Department of Primary Industries

Central West Region Pilot Area
Dairy Profile

FACTSHEET NO.6

This profile identifies important agricultural resources, critical features of the regions industries, their development potential and land use planning issues for the dairy industry across the central west study area as shown in Figure 1.

September 2012

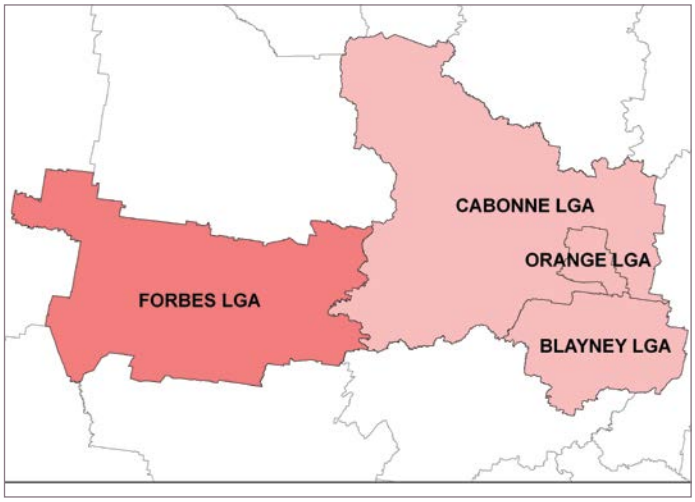


Figure 1- Central West area covered by this profile

Introduction

The Department of Primary Industries is developing a consistent method for mapping important agricultural lands.

> **Maps of Important Agricultural Land highlight areas that are well suited to selected agricultural industries at a local and regional scale.**

The pilot mapping project aims to guide local councils with strategic land use planning; and support sustainable industry development.

A case study approach was adopted to identify the important agricultural lands for a range of industries within six local government areas (LGAs). They include: Orange, Cabonne, Blayney and Forbes in the central west; and Singleton and Muswellbrook in the Upper Hunter. Those areas were chosen to cover a variety of agricultural landscapes and industries.

Included in this profile is a map that identifies land important for diary farming in the Forbes LGA. Maps were not produced for dairying land within the Blayney, Cabonne or Orange LGA's as dairy farming is not one of the critical industries in these shires

Milk Production – Highlights

The combination of undulating topography, available irrigation on the river flats of the Lachlan River and fertile soils make the conditions in the Forbes Shire highly suitable for dairying.

The available land in the Forbes LGA for milk production also enables large herds to be milked, enabling economies of scale to be achieved.

The Forbes LGA is also well connected by major transport routes that enable milk to be transported on a daily basis to the major markets.

These advantages mean that local producers are well positioned to adapt to climate change and market challenges.

Figure 2- Dairy cattle resting on introduced pastures between milking (NSW DPI)

Economic Contribution

Dairy farming is an important industry in the Forbes LGA with over a dozen established dairies, representing 3% of the states milk production, as shown in Table 1 (NSW DPI, 2011). Whilst this percentage of NSW milk production is of modest significance at present, the industry is important both locally and regionally, particularly in terms of employment.

Dairy farming provides a stable cash flow and stable employment opportunities for non skilled labour as well as career development. This is particularly important during times of drought.

As shown in Table 1, 73 people were recorded in the ABS (2006) agricultural census as being employed by the dairy industry and its associated services.

Services to the dairy industry include:

- milk pick up
- feed deliveries
- refrigeration and irrigation maintenance
- equipment and rural suppliers
- process workers

Table 1- Central West 2006 ABS Dairy Data*

Local Gov't Area	*Est. value of milk ($mill)*	*Prod'n of milk as a % of NSW total*	*No. of farms*	*Employ-ment*
Blayney	$2.0m	0.2%	1	7
Cabonne	$4.5m	0.5%	2	11
Forbes	$17.6m	2%	6	46
Orange	$0.2m	0%	1	9
Total	$24.3m	3%	10	73
NSW total	$895m	100%	1,441	5721

* changes may have occurred since this data was collected

ABS data estimates the wholesale value of unprocessed agricultural products. These figures do not capture the flow on contribution of agriculture to other businesses in NSW. An estimate of the overall contribution of agriculture to the NSW economy, as presented in table 1, is obtained by multiplying the wholesale value of agriculture by the standard ABS multiplier for agriculture production which is 2.178.(I&I NSW, 2011)

An indication of the overall contribution of agricultural jobs to NSW employment was similarly obtained by multiplying employment in a particular industry sector by the standard ABS multiplier for agricultural employment of 1.828 (I&I NSW 2011).

