

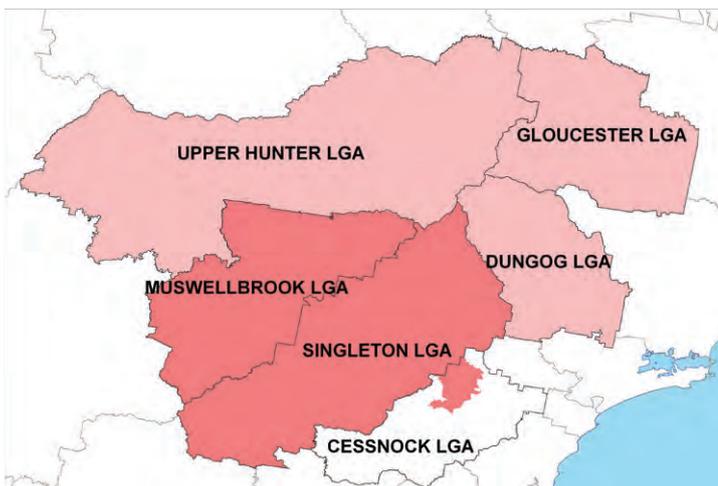
Upper Hunter Region Viticulture Profile

FACTSHEET NO.5

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

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 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 and Muswellbrook in the Upper

Hunter study area. Those areas were chosen to cover a variety of agricultural landscapes and industries.

Figure 6 identifies the important viticultural 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.

Viticulture highlights

The Hunter region is Australia's oldest wine making region. Although it produces only 2% of Australian wine, it focuses on consistent production of premier, award winning wines. Heritage plant stocks of international value are still nurtured in the region, including Shiraz from 1867 and Semillon from 1899.

The regions' recognised branding and proximity to suppliers, domestic markets and export ports, attracts international winemaking expertise and creates marketing options. Its wine heritage and reputation, attractive rural landscapes and accessibility are key factors in supporting a vibrant domestic and international wine tourism sector.

The Hunter is one of only two internationally recognised wine production areas in Australia. The region is also ranked the 10th most popular Australian location for international tourism and 13th for domestic tourism (TRA 2011).

The economic value and cultural significance of viticulture and wine tourism are essential components of the region's identity and economy.

Figure 2 – As a leading tourist attraction, Vineyards are a key part of the Upper Hunter identity (Photo: Glenda Briggs)



Economic contribution

Wine production in the region is targeted at quality award winning wines, rather than quantity. Consequently, average grape yields per hectare for the region are approximately half the NSW average (ABS 2006).

The region produces a wide range of wine styles, and Hunter Semillon and Shiraz wines both have a world class reputation. Regional winemakers also have established domestic and export markets.

As shown in table 1, ABS data records show that in 2005-06, the 215 vignerons in the Upper Hunter region produced 5 % of NSW wine grapes by volume with an estimated unprocessed wholesale value of \$26 m (ABS 2006). However, the value of locally grown raw grapes is a very small part of viticulture's actual contribution to local, state and national economies.

Table 1- Upper Hunter wine grape data (ABS 2006) *

Local Govt Area (LGA)	Area of fruit bearing vines (ha)	Number of growers	Average area of vines per farm (ha)	Wine Grape volume as a % of NSW total
Cessnock	1,545	125	12	1.7%
Dungog	11	2	6	0.0%
Gloucester	0	0	-	-%
Singleton	855	58	15	1.0%
Muswellbrook	1,375	23	60	2.0%
Upper Hunter	186	7	27	0.4%
UH Region	3,972	215	18	5 %
NSW total	36,632	1,445	25	100 %

* 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 Hunter is a recognised wine making hub for the broader region and has significant investment in grape crushing, bottling and fermenting infrastructure together with expanded production and storage capacity.

Hunter wine producers have also developed a strong domestic and export focused marketing program that include cellar door outlets, regional events and international branding.

Current industry data (Winebiz 2012) identifies the total area of wine grapes in the Hunter (both bearing and not yet in production) being 3,537 ha in 2010 (8% of the current NSW total of 42,621ha). Compared to the ABS figures in Table 1, this indicates a reduction of approximately 400 ha of grapes in the region due to industry rationalisation.

The Hunter Valley Wine Industry Association (HVWIA 2010) reports that in 2010:

- wine makers in the Hunter produced more than 25 million litres of wine per annum, valued at more than \$210 million (including cellar door sales worth over \$75 million each year)
- the total value of investment expenditure directly associated with the grape and wine production exceeded \$450 million, and
- viticultural and wine-making industries directly employ over 7,000 people with 10,000 indirectly employed (e.g. in service industries and via multiplier effects), this excludes wine tourism employment.

Tourism Hunter (HVWIA 2010) estimates that in 2010 the wine tourism sector provided:

- an additional 30,000 direct and indirect jobs
- more than 2.8 million visitors to this iconic locality who spent over \$1 billion, and
- hunter vineyard and tourism industries jointly inject \$1.8 billion annually into the NSW economy and are well placed to continue this trend.

