Department of Primary Industries

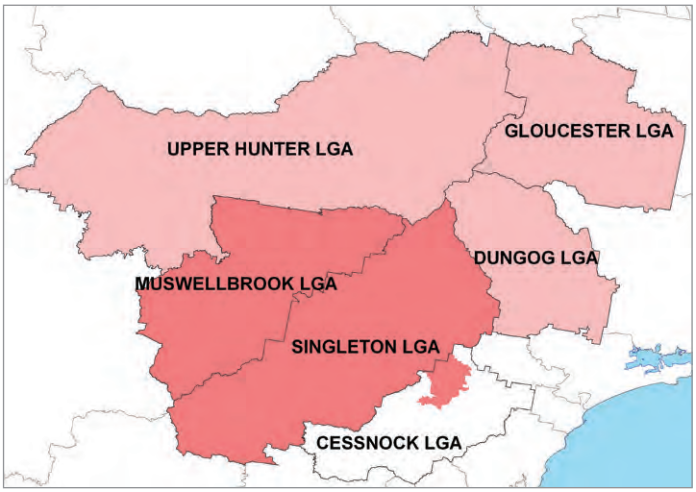
Upper Hunter Region
Beef Profile

FACTSHEET NO.2

This profile identifies important beef resources, critical agricultural industry features, their potential development and related land use planning issues across the Upper Hunter region as shown in Figure 1.

June 2013

Figure 1 – Upper Hunter region and study area (in orange) covered by this profile.



Introduction

The Department of Primary Industries (DPI) is developing a consistent method for mapping important agricultural lands to support strategic planning by local governments and industry.

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

The maps complement the state significant agricultural lands mapping developed for the Strategic Regional Land Use Plans (led by the Department of Planning & Infrastructure).

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

Figure 5 identifies the important beef producing lands in the study area incorporating Singleton and Muswellbrook LGAs. This profile also identifies the critical industry features and land use planning issues that are shared by each LGA in the broader Upper Hunter region that additionally includes Gloucester, Dungog and Upper Hunter LGAs.

Beef production – highlights

The unique geography of the Hunter allows maritime influences to extend much further inland than other coastal river systems. The resultant milder temperatures, humidity and year round rainfall pattern are well matched for grazing enterprises and particularly for beef cattle breeding.

The region also has ready access to saleyards and B double routes with relatively short travel distances to multiple processors, and to both domestic and export markets. The short transport distances will assist a carbon restricted economy.

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

Figure 2 - Beef calves near Denman on improved pastures (Photo: Glenda Briggs)

A traditional beef breeding area, the Upper Hunter region is an important source of store cattle in NSW.

Producing light weight calves is a practical option for lower fertility and/or low input farms. Heavier weight cattle can be produced on properties with access to improved pastures and more fertile soils.

Calves can be sold for slaughter, sent to a feedlot for finishing (ie fattening) or kept/sold for breeding purposes. Finishing may occur in other regions, but the value of such sales is not recorded by statistical surveys.

The predominant cattle breeds in the region are British such as Angus, but British / European cross are also popular. Also in the mix are Bos indicus cross types that do better on tropical / native pastures.

The most widespread landuse in the Upper Hunter region is beef cattle grazing. This industry also has a high employment contribution and is therefore important for the regions economy and rural communities.

Economic contribution

Beef cattle grazing is the most numerous and widespread form of agriculture in the region and occurs on 89% of all Upper Hunter region farms (ABS 2006). Excluding horse studs, it is also the most valuable agricultural sector for each of the Upper Hunter LGAs.

The Upper Hunter region comprises just 2% of the state's grazing land, but in 2006 produced 6% of the beef cattle sold for slaughter in NSW (Refer to Table 1).

Table 1 Upper Hunter Beef Data (ABS 2006)*

Local Gov't Area	*Est. value of beef sold for slaughters ($mill)*	*Prod'n of Beef as a % of NSW total*	*No. of Farms*	*Employ-ment*
Dungog	$26.8	0.8%	416	388
Gloucester	$28.8	0.8%	327	452
	$24.1	0.7%	253	329
Singleton	$33.6	1.0%	389	349
Upper Hunter	$98.6	2.8%	599	903
Total	$212	6.1%	1,984	2,420
NSW total	$3,492	100%	29,675	44,077

* 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).