Within the study area, the Forbes LGA has the highest value milk production contributing $17.6 million to the NSW economy (NSW DPI, 2011).

Dairies within Forbes LGA have state of the art facilities, including the largest undercover dairy in Australia with an investment of $5 million, which milks 2,000 cows. This type of facility and efficient water use will help dairying to adapt to the impacts of climate change and market pressures.

The average herd size of 878 in the study area is significantly larger than the state average of 220 (ABS, 2006). This scale allows for highly efficient production and is critical for the transport of milk to processing plants.

Flow on economic effects of this industry include the purchase and sale of cattle, supplementary feed, farm equipment (such as fertiliser, seed, fencing), veterinary supplies, milk transportation and refrigeration services.

Industry Challenges

A critical challenge to dairying in the region and nationally is the shortage of available farm workers. Labour is absorbed by other industries or is lost to the area because of out migration.

Other current major challenges include:

- pricing of milk
- environmental issues such as locust plagues, floods, drought and climate change impacts
- land use conflicts, particularly chemical spray drift complaints

Climate Change

Regional climate change impacts on the dairying industry include; increased heat stress and increased risks of storms and flooding.

The impacts of climate change on water quantity and quality will become more significant, particularly in the Forbes LGA, which currently receives the lowest rainfall and the highest temperatures in the study area.

The capacity to irrigate to provide the feed quantity and nutritional value will be increasingly important to ensure that sufficient feed and water is available at critical times. Dairy farmers however, are innovative and open to new ideas and opportunities. Farm management adaptations, such as efficient water management, new crop varieties and high levels of environmental awareness will enable dairy farming to adapt.

Infrastructure Requirements

Dairies require daily transport of milk to markets so good roads, bridges and cost effective access to major population centres are essential requirements. Areas subject to flooding will restrict access to markets and impact on dairy operations.

Significant quantities of water are used for irrigating pastures, washing dairy equipment and for livestock drinking water. Hence a reliable year round source of water is important from either river or ground water sources. Often this involves access to regulated water supplies or from water storages.

A reliable electricity supply is also required for irrigation and to drive dairy machinery.

Development Prospects

The advantages of topography, soils and water availability combined with good access to markets and supplementary feed mean that the dairy industry has the potential to expand further.

The study area also provides an alternative location for dairy industries to expand by relocating from more constrained sites on the NSW coast where the growth of urban and lifestyle developments is causing land use conflicts and inflating farmland prices.

Important Dairy Lands

Dairying has specific requirements that dictate where it can be located. The map in figure 4 shows lands that are well suited to dairy farming in the Forbes LGA. The land denoted in Figure 4 may currently be used for other agricultural uses demonstrating how valuable this land resource is to the industry.

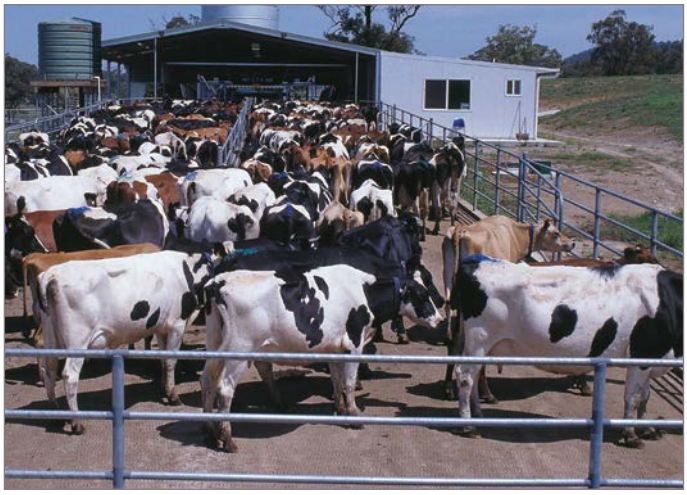
Important criteria for locating dairy developments include:

