



Agriculture Industry Snapshot for Planning

Central Tablelands Sub Region

August 2020

The value of agricultural production in the Central Tablelands Sub Region was over \$605m from a range of livestock for meat, wool, broadacre crops, hay, fruit and vegetables (ABS 2015/16). Agriculture and agricultural product manufacturing employ a large percentage of people across the Central Tablelands (ABS 2015/16). The Central Tablelands has the advantage of topographical variability with landscapes that support broadacre cropping and livestock production, alluvial valleys suited to irrigated hay and vegetables and horticulture in higher altitude areas. This coupled with infrastructure as well as access to markets in Orange, Sydney, and Newcastle make the Central Tablelands one of the most successful agricultural areas in NSW.

Purpose of this profile

To develop effective land use planning policy for agricultural industries it is important to understand their location, the reasons why they exist in that location, the opportunities they take advantage of and the challenges they face. This profile details the key agricultural industries in the Central Tablelands and their interactions with suppliers, processing facilities and markets.

Establishing the significance of agriculture allows its recognition and management in land use planning by Councils. By providing the evidence base for strategic planning, agricultural land and local agriculturally-based economies can be protected and supported in planning instruments. The Central Tablelands agricultural industries operate in an environment of increasingly global competition and opportunities, external challenges and changing land use. This profile will inform local strategic planning for these key agricultural industries considering their linkages to infrastructure and secondary industries. Land use planning is guided by the Central West and Orana Regional Plan 2036 (DPE 2017). The Regional Plan has clear directions for the need to identify, protect and appropriately capitalise on agricultural industries, infrastructure and rural land.

Agriculture in the Central Tablelands Sub Region

Agriculture is a key industry for the Central Tablelands economically and for the scenic and environmental qualities of the rural lands where agriculture is undertaken. The area is particularly important for beef, sheep and wool, horticulture, and cropping. The Central Tablelands is 80,372 km² in area and incorporates land in the Upper Lachlan and Macquarie river valleys: Bathurst Regional, Blayney, Cabonne, Cowra, Lithgow, Mid-Western (Mudgee), Oberon and Orange City local government areas (LGA). The Central Tablelands is home to 141,138 people (ABS 2015/16) and makes a significant contribution to agricultural production in NSW.

Industry	Gross Value of Production (\$)	% share of Central Tablelands total	Number of businesses	% share of NSW
Beef production	\$199.2m	32.9%	1,474	7.8%
Wool	\$88m	14.5%	1,313	9.3%
Sheep and lamb	\$65.3m	10.8%		8.9%
Broadacre crops	\$77.8m	12.8%	613	1.5%
Vegetables	\$60.8m	10.1%	42	14.5%
Hay	\$37.6m	6.2%	755	11.5%
All other agriculture	\$77m	12.8%		2.3%
Total	\$605.8m	100%		4.6%

Source: ABS 2015 /16 (note: some businesses cover multiple industries).

While rural land in the Central Tablelands is largely used for agriculture, the expansion of dispersed residential and lifestyle development has sterilised some areas and incrementally displaced farming activities, making it difficult for remaining producers to operate. Some farmers and value-adding industries need to deal with increased land use conflict and inflated land prices due to competing interests particularly around larger towns, that stifle expansion. Despite these challenges, the Central Tablelands has great potential to grow and continue to support the profitable agricultural sector that helps underpin the Central Tablelands economy.

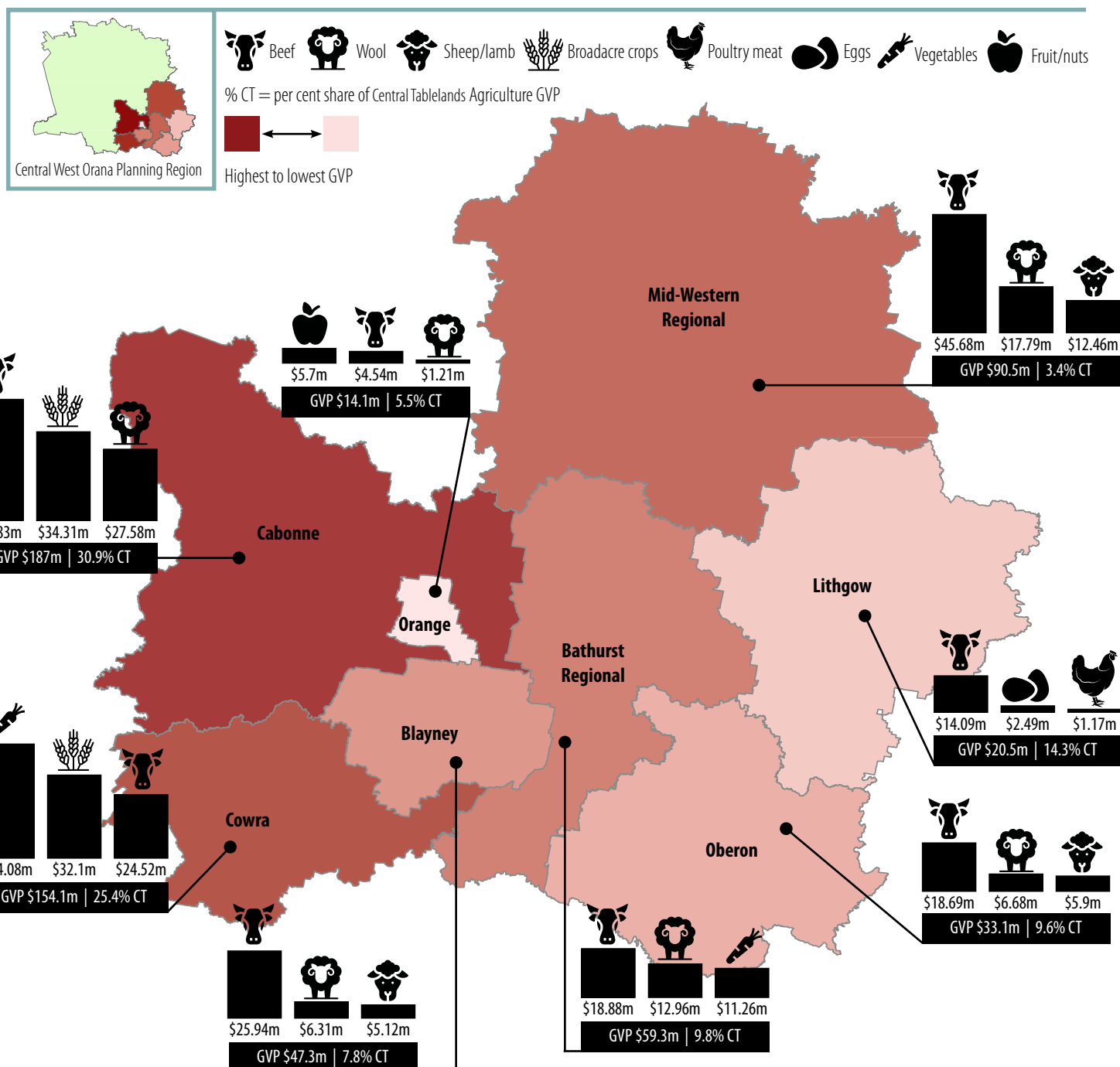
In 2015/16, beef production was the dominant industry in terms of GVP, contributing \$199m (ABS), being 32.9% of the Central Tablelands GVP and 7.8% of NSW GVP. The Central Tablelands also produced \$88m from wool, 9.3% of NSW's production, 14.5% of NSW's vegetables and 11.49% of NSW's hay (ABS 2015/16).

Employment

Agriculture employs over 4,429 people across the Central Tablelands (ABS 2015/16). The biggest employer is cattle and grain farming (68.1%) followed by the fruit and nut industries (6.2%) and vegetable production (2.3%). The LGAs with the highest agriculture employment are Cabonne (22.9%) and Mid-Western Regional (17.9%). These are people employed in the primary production of agriculture and do not include the vast workforce within the key secondary industries. It does not include employees that are hired on a seasonal basis that were not working in the Central Tablelands at the time of the ABS census.