The overall contribution of the Upper Hunter region beef production to the NSW economy is estimated at $212 million in 2006 (ABS 2006). However, this excludes the value of the large numbers of the Upper Hunter region calves and steers that are sold live for fattening in other regions. The actual number and hence value of cattle production in the region may be 30% higher than reported by ABS (SBLM, 2012).

Available data shows that beef cattle production in the Upper Hunter region resulted in 2,420 jobs in NSW. This equates to 5% of total beef industry employment in NSW (ABS, 2010).

Upper Hunter region beef cattle enterprises additionally contribute to the local, regional and state economy via the purchase of farm equipment and inputs, such as replacement cattle, fertiliser, pasture seed and fencing.

Cattle production supports local transport firms, regional processors, training providers and industry research and development. It also helps to maintain rural landscapes that supports regional tourism and provides environmental services such as biodiversity offsets and clean water.

Beef farming additionally creates local and regional employment, such as transport contractors, farm managers and rural suppliers.

Industry challenges

The Upper Hunter region beef industry is competing on several fronts with the rapid growth of coal mining (and potential coal seam gas) developments.

Identified mining impacts that contribute to the loss of critical industry mass include:

- the shortage of available farm labour and skilled contract managers
- competition for water supplies and other natural resources
- impacts on water quality, dust, noise and landscape amenity
- competition for land, water, labour and other inputs from mining
- leasehold grazing land held for future development and mining (currently sub-optimally managed)

Additional current beef industry challenges include:

- expanding residential development, including rural lifestyle lots
- cost of managing land use conflicts
- pest animal pressures, especially wild dogs, and
- the spread of weeds such as Galenia on land excluded from grazing.

Climate change

Regional climate change impacts for beef grazing include: increased heat stress due to higher temperatures, higher rainfall across much of the region and increased risk of storms and flooding.

This may result in additional production risks and costs. The capacity of local graziers to adapt to the regions existing climate variability however, is an important buffer. A key component is the ready access to improved and / or irrigated pastures and to supplementary fodder sources.

The likely increase in rainfall and temperatures may additionally increase fodder production in the region which may boost cattle production, particularly in areas with a relatively high rainfall and in the cooler (more elevated) parts of the Upper Hunter region.

The diversity of beef cattle enterprise options (such as weaner / yearling breeding / store cattle fattening) in the region and the diversity of available markets, helps local producers to adapt to variable market and climatic conditions. It also provides an important advantage for adapting to a changing climate.

Infrastructure requirements

Reliable water sources are important for pasture production and livestock. The Upper Hunter region features relatively high year round rainfall and secure water supplies from a combination of natural springs, groundwater, farm dams and regulated water supplies.

Regional saleyards at Maitland, Singleton, Scone and Gloucester service the regions' beef industry, but ongoing population growth will increase the risk of land use conflict for these facilities.

Good roads to access sale yards, abattoirs and supplementary grain supplies are also important. This includes access to B double transport routes for the sale of cattle for finishing in other regions. The Upper Hunter region currently has excellent access to transport routes and markets.

Figure 3 - Gloucester sale yards (Photo: Glenda Briggs)

Development prospects

The areas natural advantages and the expected ongoing investment in rural lifestyles that target grazing properties means that pasture based beef cattle production will remain a popular and regionally important rural land use.

Direct marketing to butchers and consumers such as the successful Barrington Beef brand also improves the profitability of regional production.

The larger mixed farming properties in the drier parts of the region are additionally well suited for expansion of the feedlot industry.

High land prices and the growth of competing land uses in the region, however, are a significant impediment to sustainable beef developments.

Competition for higher productive fodder growing areas and water resources is contributing to a cumulative and gradual loss of critical industry mass and support services, particularly in the central valley areas.