- moderate to high soil fertility, such as on fertile river plains
- water from sub surface or river sources within 5km.
- reliable power
- access to high quality feed from grain and hay produced locally
- ready access to the major markets in Sydney and
- properties that allow the management of environmental / amenity impacts

These location requirements are met in the Forbes LGA. Further west of Forbes there is limited access to a reliable water supply as well as flooding and poorer quality soils. The distance to markets and processing plants is increased which also impacts on farm gate prices.

The land within Orange, Cabonne & Blayney LGAs is not highly suited to dairy farming because of limited available water for the high water usage requirements of intensive dairy farming operations. Most dairies in these shires were historically established to service Orange and surrounding areas, but have since closed their operations. Approximately 4 dairies remain in those LGAs.

Figure 3- Dairy cattle waiting to be milked (Photo:NSW DPI)



Land Use Planning Implications

Dairy farms, particularly in inland locations, such as the Forbes LGA, that are more remote from processing plants or markets need to be of sufficient size to enable economies of scale to be achieved and to manage environmental impacts (including nutrient re-use).

Land use planning can support sustainable dairy development by ensuring there is adequate land available to meet industry needs and by minimising the risk of land use conflicts between dairy developments and neighbours, particularly from rural residential properties. Limited critical areas planned for sustainable dairy development will assist to support the industry.

Residential development and rural lifestyle developments should additionally be targeted to locations that are not near to lands that are highly suitable for dairy development and intensive cropping (for dairy feed).

Dairies also require longer term capital investments of at least 25 years. Land use planning should account for their longevity in planning for dairies and planning for other land uses surrounding dairies to avert any impacts on the surrounding amenity and environment.

Acknowledgements

Information for this profile was sourced from available statistical and spatial data. This is supported by industry intelligence from DPI regional extension staff and workshops held in June, July and December 2011. Local farmers and industry consultants helped to pilot test important agricultural mapping outcomes and clarify industry development issues and opportunities.

Compiled by Mary Kovac and Wendy Goodburn and reviewed by the Resource Planning and Development Team in NSW DPI.

Special acknowledgement to the resource mapping team for providing and reviewing mapping data.

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I&I NSW (Industry & Investment NSW), 2011, Contribution of Primary Industries to NSW Economy, agricultural contribution and standard agricultural multipliers, accessed from

http://intranet.dpi.nsw.gov.au/library/statistics/industry/all-industries/key-data-2011.pdf

NSW DPI (Department of Primary Industries), 2011, Analysis of ABS 2006 Census data for agriculture, accessed from http://www.dpi.nsw.gov.au/environment/landuse-planning/agriculture/analysis-census-data

Additional Reading

Agricultural Land use planning guidelines; www.dpi.nsw.gov.au/environment/landuse-planning/agriculture

Dairy advisory information, NSW DPI http://www.dpi.nsw.gov.au/agriculture/livestock/dairy-cattle

Dairy gross margins (financials), NSW DPI 2011 http://www.dpi.nsw.gov.au/agriculture/farm-business/budgets/livestock

Environmental management guidelines for the dairy industry, NSW DPI 2008 http://www.dpi.nsw.gov.au/agriculture/livestock/dairy-cattle/nrm/publications/environmental-management-guidelines-for-the-dairy-industry

Glossary of Agricultural terms

http://www.dpi.nsw.gov.au/agriculture/info/ag-glossary

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NSW DPI 2011. Land Use Conflict Risk Assessment Guide http://www.dpi.nsw.gov.au/environment/landuse-planning/agriculture/lucra

NSW DPI 1998. Policy for sustainable agriculture in NSW, http://www.dpi.nsw.gov.au/environment/landuse-planning/agriculture/sustainable

NSW DPI 2011. Policy 0-104 Maintaining land for agricultural industries http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0008/396458/Policy-0-104-maintaining-land-agricultural-industries.pdf

ISSN 1832-6668

Published by the Department of Primary Industries, a part of the Department of Trade and Investment, Regional Infrastructure and Services.