Local government distribution

The following map shows the LGAs in the and agricultural GVP of the three leading industries for each. The biggest individual contribution is Cabonne Council with \$187m being 30% of sub-regional GVP, followed by Cowra Council which contributed \$154m (ABS 2015/16).



Agricultural highlights of the Central Tablelands Sub Region

The Central Tablelands has some of the most highly productive and sought-after agricultural land in NSW, suited to a wide variety of horticultural and broadacre crops and livestock production. Beef production is the main livestock industry by GVP, with wool, and sheep meat production also important. Beef production is an industry favoured in areas with high amenity landscapes such as the Central Tablelands as it can be carried out by part-time and small scale farmers with least effort per area of pasture (RMCG 2019).

Industries located on alluvial soils are vegetables and hay in Cowra and Bathurst LGAs. Fruit production is a localised industry, worth \$28.69 m in 2015/16 based mostly in Cabonne and Orange in connection with Mount Canobolas.

While not a prominent industry in terms of the value of production alone (\$ 6.4 million in 2015/16 for wine grape production) it is important to acknowledge the viticultural industry and the wine making and processing sector. This is largely based in the Cabonne, Cowra and Mid-Western Regional Councils, that correspond with the Orange, Cowra and Mudgee wine regions (NSW Wine Industry Association n.d.). They are also associated with cellar doors, cafes and restaurants as well as accommodation and associated events. Other council areas also gain tourism benefits from these operations, eg Orange receives a greater share of tourism benefits from wine, food and other horticultural production from Cabonne council's agricultural features (Elton Consulting 2019).

This section highlights the prominent industries for the Central Tablelands.



Livestock production

Beef and lamb

Beef is often a common choice of lifestyle operations, being the least effort to utilise small areas of pasture on a part time basis. RCMG (2019) noted that beef production is the highest in the eastern part of the region, including much of the Central Tablelands. They noted that the total number of businesses had reduced over time with the most reduction in those under 500 hectares in area. They concluded that the industry comprises many small business units with fewer large commercial businesses. The DPI Central West Beef profile (2012a) also noted that beef production can be undertaken by lifestyle operations as they have limited infrastructure and low input levels compared to sheep or mixed sheep/cattle enterprises.

The DPI Central West Region Pilot program (2012a) described beef production in the Cabonne Orange, Blayney and Forbes areas (Forbes is not included in this profile) as based on mixed farming systems with breeding and finishing cattle for domestic markets and some export. The Evergraze Central Tablelands trial (2014) notes that cattle and mixed sheep/cattle enterprises are also present in the area. All of these systems use both improved native and introduced pastures for grazing.

Sheep meat production is an important industry in both mixed farming and also pure sheep meat farming enterprises in the Central Tablelands, being productive over a wide range of climates and land types.

Prime lamb production is a feature of the Central Tablelands and has increased due to increased lamb prices. The Evergraze trial program (2014) notes that farms in the Central Tablelands average around 500 ha with native pastures. It is also noted that average farm size is declining due to increasing subdivision around the major urban areas.

There also has been an increasing interest in finishing lambs off in a grain finishing feedlot particularly in the western parts where grain is readily available. Recent drought conditions and temporary feeding have showed that this finishing process increases profitability of lamb production. The Central Tablelands' locational advantage to the Sydney market and processors are advantages that will continue to grow the industry.

Industry requirements

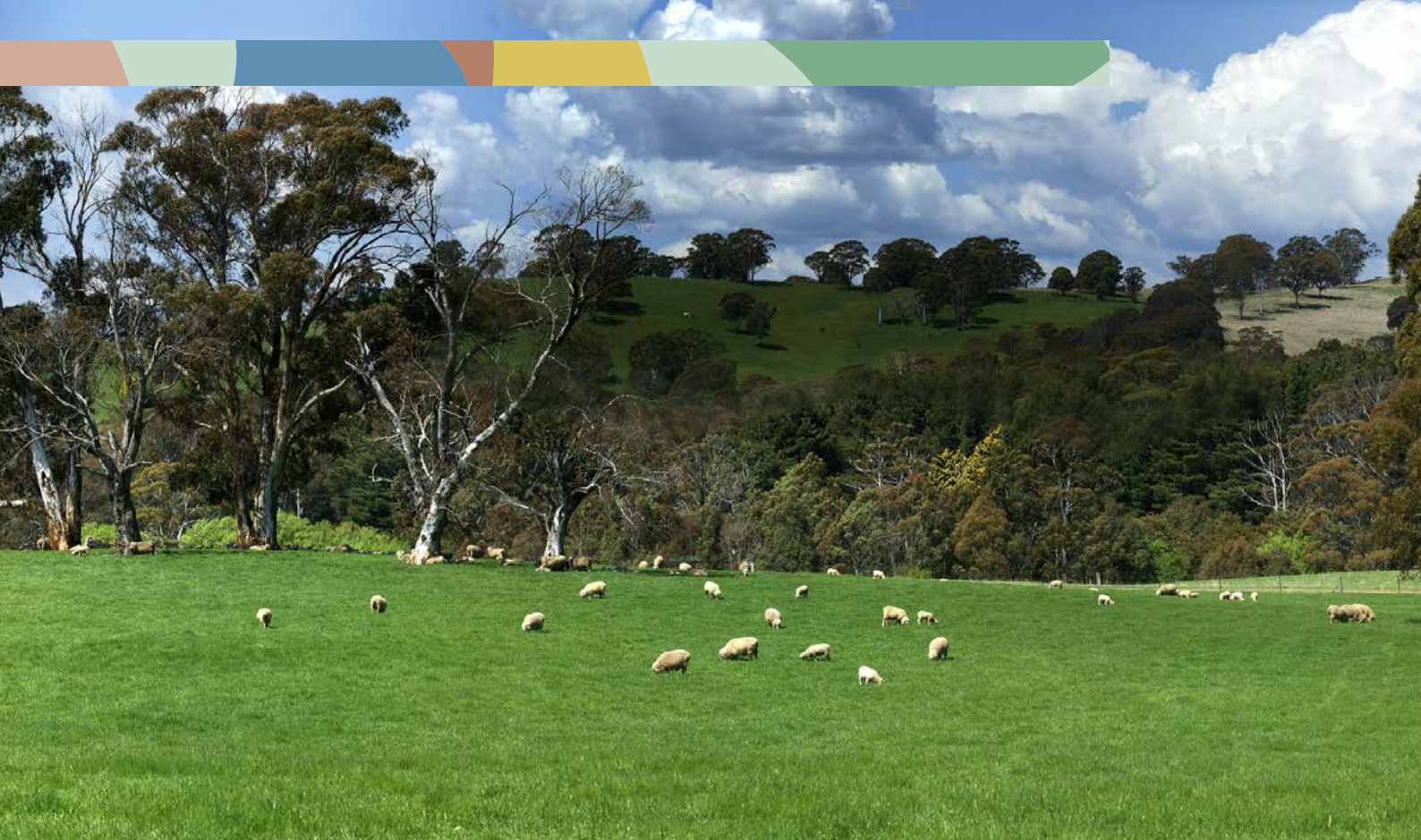
There are no strict locational requirements for beef and sheep production in the Central Tablelands although the higher rainfall gives it a 'reliable' status for the growth of pastures. The DPI Central West Beef profile (2012a) identifies important grazing lands in the Orange, Cabonne and Blayney areas that had the following requirements:

- rainfall 650-950mm
- elevation 400-1,100m
- soil fertility moderate to moderately high.

Other requirements include larger property size to accommodate commercial and environmental factors including water, and access to grain and roughage supplies. Many grazing enterprises also produce fodder crops as part of the operation in dryland or irrigated situations.

Typically, livestock are managed in a system of rotational grazing, with paddocks recuperating after grazing. Intensive animal industries require reliable water supply, transport access for stock and feed and areas of unfragmented rural land with large separation distances to sensitive receptors for odour and noise management. There are a small number of beef feedlots in the area, typically located on larger tracts of land with access to suitable water and allowing on-site waste management. The operations have to meet strict operational standards to minimise impacts such as noise and odour. There are still some areas, especially in the lower slopes of the Central Tablelands, that can accommodate these developments.

