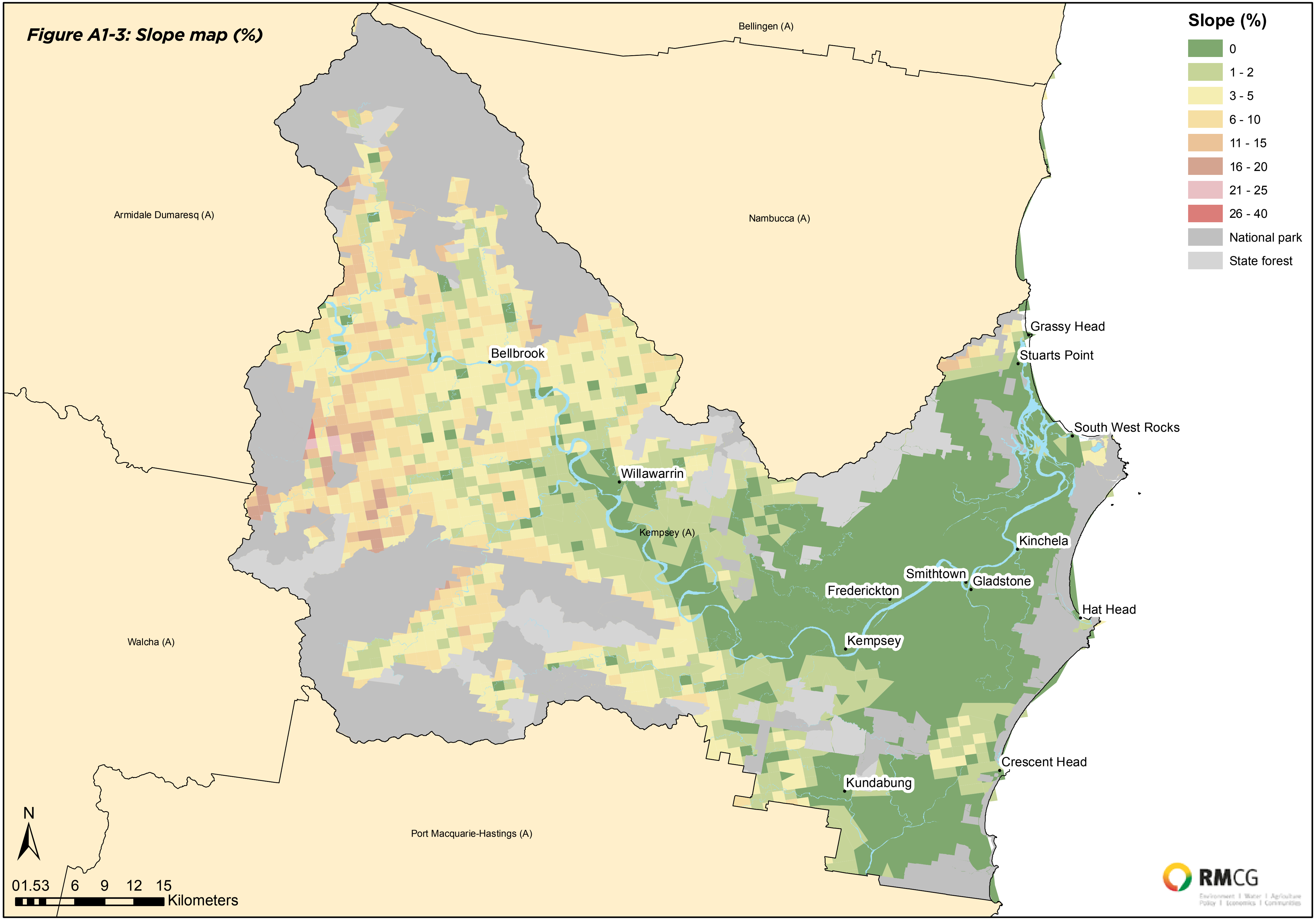


Figure A1-3: Slope map (%)



Macleay Valley Food Bowl
Agribusiness Investment Guide


Kempsey Farmers Markets in Belgrave St, Kempsey

Macleay Options Momacs products


Fresh local procuce at Kempsey Central's Depot Cafe

macleay valley FOODBOWL

KEMPSEY Shire Council

macleayvalleyfoodbowl.com.au

This guide is an initiative of Kempsey Shire Council