Important beef growing areas

Larger scale beef cattle breeding farms need reliable access to water to support high quality pastures or supplementary fodder production and larger holdings to support large herds. Beef production is well suited for smaller rural lifestyle holdings as it can involve a low level of inputs and limited infrastructure.

The average size of beef cattle herds in the more urbanised Dungog, Singleton and Muswellbrook LGAs is typically smaller than the state average of 198 beef cattle per farm. In contrast the average number of cattle per farm in the Upper Hunter LGA is significantly larger at 305 head per farm (ABS 2006).

The range of production options allows beef cattle production to occur on a broad range of locations and property sizes. Important Upper Hunter region cattle grazing areas include:

- the lower to mid slopes of the Barrington ranges which typically have cooler temperatures and higher rainfall
- mixed farming and cropping country on fertile volcanic soils with good water holding capacity (such as the Merriwa, Bunnan and Bylong areas)
- broad river valleys with access to fertile soils, suitable for improved pastures / supplementary fodder production.

The attached map (Figure 5) identifies land that is well suited for beef cattle grazing in the Singleton and Muswellbrook LGAs and part of Cessnock LGA (the study area). These areas may also be used for other agricultural land uses, such as dairying, horses or horticulture. This indicates how valuable the land resources are in this region for a variety of agricultural uses.

Important Beef Cattle Lands in the Upper Hunter study area feature:

- reliable access to water (>650mm rainfall, or within 2km of alluvial groundwater or with access to reliable spring water)
- moderate topography (Class 1- 5 Land and soil capability with not more than 18 degrees slope)
- suitable soils for improved pastures and/or supplementary fodder crops moderately low – high soil fertility)
- ready access to B double transport routes, regional sale yards and abattoirs; and
- a critical mass of beef cattle properties in the region to support contractors, specialist transport etc.

Figure 4 - Beef cattle on improved pastures that supplement the native pastures in the background (Photo: Glenda Briggs)

Land use planning implications

A sustainable beef industry relies on maintaining critical mass of beef cattle properties to sustain industry support services (eg transport, aerial spraying, farm managers).

Beef properties also ideally contain a mix of land suitable for pasture improvement and more seasonal (native) pastures. Beef cattle feedlots have additional land use planning requirements including: appropriate separation from neighbours, suitable property sizes to allow the productive re-use of manures and access to transport routes.

Planning can facilitate economically sustainable beef cattle developments and the expansion of the feedlot industry by retaining suitable rural lands and recognising the importance of regional infrastructure such as sale yards.

Residential focused developments (including small rural lots) should also be directed away from the most important beef cattle areas, as shown in Figure 5. This is particularly relevant for those locations well suited for more intensive forage production or feedlots which will have higher impacts on small rural lot development.

Acknowledgements

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Compiled by Glenda Briggs and reviewed by Todd Andrews (NSW DPI), Wendy Goodburn, Melissa Kahler and Jennifer Warner (NSW DPI Resources Planning and Development team).

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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

SBML (Singleton Beef Land Management Group) 2012, pers comm.

Additional Reading

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

Beef cattle advisory information; www.dpi.nsw.gov.au/agriculture/livestock/beef

Beef gross margins (financials); www.dpi.nsw.gov.au/agriculture/farm-business/budgets/livestock

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

Glossary of Agricultural terms http://www.dpi.nsw.gov.au/agriculture/info/ag-glossary

Hassell and Associates Pty Ltd, 2007, Minimum Lot Size Analysis for Blayney-Cabonne-Orange Rural and Industrial Land Use Strategy, Report to Councils.