Livestock industries are supported by ancillary industries and other agricultural enterprises such as meat processors, machinery and irrigation suppliers, mechanics, transport, rural suppliers, agronomic and veterinary services, livestock marketing agents and wool brokers. The Central Tablelands is serviced by saleyards at Carcoar which have weekly sales. The Central Tablelands Livestock Exchange is the third largest in NSW with 172,925 head yarded in 2017-18 (MLA 2020). Breakout River Meats is located at Cowra, processing beef, lamb and pork. Nestle Purina produces pet food in Blayney and employs 300 full time staff.



Wool

The wool industry in the Central Tablelands is adapted to the variety of landscapes and cooler climates. Oberon, Lithgow and Blayney have fewer wool producers due to limitations including land availability and suitability. The presence of wild dog predation in most eastern parts of the Central Tablelands may also deter the industry. Fine wool production is based on the areas that make up the hilly country north of Orange and Bathurst extending to Mudgee, with pockets to the far south of the Central Tablelands and also to the far western ranges of Cabonne Shire (DPI 2012b). Medium wool is grown in the rest of the Tablelands area. Cabonne Council produced the most wool in 2015/16.

Locational criteria identified for fine and medium wool is identified as the following for Orange, Cabonne and Blayney LGAs:

Criteria	Medium wool	Fine wool
Rainfall	650-950mm	600-900mm
Elevation	400-1,100m	300-800m
Soil fertility	Moderate to moderately high	Low to moderately low
Land capability	Class 3 to 5	Class 4 to 5

Wool production has declined over the years but stabilised with recent price gains. There has been a shift between managing sheep for wool production and meat production based on high lamb prices (RCMG 2019).

There will be likely impacts on wool production and quality with a drier and warmer climate. Animal health and reproduction will be impacted as will pasture and fodder crop production and water availability. The warmer temperatures may benefit the eastern parts of the Central Tablelands in relation to increasing pasture growth during winter and reduce reliance on supplementary feeding.

The increase in numbers of lifestyle blocks in areas especially to the east and north of the Central Tablelands is an ongoing challenge for the industry, restricting management and expansion. Increasing numbers of residents in these areas has resulted in more land use conflict issues, and the land prices reflecting residential use values.

It is often suggested that wool production is limited to 'lesser quality' lands. There continues to be a perception that such lands are of less value to agriculture, and hence are expendable to other land uses especially subdivision for lifestyle lots. There are areas of large contiguous landholdings that are still important to wool production that provide economies of scale. These should be recognised and any future subdivision restricted.

Industry requirements

Wool growing is a specialised industry with a specific set of biophysical (land and climate), labour, management and animal husbandry requirements to meet market specifications. Finer wool enterprises take advantage of lighter soil types and those with a granitic origin to produce a premium product. Each wool-producing district has ancillary industries including wool brokers and shearing contractors.



Broadacre crops

Broadacre cropping is mainly carried out in Cabonne, Cowra and Mid-Western Regional LGAs. Technological improvements to crop varieties has enabled greater adaptation to markets and the industry is increasing as a result. Cropping is often part of sheep and cattle production systems with an increased emphasis on crops in the lower slopes. Wheat is the main crop grown in the area (with a gross value of production of \$ 37.2m) mainly grown in Cowra and Cabonne Councils. Canola is a more recent crop grown in the Cabonne and Cowra areas with a gross value of production of \$19.19m in 2015/16. Oats and barley are also important grain crops, with gross values of production at \$10.77m and \$7.76m respectively. Oat and barley production is highest in Cabonne and Mid-Western Regional Council areas. Cowra also produces both crops and Blayney is also notable for oat production.

Cropping mainly occurs on the areas of the lower slopes and valleys of the Cabonne, Cowra and Mid-Western Regional council areas, and are often part of a mixed farming system. The DPI Central West Region Pilot Area (2012c) cropping profile identified the following criteria for important cropping lands in the Cabonne, Blayney, Orange (and Forbes) areas:

- lands of less than 10% slope
- moderate to moderately high fertile soils at depths to 60cm, good soil moisture storage capacity and neutral pH
- land capability of class 2 to 4
- moderate rainfall of 600 to 810mm.

For example canola requires 270- 330mm during the growing season.

These criteria include the alluvial and grazing lands of the Lachlan and Macquarie valleys that are slightly more risk sensitive due to lower rainfall. Other important areas are:

- the slopes west of Manildra and Canowindra that have greater rainfalls, allowing a greater diversity of crop varieties grown
- parts of the Tablelands around Blayney above 600mm. These areas have more reliable rainfall but are more prone to frost risk affecting plant growth and potential damage to grain yields. The lands are also higher in value but are smaller in property size, often associated with smallholding livestock operations
- a north-south band from Manildra to Cowra is also significant in terms of its production of canola and other crops.

These criteria are also relevant to the western parts of the Mid-Western Regional LGA.

Industry requirements

Reliable transport networks are important to the movement of crop product from farms to industry, silos and ports, and inputs such as labour, seed, machinery etc. Broadacre cropping also relies on large tracts of land to deal with modern machinery and to achieve economies of scale. Avoiding land fragmentation through subdivision removes the threat of land use conflict and land value escalation from lifestyle development. There is limited land suited to cropping in the Central Tablelands and the reliability of rainfall will make the Sub Region more attractive (RCMG 2019).

Grain and oilseed production is the basis for many other agricultural and secondary industries in the Central Tablelands and beyond. There are a range of secondary industries in the area that require grain and oilseeds, as well as the stock and feed requirements such as feedlots, horse establishments etc. Improving technologies are increasing the ability of the industry to deal with both climate and market changes.



Hay production

The Central Tablelands is a hay producing area regionally, and an important adjunctive industry to broadacre cropping. The main lucerne hay production areas are based on the alluvial flats of the Lachlan River at Cowra, the Macquarie River and various tributaries in Bathurst, the Belubula River for Cabonne and the Cudgong River at Mudgee (Mid-Western Council area). These areas have access to surface water allocations, and in the 2015/16 lucerne produced \$20.52m. \$12m was derived from cereal hay production while the rest of the hay was derived from other crops and pastures. The hay industry provides important feedstocks for other livestock industries.





Vegetables

Vegetable growing is an important industry in the Cowra, Bathurst Regional and Cabonne LGAs where there is high quality flat alluvial land and reliable water supply. Wade (2005) describes the vegetable growing areas in the Macquarie Valley occurring both on the river flats at Bathurst, as well as some of the volcanic plateau areas of Oberon and Orange (irrigated through groundwater supplies). The industry in the Lachlan Valley is based on both the Lachlan and Belubula rivers around Canowindra and Cowra. The major commodities grown include lettuce, sweet corn and potatoes, as well as Brussel sprouts, cabbages and cauliflowers in the cooler Bathurst area. The main advantages to growing vegetables in the Central Tablelands include the access to water, local food processing, access to the Sydney market and favourable climatic conditions (Wade 2005). The proximity of the Western Sydney Airport via road and rail will provide future export opportunities.

Water access is becoming a major concern especially with drying climates, urban water use priorities and other water-dependent land uses. Land use conflicts have arisen with new intensive developments such as protected cropping. Pest and disease threats will also impact on crops. (DPI 2012d). It is projected that climate change will create issues with heat stress and frost timing.

Small area farmers also produce vegetables for local consumption, through markets and restaurants. There are a number that occur especially in the Lithgow and Orange areas, where the land and water supplies are suitable. Hydroponic or greenhouse agriculture (known as protected cropping) also provides an opportunity for vegetable and horticultural development in the Central Tablelands (Andrews 2016).

Industry requirements

Vegetable production is reliant on irrigation and tend to be located on farms close to the rivers comprising medium to very high capability land, on slopes less than 10 degrees. The Central Tablelands offers opportunities for vegetable cropping to take advantage of the suitable lands along rivers and the future access to markets. For protected cropping, cleared flat areas of land, with access to water are required. The advantage of protected cropping is that it is not dependent on soil quality; and as a closed system, water use, energy and chemicals etc are controlled, and the enterprise is protected from extreme weather events.