PUB12/16

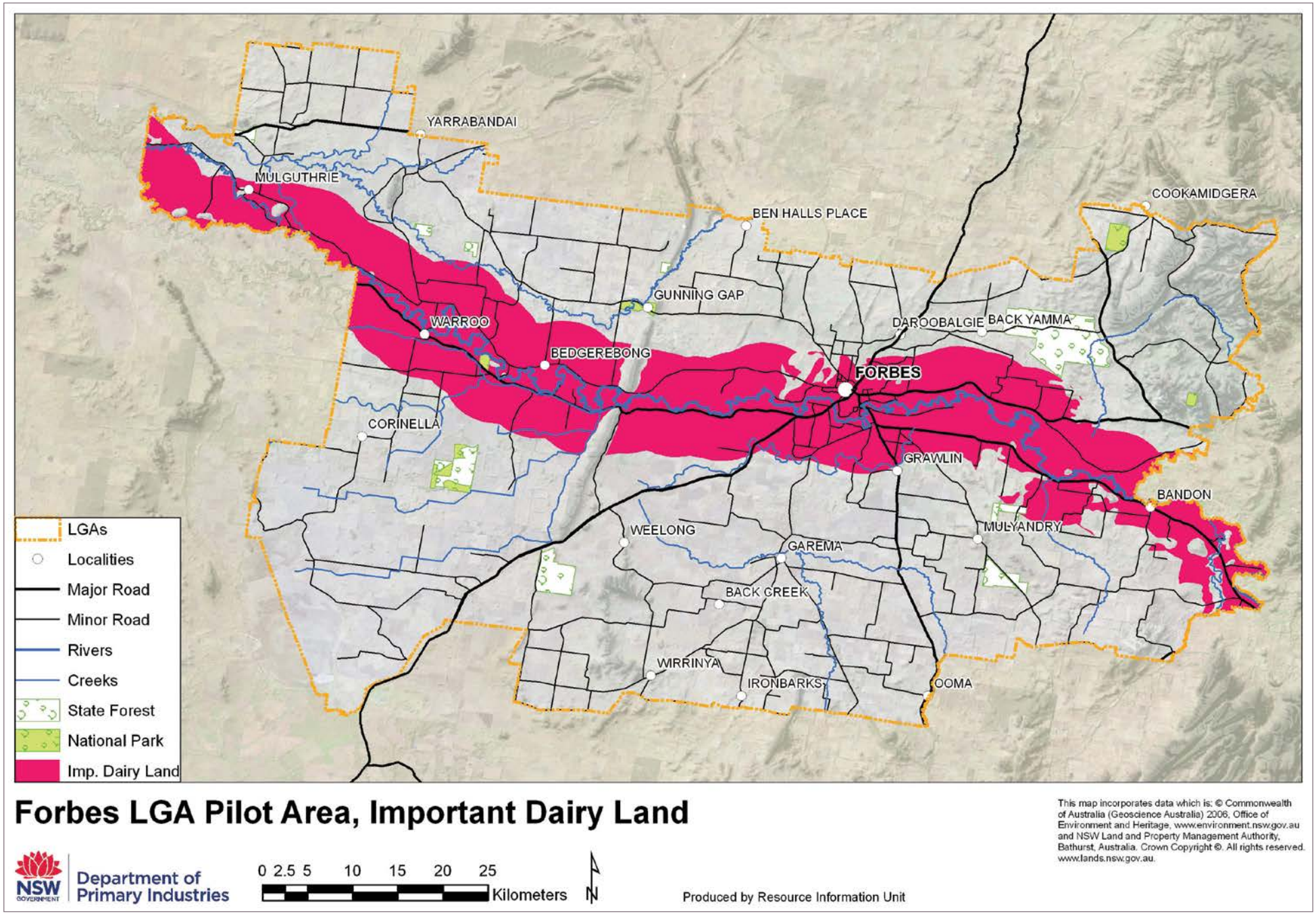

Figure 4: Land important for dairy farming in the Forbes LGA