Land Use Conflict Risk Assessment (LUCRA) Guide http://www.dpi.nsw.gov.au/environment/landuse-planning/agriculture/lucra

Land Use Planning http://www.dpi.nsw.gov.au/agriculture/resources/lup

Land Use Planning and Development http://www.dpi.nsw.gov.au/environment/landuse-planning

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Strategic Regional Land Use Policy http://www.nsw.gov.au/strategicregionallanduse

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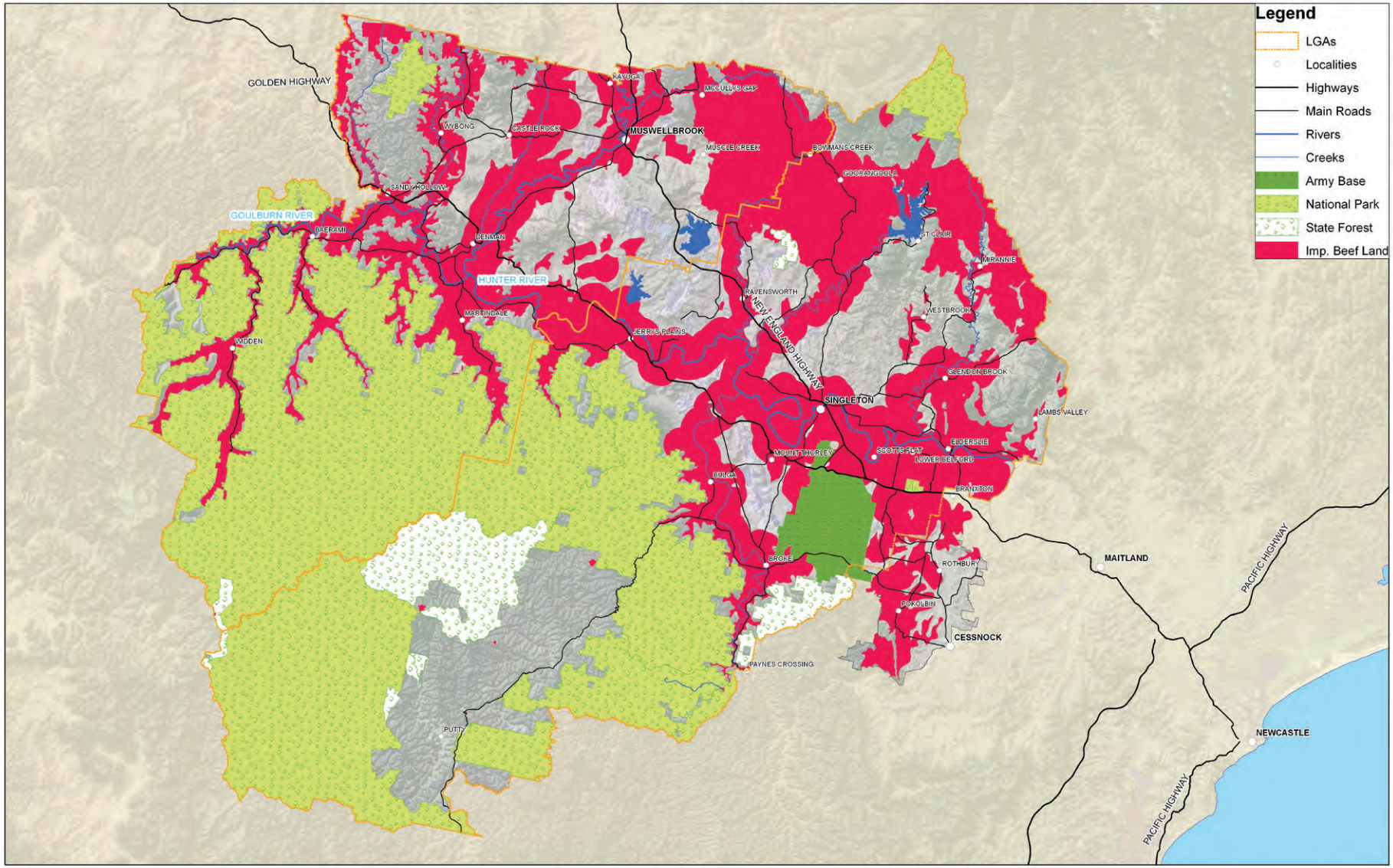
Figure 5: Land important for beef grazing in the pilot mapping area (Singleton and Muswellbrook LGAs)



Singleton - Muswellbrook Pilot Area Important Beef Land

NSW GOVERNMENT Department of Primary Industries

0 2.5 5 10 15 20 25 Kilometers

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