Dairy industry

Although not a major agricultural industry, dairy has a strong local presence in the Cowra and Cabonne LGAs, with Cowra having 14 dairy farms and Cabonne 13 farms in 2015-16 (Andrews 2016). The Central West Region Pilot Area Dairy Profile (2012e) that includes Cabonne noted the following industry requirements:

- moderate to high fertility soils such as those on fertile river plains (Belubula and Lachlan rivers)
- water from surface or groundwater within five kilometres in quantities to support dairy operations, irrigation of pastures and livestock drinking water
- reliable power for irrigation and dairy operations
- access to high quality feed from grain and hay produced locally, or grown on farm
- ready access to the major markets in Sydney through road infrastructure
- properties that allow the management of environmental/amenity impacts.

There is no regionally based milk processing in the Central Tablelands. The Second Mouse Cheese Company in Orange sources raw milk from local producers. There is also a goat dairy and cheese manufacturing business in Lithgow Council area (Jannei Goat Dairy) sourcing local milk.

Dairies are highly technical and require expertise to service refrigeration and irrigation equipment, supply and maintenance. Reliable road access is essential for milk transport, labour and feed delivery.

The industry currently deals with issues associated with climate variability such as heat stress and cold snaps. There is a need to consider animals protection from these impacts, eg spelling areas, artificial and tree cover and refuges. There are also issues with water availability in some areas with increasing competition from urban uses. Dairying as a high input agricultural activity is susceptible to conflict particularly where adjacent land is used for rural lifestyle purposes.

There are opportunities for dairying to expand in the Central Tablelands especially where there is reliable water access. The ongoing loss of dairying on the NSW coast due to urbanisation provides an attractive opportunity for producers to relocate to the Central Tablelands.



Fruit and nuts

The production of pome fruit is dominated by Cabonne and Orange City LGAs based on the Mt Canobolas geological complex. The highest GVP values in 2015/16 include apples (\$13.26m in Cabonne and \$4m in Orange City) and cherries (\$7.1m in Cabonne and \$1.6m in Orange City). Other pome and stone fruit is also grown in the area, with minor plantings of olives and nuts (such as hazelnuts).

This industry has declined in response to economic returns, production costs, seasonal conditions and the incursion of residential and lifestyle living. For example, in the Towac Valley over the last 30 years rural residential developments have escalated land prices. There has been some diversification with the increase in grape plantings but the proximity of Orange and the desirability of the area for living purposes has seen many orchards being displaced, and lands being converted to lifestyle use.

Land use conflict is an ongoing threat to the industry as a result of the non agricultural developments in horticultural areas. The use of chemical sprays, hail and bird netting, and seasonal bird scarers are some of the major conflict scenarios that occur in these areas.

Whilst climate change will see changing weather events, the unique area the Central Tablelands offers especially for fruit and nut growing will see the area become more important for food production. There is still opportunity for new operators to enter the industry, with new techniques, varieties and information. The major hurdle continues to be the competition between land uses for land and water sources, in these unique areas suited to this type of agriculture.

Industry requirements

The industry has traditionally been based on medium to high fertile soils such as those that occur in the Mt Canobolas area in Cabonne and Orange City Council areas, as well as the better quality soils of granitic origin around Bathurst and Lithgow. There are also isolated volcanic soils that have or continue to support horticultural operations in the other council areas. The DPI Central West Region Pilot Area (2012d) horticulture and viticulture profile also has identified the following criteria for important horticultural and viticultural lands in the Cabonne, Blayney, Orange (and Forbes) areas:

- an adequate water supply for surface and groundwater sources
- cool climates
- slopes between 3-10% and land and soil capabilities from 2-4., and elevations between 550 to 1,100m.

Protected cropping opportunities do not necessarily require strict land requirements although the climate and proximity of the area to the Sydney market are attractive to development.

Water availability continues to be the major resource limitation for these developments, and other land based developments in the Central Tablelands.





Central Tablelands Sub Regional assets for agriculture

The Central Tablelands has ideal growing conditions with evenly distributed rainfall combined with a variety of soils and land capability, and access to water resources for irrigation enabling highly productive farms to prosper.

The Central Tablelands also has a geographical advantage given proximity to Sydney and access to Newcastle and Port Kembla; and access via major national road and rail routes (DPIE 2017; RMCG 2019). Other benefits come from an established tourism industry, of which agriculture and value adding are major attractors.

Farming in the Central Tablelands provides benefits and opportunities for both producers and urban populations. By sustaining agriculture near regional cities such as Orange and Bathurst there are farming advantages such as market differentiation and alternative income streams, access to labour, processors and materials, and opportunities to produce higher value commodities which benefit from market proximity (reduced food miles and spoilage).

A summary of the Central Tablelands competitive strengths include:

- the scale, diversity and productivity of agricultural lands
- a relatively cool climate with reliable rainfall
- water supply provided by the Macquarie, Cudgegong, Belubula and Lachlan rivers, including upper tributaries
- potential for a range of intensive horticulture and livestock production systems including dairy
- good road transport networks with the Golden and Mitchell Highways providing the main access in and out of the Central Tablelands, linking with the Hunter Valley and Sydney
- the existing rail network extending through Bathurst, Blayney, Orange, Mudgee, Cowra and Lithgow, connecting to Sydney, Port Kembla and Newcastle.



Supporting industries and infrastructure

The Central Tablelands has a comprehensive range of support services and infrastructure, processors, transport and logistics, professional services and farm supplies in the larger centres. Before agricultural produce makes it to market, there are inputs such as fertiliser, fuel, technical support services such as agronomists, vets and mechanics, processing facilities, transport and infrastructure, etc. There is also substantial movement of produce within the Central Tablelands, supplying grain to intensive animal producers and moving livestock to processing plants. The interactions of these agricultural industries with their secondary industries is a critical consideration in planning for agricultural land uses.

Value adding within the Central Tablelands is significant. A summary of processors of agricultural produce is in Appendix 2.



Climate

This area is regarded as being in a high rainfall zone with rainfall being distributed evenly across the year, with totals from about 600mm to over 1,000mm. Orange has an average annual rainfall of 907mm, with Bathurst 635mm, and Mudgee 668mm and Cowra 597mm (BOM). Temperatures vary across the Central Tablelands with altitude and topography. In summer, average temperatures are between 20-22 °C in areas closer to the Blue Mountains, and in winter, range from -2 to 0°C. This area experiences fewer than 10 hot days a year (35°C) while further west hot days can increase to 10-20 a year. Up to 130 cold nights (less than 2°C) are possible in areas closer to the Blue Mountains, reducing sharply moving to the west (OEH 2014).

Over the last 30 years, the Central Tablelands Regional Weather and Climate Guide (BOM, CSIRO and FarmLink, 2019) has summarised the following features of climate in that time that include:

- annual rainfall has been relatively stable, with rainfall decreasing in the autumn and spring months but most reliable in summer
- there have been more hot days and more consecutive days over 38°C
- spring frosts are common and occurring later.

These changes have implications to current land management, and farm business decisions in the area.



Biophysical characteristics

The Central Tablelands is traversed by the Great Dividing Range that runs north to south, with highest altitudes in the Oberon, Orange and Lithgow LGAs. The headwaters of the Macquarie and Lachlan rivers start in the eastern areas around Oberon, and the adjacent Southern Tablelands respectively in elevated areas above 1,000m. The elevation drops to 450m to the western slopes. The eastern third of the Lithgow LGA falls to the Warragamba catchment to the east. The Central Tablelands is made up of sediments with granite outcrops, and igneous remnants that contribute to an array of soils that are reflected in the various agricultural industries located in the area. Mount Canobolas near Orange is recognised as an important horticultural and viticultural area due to the unique combination of volcanic soils, rainfall and climate. The Cudegong River is the main river that occurs in the uppermost area of the Mid-Western Regional Council area with Windamere Dam impounding waters above Mudgee. This water helps irrigate the viticultural industry in the area, as well as supporting irrigated hay production and contributing to the irrigation industry in the Macquarie River when it joins this river in the Burrendong Dam storage downstream of the Central Tablelands.

The Carcoar Dam is situated on the Belubula River six kilometres upstream from Carcoar in the Blayney Shire, where the impounded water is used to support irrigation downstream as well as to supply stock and domestic water. The Wyangala Dam located 48km above Cowra is the major dam that is situated on the confluence of the Lachlan and Abercrombie rivers, and provides regulated irrigation water to the Lachlan Valley (WaterNSW website). The vegetable, hay and dairy industry is reliant on this supply. Groundwater supplies are also important to irrigation in the Belubula valley, the Orange basalts, and the Molong limestone. Basic landholder rights exist, with water of high quality and lower yield in the weathered granites at Bathurst, and the Hawkesbury Sandstone to the east. Groundwater has been a vital source of water during droughts especially for livestock (A Smithson personal communication).



Marketing and tourism associated with agriculture

Councils of the Central Tablelands aim to capitalise on the reputation of various agricultural industries and their resulting products. The Cabonne Council community has recently confirmed that their 'Australia's Food basket' slogan is an important part of defining their area as highlighted in the Cabonne Country tourism marketing initiative (<https://cabonnecountry.com/>) and draft Local Strategic Planning Statement. Similarly, Orange benefits from the food and wine tourism offered in its own area and that of Cabonne. The wine areas of Cabonne, Orange, Cowra and Mid-Western Regional councils also highlight the associated tourism and marketing of wine. Oberon also has food and wine tourism marketing. Lithgow tourism is based around the landforms and vistas that form part of the area, including the Jenolan Caves and areas such as the Capertee Valley that include agricultural vistas. Bathurst capitalises on the seasonality in the area, of which food and wine also has a part.





Challenges for agriculture in the Central Tablelands Sub Region and planning levers

Challenges for agriculture are connected to climate change, reliable telecommunications, technology, commodity prices, and in some areas, land use conflict and 'right to farm'. Development unrelated to agriculture such as lifestyle housing creates land use conflict where expectations of amenity are not met. This places pressure on producers to adjust their normal practices. This competition for land has a real potential for dislocation and transfer of agriculture (particularly intensive agriculture) to other areas. Agricultural land is a finite resource, particularly in the Central Tablelands where decades of land fragmentation has created undersized rural holdings now mostly used for lifestyle purposes. This gradual process has displaced intensive industries such as dairies, piggeries and orchards, and affected broadacre cropping and livestock grazing in the more contested areas.

There are consistent trends across the Central Tablelands that have implications for development of land use plans and promoting investment in agriculture:

- Farms are increasing in size, both in terms of the physical size and value of operations. This is observed across both broadacre and more intensive enterprises.
- Most value of production is generated by the medium to large farm businesses. While more numerous, smaller farm businesses contribute a smaller proportion of overall commodity value.

This section highlights some of the challenges faced and planning solutions.



Historic land use planning

Historic planning policy has not strategically valued and protected rural land in many areas, instead regarding it as 'urban land in waiting' (Houston 2005). The absence of dedicated planning policy for agriculture has resulted in local environmental plans (LEPs) that do not support agriculture in practice. Agriculture has spatial, biophysical and production criteria that can be similar to industrial development, especially intensive industries. However, in LEPs industrial zones are in dedicated areas with development controls managing incompatible development. In contrast, rural planning provisions often allow incompatible development and subdivision that affect farm amalgamations, expansion or intensification plans and ultimately restrict a farmer's ability to make a living.

Planning solution

Future land use planning must recognise the importance of agriculture to society and the economy and that the land and resources on which agriculture depend need to be protected and managed to enable continued use of the land for agriculture.

The challenges can lead to the following adverse impacts for agriculture if they continue to occur:

- **Inflated land prices** prevent farm expansion as residential land values are in a different market to agricultural land values.
- **Differing expectations:** Complaints are made to authorities from neighbouring residents about legal farming activities such as traffic movements, dust, noise, odour etc., resulting in adjustments being required to operations.
- **Loss of critical mass:** Urban encroachment gradually results in the loss of farmland and supporting services (a critical mass required for commercial viability), requiring farmers to source further afield.
- **Uncertainty:** land use conflict and the variable impacts on farming makes it difficult to plan for future investment in the industry. Pressures of encroaching development often result in farmers either selling land for non-rural uses or continuing to farm with the issue of land use conflict.



Statutory land use decision making

The time and cost involved in the development approval process can constrain the capacity of agricultural industries to quickly respond to market forces. Intensive agricultural land uses often require extensive site and impact assessments from specialist consultants and state agencies, while perceived environmental impacts on neighbouring properties can raise concerns in a community about the potential impacts of the land use.

Planning solution

Clear development controls which specify requirements for intensive agricultural development, and non-agricultural developments near existing agricultural land uses, are integral to minimising community concerns and avoiding unnecessary cost and delays. Consistent requirements for information to support development applications can also streamline the application process for proponents and assist consent authorities to manage community expectations. It is important for both the agricultural industry and the community that the development approval process results in well managed agricultural land uses in the right location to enable the continued use of the land for agricultural production for the benefit of the wider community.



Land use conflict

The land use zones that apply to land on which agriculture occurs often permit a wide range of other land uses that are unrelated to agriculture. For example, with population growth and change, there will be pressure to use rural land on the edge of urban areas to accommodate residential development and other urban land uses. Competition for rural land on which agriculture can occur can lead to increased land prices and uncertainty for agricultural industries and investors. This often results in dislocation and transfer of agriculture to other areas, sometimes at great personal cost to producers and their industry.

Planning solution

Planning controls which limit the range of permissible non-agricultural land uses in rural zones can prevent the encroachment of urban land uses on agricultural industries. Planning controls which require adequate buffer distances between land uses can also mitigate potential impacts on and from agricultural land uses. With land use conflict being largely driven by the divergence in knowledge, expectations and activities of rural neighbours, particularly between new residents and traditional rural landholders, collaboration and networking becomes critically important to addressing changing social landscapes (UoN 2019). Councils can help facilitate this education process. Clear and robust strategic planning policy and land use strategies are important to guide future urban growth to locations where it will not have adverse impacts on agriculture.



Land fragmentation

Rural zoned land for agriculture (Primary Production - RU1, Rural Landscape - RU2 and Rural Small Holdings - RU4 zones) make up approximately 74% of the Central Tablelands.

Analysis of the rural zoned land found that:

- 18% is comprised of lots between 1 and 5 hectares in size
- 36% is between 5 and 20 hectares
- 16% is between 20 and 40 hectares
- 18% is between 40 and 100 hectares
- 12% is greater than 100 hectares in size.

Areas near urban settlements experience pressure for lifestyle subdivision, usually involving agricultural land. While there would appear to be ample land available, it is important that urban development does not compromise productive potential. As noted, adverse impacts on agriculture can occur where there is a high degree of land fragmentation. Undersized rural lot sizes result in increased land prices as competition from non-agricultural land uses arise. Small rural lot sizes limit the ability of new agricultural enterprises to achieve required buffer distances or expand their operations. Expansion of agricultural operations in a fragmented rural landscape often means significant investment to purchase additional land. When additional land is not available for expansion producers usually increase productivity via intensification of operations, a process which can increase the potential impacts on nearby non-agricultural land uses or require significant investment to mitigate potential impacts.

Planning solution

Planning policy which sets an appropriate minimum lot size for a dwelling house and prevents the further subdivision of rural land, except where there is a demonstrated agricultural need, can prevent the adverse impacts of land fragmentation. Councils can also limit the amount of fragmentation for dwelling houses in highly productive rural areas.



Critical mass

All agricultural industries have a critical level of production which ensures the economic viability of the enterprise. Where secondary industries rely on a minimum volume of agricultural product to remain viable it is imperative for the industry to maintain that critical mass for the benefit of all agricultural industries. This is important for the agricultural industries as well as the related supply chain, including ancillary services, infrastructure, markets, processing facilities and related industries.

Planning solution

When land use planning decisions have the potential to affect one aspect of the agricultural supply chain it has the potential to threaten the entire industry in a locality. Land use planning needs to recognise that it is not only agricultural land with excellent biophysical characteristics that needs to be retained for agricultural purposes, but also those key secondary supporting industries which may be located on lower quality agricultural land which are still potentially impacted by encroaching non-agricultural land uses.



Other challenges

Climate change

The Central Tablelands is expected to experience an increase in all temperature variables (average, maximum and minimum) by 2030. Summer temperatures are projected to increase by 0.7°C in 2030 and 2.1°C by 2070. Minimum temperatures are projected to increase by 0.7°C by 2030 and 2.1°C by 2070. Changes in cold nights are important in the maintenance of natural ecosystems and agricultural/horticultural industries.

The number of hot days (over 35°C) is projected to increase on the Central Tablelands by another five to 10 days by 2030 and 10-20 by 2070 with increases most pronounced in spring and summer. Minimum temperatures are projected to increase. Prolonged periods of hot days increase the incidence of illness and death amongst vulnerable people and adversely affect ecosystems. The number of cold nights (less than 2°C) is expected to decrease across the Central Tablelands with between five to 10 to 20 fewer cold nights by 2030 and 20 to 30 by 2070.

Rainfall is projected to decrease over spring by 2030 but is expected to increase in autumn by 2070. Across the Central Tablelands winter rainfall is expected to decrease by 2030. Climate models indicate both wetter and drier scenarios for annual rainfall with the range of change -12% to +11% by 2030 and -10% to +22%.

The Central Tablelands will also experience an increase in the accumulation of the number of day degrees (a measure of heat accumulation throughout a growing season). Warmer temperatures will extend the length of the growing season. However, warmer temperatures also accelerate the rate of crop development and could potentially shorten the time to maturity, reduce water use efficiencies resulting in reduced yields. Fewer frost nights will impact pome and stone fruits.

The impacts of climate change highlight the need to protect land for its future productive capacity particularly where there is a combination of biophysical assets such as water, topography and soils. The Central Tablelands supports high value agriculture now and will be important to sustain production of more specialised agricultural and horticultural enterprises into the future. A critical concern to agriculture is securing water for production in terms of quality, quantity and delivery.

Biosecurity

Rural land is exposed to pests and diseases that could threaten agriculture, the environment and community safety. Biosecurity hazards are managed by the NSW Government through Local Land Services. The distribution, abundance and management of insects, pathogens and weeds is also being affected by climate change. The likelihood that tropical or semi-tropical pests will spread southward in Australia, or become established after an incursion, increases with climate warming. Stressed plant systems (crops) may become more vulnerable to insect and disease outbreaks as the efficacy of current control measures are altered.

The combination of urban areas, open farmland, forested areas and water sources results in serious pests such as foxes, wild dogs, pigs, deer, cats, rabbits and goats. Numerous pest plants are already in the landscape and have a large impact on remnant vegetation and rural land. Land fragmentation resulting in small lot sizes in some areas means it is more difficult for an agricultural producer to control the activities occurring within the necessary biosecurity buffer. Biosecurity resilience will depend on operational factors and this can result in increased costs for the producer (Agrology 2018).

Social licence

A social license to operate refers to the perceptions of local stakeholders that an industry that operates in a given area or region is socially acceptable or legitimate.

It is important for agricultural industries to maintain a 'social licence' for their operations. The agriculture industry's right to farm agricultural land and retain access to water needs to be balanced with responsible, ethical land and livestock management and adherence to best practice operations to minimise potential environmental impacts. Producers can help to protect their 'social licence' through open communication and education and positive contributions to their communities. Connecting with local markets and demonstrating low food miles and the importance of local food security can assist in maintaining a 'social licence' for agriculture. Further detail can be found in the [NSW Government Right to Farm Policy](#).

Changing markets and economic conditions

Agriculture is vulnerable to changes in markets and economic conditions. Long lead times for crop production and the need for extensive capital and infrastructure investment to change commodity or farming systems means agricultural land uses are not capable of quickly adapting to changing markets and economic conditions. Due to Australia's presence in global agricultural markets, farmers are often 'price takers' which can have significant adverse impacts on smaller operations.

Opportunities for agriculture in the Central Tablelands Sub Region and planning levers

The competitive advantages of the Central Tablelands are noted in the previous sections, advised by the numerous regional economic development strategies and Central West and Orana Regional Plan 2036. Opportunities are in diversification and intensification, as well as research. The diversified economy based on agriculture has benefits for Central Tablelands' urban and rural communities. Urban areas benefit from agriculture through ecosystem services, employment, scenic values, 'green space', value-adding (processing, renewables), education, research and food provenance. Agriculture supports a supply chain that generates substantial productivity and employment across local, regional and national scales.

This section identifies the practical land use planning approaches and opportunities for agriculture in the Central Tablelands and some planning considerations to help implement them.



Increased scale and intensification

Productivity growth is central to the performance and international competitiveness of Australia's agricultural sector. Producers can increase scale through expanding operations onto additional land and intensifying. Commercially viable intensive agricultural operations in the Central Tablelands include horticulture, poultry, pigs and livestock lot feeding. Most intensive agricultural operations need to establish infrastructure requiring significant capital investment. To secure this capital and see a return on the investment, businesses need certainty that production will be unencumbered by land use planning changes for a minimum of approximately 25 years. Further growth of intensive animal and plant production is feasible in the Central Tablelands, such as dairy, poultry, piggeries and cattle feedlots, as well as a range of horticultural crops in outdoor and controlled environment glasshouses. Recent enhancements in the design, management and operation of intensive agricultural enterprises has resulted in productivity improvements and achievement of food safety, animal health, animal welfare and environmental sustainability standards.

Planning levers to support intensification

- a. Certainty in strategic planning policy and land use planning controls for intensive agricultural operations and neighbouring land can provide the appropriate investment environment for industry expansion.
- b. Rural land use strategy development is key to understanding the needs of various agricultural industries and investigating opportunities and mechanisms to support intensive agricultural industries through LEP controls.
- c. LEP zones and provisions should be applied over intensive agricultural precincts; with land use tables structured to permit intensive agriculture and related industries while prohibiting incompatible land uses such as residential accommodation, tourist and visitor accommodation, commercial, heavy industrial and recreational activities etc
- d. Minimum lot sizes should be large enough to limit fragmentation of agricultural land, incorporate industry requirements, enable expansion of existing agricultural industries and provide for adequate buffers to incompatible land uses.



Food security

There are marketing opportunities for food producers to leverage the benefits of local food production and differentiate their product in the market. Predicted growth of population and markets in the Central Tablelands, NSW and beyond will sustain the demand for locally produced food and fibre. Global markets will also continue to demand Australian produce. In combination these factors will lead to a higher value of agricultural production in the Central Tablelands.

Planning levers to increase food security

- a. Strategic planning for rural land must ensure productive land is identified and protective mechanisms provided through the planning framework to enable provision for expansion of urban farms for intensive production, food security and education purposes.
- b. Councils should zone agricultural land for primary production and only permit agriculture and a narrow range of supporting land uses in that zone.
- c. Some forms of horticulture may be a suitable permissible use in a range of zones, with opportunities for associated agri-tourism and roadside stalls.
- d. Minimum lot sizes should be large enough to limit fragmentation of agricultural land, incorporate industry requirements, enable expansion of existing agricultural industries and provide for adequate buffers to incompatible land uses.



Diversification and value-adding

Agriculture is recognised as a major contributor to the regional economy and social fabric of the region. Access to transport links to Sydney, Port Kembla and Newcastle and favourable biophysical assets of rainfall, water, productive soils and farming infrastructure means that the Central Tablelands is well positioned to capitalise on growing community interest in food provenance and agri-tourism. The Central West and Orana Regional Plan 2036 and Regional Economic Development Strategies all identify the need for diversification and expansion of agricultural commodities to include agri-tourism, boutique and artisan produce, and value adding. The various regional economic development strategies (REDS) that cover this region acknowledge the importance of agriculture to the area, including the Abercrombie REDS (Bathurst and Oberon), Lithgow REDS, Cowra REDS, Mid Western REDS, Blayney, Cabonne and Orange REDS. A unified approach to branding the region, investment in processing and packaging, dealing with digital and biotechnology innovation and markets were noted as while freight and logistics were considered key challenges.

Agri-tourism in the form of low-key farm stays and bed and breakfast establishments can provide an alternative income stream of agricultural producers while also educating the community about the activities that occur on farm. These ancillary land uses should not compromise the agricultural production being undertaken on the land and agricultural production should be the primary land use. The Central Tablelands has the opportunity to promote NSW's 'clean and green' production to the world through its high levels of tourism.

Planning levers for diversification and value adding

- Farmers markets ('markets' as defined by the Standard Instrument LEP) should be permissible and encouraged by councils in appropriate urban and open space zones.
- Agri-tourism (farm stays, bed and breakfast accommodation) should be associated with and complement the continued agricultural production on the land.
- Agri-tourism should be directed away from intensive agricultural operations or precincts.

Non-planning levers for diversification and value adding

- Intensive agricultural production precincts and businesses may be used for education of the community and tourists around how food supply chains work.
- Roadside stalls, artisan food and drink industries and cellar door premises all offer opportunities to promote NSW's clean green image to the international tourism market.
- Farmers markets could prioritise locally grown or made produce to support local growers.



Circular economies

A circular economy is one that exchanges the typical cycle of 'make, use, dispose' in favour of maximising re-use and recycling. The longer materials and resources are in use, the more value is extracted from them. The circular economy concept is best, and most often, applied in relation to resource consumption and regeneration.

For the agricultural industry a circular economy presents possibilities for significant efficiencies and input cost reductions through energy generation and smart grid distribution; innovative off-grid energy solutions; recycled water use; and opportunities for renewables and waste solutions.

Planning levers to facilitate circular economies

- Primary production zones should permit resource recovery facilities as a means of reusing waste products while also restricting incompatible uses to prevent rural land use conflict.
- Minimum lot sizes should account for a potential increase in the need for land area requirements as farming trends towards circular economies. Reuse of effluent and other products on farm to vertically integrate farm inputs and outputs may result in additional and diversified production areas on farm. For example, the reuse of poultry litter is an input to mushroom substrate, with the mushroom compost ultimately being reused to grow grain crops to feed poultry. In this case either the poultry or mushroom farm may diversify to grow a grain crop with increased land area requirements.

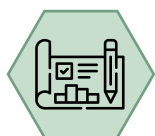




Planning toolkit

Best practice land use planning for agriculture includes recognition of the industry as a significant contributor economically, environmentally and culturally, providing recognition and management through all levels of the planning framework. Dedicated land use zones, provisions and minimum lot sizes are available to Councils and can effectively support primary production even in contested areas.

This section highlights the parts of the planning system to facilitate this.



Strategic planning

Local strategic planning statement

A local strategic planning statement (LSPS) identifies the vision and trends for agriculture in an LGA and sets out the direction for agricultural land uses for the next 20 years. It is important that agriculture, the land it depends upon and the infrastructure and other secondary industries which interact with agricultural land uses are considered at this initial strategic planning stage. The LSPS should explain the economic contribution that agriculture makes to the local economy and reflect the community's expectations for the provision of food and fibre locally. Further information can be found in the following DPI guideline [Local Strategic Planning Statements – Agricultural Planning Advice for Councils](#).

Local land use strategy

The Central West and Orana Regional Plan 2036 and Council LSPSs set out the framework and expectations for preparation of local land use strategies. The agricultural component of a land use strategy should identify the agricultural industries in the LGA, land on which they are located and the essential infrastructure and secondary industries. A land use strategy is also an effective tool in communicating to the community the scale and importance of agriculture in the LGA economically, physically and socially. It is an important step in identifying where agricultural land should be protected from incompatible land uses such as lifestyle subdivision and housing.

A rural land use strategy will identify the linkages primary industries have with secondary industries, infrastructure and other components of the production chain to establish a holistic picture of relationships and dependencies. The strategy will also clarify the relationship of rural land with residential development and specify the circumstances in which additional fragmentation and residential development may or may not be appropriate. The strategy will also assess the policy framework including existing LEP provisions and make recommendations to retire and/or remove redundant provisions concerning rural subdivision and non-strategic residential development.

Local environmental plan (LEP)

A LEP allows councils to tailor planning controls to address the issues facing agricultural industries in their LGAs. The LEP is informed by the rural land use strategy. The following are mechanisms that can result in positive outcomes for agriculture:

Land use zones: the RU1 Primary Production or RU4 Primary Production Small Lots zones are the most appropriate zones to apply to land which is currently used for agriculture and/or is suited to future agricultural land uses.

Land use zone objectives and tables: The use of specific zones for agricultural land allows the zone objectives to be specific for agricultural land uses and require other permissible land uses to be compatible with agriculture.

Limiting permissible land uses: LEPs can reduce the potential for land use conflict by restricting the range of permissible land uses where incompatible with agriculture. This is executed by careful construction of land use tables for the rural zones. Councils should review the permissible land uses in rural zones applied to agricultural land or where agricultural industries are located to prevent inappropriate land uses and limit potential for land use conflict. Land use tables for rural zones should be 'closed' to enable more control over the range of specific land uses.

Minimum lot sizes: The minimum lot size specified in an LEP for rural land needs to be of a scale to prevent fragmentation into lots which cannot support the locally typical agricultural land uses. Generally larger minimum lot sizes facilitate the establishment of larger and more appropriate buffer distance between potentially conflicting land uses. Larger lot sizes also enable expansion or diversification of the agricultural activities without the need to purchase additional land which can be an economically prohibitive option for farm expansion. While it can often be difficult to execute, the breaking of the nexus between minimum lot size and dwellings is a way to prevent new settlement on rural land, and a positive advance in promoting agriculture and preventing future rural land use conflict.



Development control plans and other approaches

Development control plans

A development control plan (DCP) for rural zones should include practical guidance for agricultural land uses.

A DCP can specify buffer distances to be applied to all land uses, both agricultural and non-agricultural, to ensure that new land uses do not increase the potential for land use conflict with existing neighbouring properties.

Guidance on appropriate buffer distances is provided in the Department's [Buffer Zones to Reduce Land Use Conflict with Agriculture - An Interim Guideline](#).

Novel approaches

In some cases, Councils may need to apply both planning approaches and non-planning advocacy to achieve positive outcomes for agriculture. For example, under the current legislative framework, Councils can:

- offer financial incentives such as rate reduction for legitimate agricultural enterprises in contested landscapes
- seek a locality to be mapped as state significant agricultural land with restrictions on fragmentation and development for non-agricultural purposes
- set up a rural industry liaison committee to establish links between council and farmers and provide a forum for discussion of the issues facing agriculture in the LGA
- propose a highly contested area as a special planning precinct with planning provisions to protect it from incompatible land uses.

Industry can provide advocacy through active involvement in land use planning decision making and strategic planning to raise the profile of agriculture. The land use planning system is only one mechanism available to reduce the potential for land use conflict. Agricultural industries can decrease the potential for land use conflict by adopting industry best practice operations which eliminate or reduce the impact of their operations on neighbouring landowners.

Similarly, clear communication with neighbouring properties and an education program targeting sensitive neighbours can help increase understanding of the reasons for some agricultural practices and prevent nuisance complaints.



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Appendix 1

Further details on Central Tablelands Sub Region major agricultural industries



Distribution of beef production by LGA

LGA	Gross value of production (\$m)	% share of CT beef
Bathurst Regional	\$18.9m	9.5%
Blayney	\$25.9m	13.0%
Cabonne	\$46.8m	23.5%
Cowra	\$24.5m	12.31%
Lithgow	\$14.1m	7.08%
Mid-Western Regional	\$45.7m	22.96%
Oberon	\$18.7m	9.39%
Orange	\$4.5m	2.26%
Total	\$199.1m	

Distribution of sheep and lamb (meat production) by LGA

LGA	Gross value of production (\$m)	% share of CT sheep meat
Bathurst Regional	\$9.33m	14.28%
Blayney	\$5.11m	7.82%
Cabonne	\$20.57m	31.48%
Cowra	\$10.23m	15.66%
Lithgow	\$0.76m	1.16%
Mid-Western Regional	\$12.46m	19.0%
Oberon	\$5.90m	9.03%
Orange	\$0.97m	1.48%
Total	\$65.33m	

Distribution of wool production by LGA

LGA	Gross value of production (\$m)	% share of CT wool
Bathurst Regional	\$12.96m	14.72%
Blayney	\$6.31m	7.17%
Cabonne	\$27.58m	31.34%
Cowra	\$14.43m	16.40%
Lithgow	\$1.06m	1.20%
Mid-Western Regional	\$17.79m	20.22%
Oberon	\$6.66m	7.57%
Orange	\$1.21m	1.38%
Total	\$88.0m	

Distribution of broadacre cropping production by LGA

LGA	Gross value of production (\$m)	% share of CT broadacre cropping
Bathurst Regional	\$1.19m	1.53%
Blayney	\$2.78m	3.57%
Cabonne	\$34.31m	44.1%
Cowra	\$32.10m	41.27%
Lithgow	\$0.12m	0.15%
Mid-Western Regional	\$6.56m	8.43%
Oberon	\$0.09m	0.11%
Orange	\$0.65m	0.84%
Total	\$77.80m	

Distribution of hay production by LGA

LGA	Gross value of production (\$m)	% share of CT hay
Bathurst Regional	\$2.32m	6.17%
Blayney	\$2.71m	7.20%
Cabonne	\$9.55m	25.38%
Cowra	\$15.37m	40.84%
Lithgow	\$0.58m	1.54%
Mid-Western Regional	\$5.76m	15.31%
Oberon	\$1.01m	2.68%
Orange	\$0.33m	0.88%
Total	\$37.63m	

Distribution of vegetable production by LGA

LGA	Gross value of production (\$m)	% share of CT vegetable production
Bathurst Regional	\$11.28m	18.56
Blayney	\$0.24m	0.39
Cabonne	\$4.35m	7.15
Cowra	\$44.07m	72.47
Lithgow	\$0.24m	0.39
Mid-Western Regional	\$0.02m	0.03
Oberon	\$0.61m	1.0
Orange	\$0.001m	0.01
Total	\$60.82m	

Distribution of dairy production by LGA

LGA	Gross value of production (\$m)	% share of CT dairy
Bathurst Regional	\$0.73m	4.40%
Blayney	\$3.02m	18.30%
Cabonne	\$4.63m	28.04%
Cowra	\$8.05m	48.77%
Lithgow		
Mid-Western Regional	\$0.04m	0.24%
Oberon	\$0.01m	0.01%
Orange	\$0.04m	0.24%
Total	\$16.51m	

Distribution of fruit and nut producers by LGA

LGA	Gross value of production (\$m)	% share of CT fruit & nuts
Bathurst Regional	\$0.33m	1.14%
Blayney	\$0.28m	1.00%
Cabonne	\$21.91m	76.39%
Cowra	\$0.05m	0.17%
Lithgow		
Mid-Western Regional	\$0.39m	1.36%
Oberon	\$0.02m	0.07%
Orange	\$5.7m	19.87%
Total	\$28.68m	



Appendix 2

Value adding industries

Value adding industries

The Central Tablelands also supports a broad range of related businesses such as agricultural suppliers, advisory services, processing, retail, transport, logistics and warehousing. The key secondary industries include saleyards, wool brokers, grain storage and processing plants.

The below list highlights some of these key secondary and value adding industries.

Mars Petcare

Located in Raglan (Bathurst Regional Council) the plant employs about 150 people in the production of pet food. It sources \$40m of raw materials annually from local sources as much as possible (Western Advocate 2015).

Devro

The manufacturing plant in Bathurst employs about 150 people, and is involved in producing collagen casings for food products (such as sausage cases), half of which are exported.

Nestle Purina Petcare

Based in Blayney, this is a pet food manufacturing company. It employs 300 people and produces over 100,000 tonnes of pet food for domestic and export. The ability to source agricultural inputs locally determined the development of the Blayney site.

Breakout River Meats

Based at Cowra this abattoir processes 7,000 lambs, 600 cattle and also pigs per week. It employs about 160 people.

Tablelands Premier Meats

An on-farm licenced abattoir and meat processor for multiple species, with a no minimum kill number. They are based at Canowindra (<https://tablelandspremiermeats.com/>).

Central Tablelands Livestock Exchange

A privately owned saleyard located near Carcoar (Blayney Shire), trading 700,000 lambs and 160,000 cattle per annum (<https://www.blayney.nsw.gov.au/business-and-tourism/industry-and-commerce/carcoar-livestock-saleyards>)

Adagio Mill

This Orange based alpaca mill processes from five growers across the state, producing fine alpaca fibres and garments such as scarves. It employs between eight to 10 people (<https://www.adagiomills.com.au/>).

Manildra Flour Mills

Part of the Manildra Group, this flour mill is the largest in Australia using one million tonnes of wheat each year for flour production. It is located in Manildra in the Cabonne Council area, and employs approximately 200 people (<https://www.manildra.com.au/>).

Allied Pinnacle

The Cowra located factory produces caramels, jams and fondants and is part of a larger Australian bakery product company.

MSM Milling

This is a crushing facility that uses non-GM Canola to produce oil and stockfeeds. It is located near Manildra (Cabonne Shire). It employs about 70 people and exports to 15 countries as well as domestic sales (<https://msmmilling.com.au/>).

Ferrero Australia Pty Ltd

This a food processing company based in Lithgow that produces Nutella and Tic Tacs. It also is linked to the Agri Australis company that manages hazelnut groves in southern NSW. It employs about 100 people and exports 35% of its production to the asian market (<https://www.ferrero.com.au/Features/40-YEARS-OF-THE-FERRERO-FACTORY-IN-AUSTRALIA>).

Department of Primary Industries Orange Agricultural Institute

A NSW government research and scientific facility located on 183 hectares just south of Orange. It has dedicated facilities that support areas such as climate, horticulture, vertebrate pests, pastures and irrigation research (<https://www.dpi.nsw.gov.au/about-us/science-and-research/centres/orange>).

Department of Primary Industries Cowra Agricultural Research and Advisory Station

Another NSW government research facility located on 305 hectares just north of Cowra, it specialises in meat and agronomy research (<https://www.dpi.nsw.gov.au/about-us/science-and-research/centres/cowra>).

Simplot, Bathurst

This food manufacturing plant processes about 40,000 tonnes of sweet corn per annum sourced from the local area. It also produces Chicko rolls. It employs about 160 staff (<https://www.simplot.com.au/>).

Australian Queen Bee Exporters

This is a specialised apiary business in queen bee breeding and export, as well as having domestic package bees and honey. It employs 30 people (<https://www.facebook.com/AQBExporters/?rf=11552413645321390>).

Avondale Foods

This is a small food manufacturing company that specialises in apple products for the domestic market. It is located in the Cabonne Council area and employs less than 30 people (<http://www.avondalefoods.com.au/home.php?resetbrand=1>).

Fresh Fodder

A small food manufacturing company based in Orange that specialises in dips and soup, employing up to 20 people (<https://www.freshfodder.com.au/the-fodders>).

Appledale Processors Cooperative Limited

This is an apple and pear juice processing facility that can process up to 24,000 tonnes of fruit per annum. It also has a separate orchard that provides a base supply of fruit due to recent declines in fruit production in the area. Employs about 20 people (<https://www.appledale.com.au/about-us/>).

Graincorp

Silos in this area include Cowra, Manildra, and Nyrang Creek.

Bryton Wool

The business is the largest family owned wool business in NSW. It has 13 staff in their Canowindra facility, that also has a facility in Oberon and other centres. They specialise in selling wool through a video sales platform (Andrews 2016).



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For further information please contact us via email: landuse.ag@dpi.nsw.gov.au or visit our website: www.dpi.nsw.gov.au/agriculture/lup