Located only 2 to 3 hours from Sydney, the Hunter has over 120 wineries, 65 restaurants and three major golf courses. This is combined with 180 accommodation properties ranging from small bed and breakfast facilities to 5,000 bed establishments, resort hotels and serviced apartments (HVWC 2012).

This creates a critical and integrated industry cluster covering the Lower Hunter, Broke Fordwich and Upper Hunter wine growing areas.

The Upper Hunter viticulture industry is additionally integral to regional tourism and for a large number of tourism events throughout the year including;

- the Upper Hunter Wine and Food Fair,
- the Upper Hunter Horse Festival,
- Muswellbrook Carnivale,
- Aberdeen Highland Games,
- King of the Ranges Stockman's Challenge,
- Upper Hunter Wine Trail and
- Denman Farmers Markets.

Industry challenges

Wine tourism and sustainable production of high quality wines depend on a mass of critical industries and integrated clusters of vineyards and related developments.

Statewide viticulture industry pressures include:

- high capital costs to enter the industry due to the infrastructure required and the level of management and marketing to establish a reputation in a highly competitive industry;
- industry rationalisation due to rapid national development over the last decade that exceeded the growth of demand and processing facilities; and
- global downturn and tight marketing pressures.

Hunter based growers face additional challenges from competing land uses and a growing risk of land use conflicts, particularly from residential and coal mining developments.

The scale of urban and rural lifestyle development, particularly the Pokolbin - Lovedale, Belford and Rothbury areas contribute to inflated land prices and land use conflict risks that will restrict future viticultural development.

Upper Hunter region viticultural areas such as Denman and Broke - Fordwich are consequently integral to the sustainable future growth of viticulture in the region. However, these locations contain coal and coal seam gas resources. Existing coal mines have already forced the closure of some Upper Hunter region vineyards with other vineyards closed due to industry rationalisation and uncertain water supplies.

The recent expansion of coal seam gas (CSG) exploration and coal mining proposals in the region are perceived by the viticultural industry as a threat to the regions' environmental attributes, its heritage and reputation, and consequently the Hunter wine experience and brand (HVWIA 2012, UHWM 2012).

Particular issues of concern for the viticultural industry are the lack of certainty and cumulative impacts of mining and CSG on:

- essential water supplies;
- labour availability;
- land prices; and
- the regional landscape and viticultural reputation;

Reputation and landscape are particularly critical to the sustainability and development prospects for the Hunter viticultural industry. Visitors are attracted to the Hunter by the diverse wine experiences on offer, the attractive rural landscapes and the opportunity to escape urban and industrial environments.

The range of specific wine styles produced in the Hunter depend not only on the physical features of the region, but also the talent of local vigneron and wine makers. Both groups are attracted by the region's landscapes, its established reputation and the quality and range of wine marketing opportunities on offer.

Climate change

The expected increased risk of summer storms, higher humidity, increased heat stress and a more variable temperature range can increase disease and pest outbreaks. Delayed harvests and loss of grape quality are also likely to occur.

Hunter vigneron, however, are experienced at managing the already highly variable climate of the region and regard climate change as an extension of such conditions.

In the Hunter Valley zone the cool wet season and in particular heavy rains in February and March 2012 reduce grape yields below average (ABARE 2012). Improved canopy management, however, reduces disease outbreaks and has prevented large crop losses.

The ability to continue to adapt to both climatic and market changes comes from the highly integrated nature of wine production and tourism across the Upper and Lower Hunter regions; the wide variety of wine styles; diverse micro-climates; and experienced viticultural managers and wine makers. A reliable water supply, moderate climate and access to multiple, quality focused markets also help the industry to adapt.

Figure 3 – Sunset at an Upper Hunter Vineyard adjacent to the Hunter regulated river system (Photo: Tony Somers)



Infrastructure requirements

Reliable, high quality water supplies are critical resources for viticultural and wine tourism developments.

Hunter vineyards benefit from relatively high annual rainfall and low evaporation rates compared to other warm climate wine areas. Consequently, not all vineyards are dependant on irrigation. Yields from vines of exceptional value may be sacrificed by restricting water in order to maximise desired characteristics.

Supplementary irrigation, however, allows vigneron to adjust grape yields, the timing of harvest and wine characteristics. Water is also essential for cleaning and cooling wine making equipment.

Direct access to the Hunter River's reliable regulated water supplies is consequently an important feature, particularly for the vineyards near Denman and Branxton.

To ensure the sustainability and growth of other Hunter wine growing areas, the viticultural industry invested significantly to create the privately owned Pokolbin Private Irrigation District and

the Broke - Fordwich Private Irrigation District (PID). Both PIDs provide the infrastructure and regulation that allows members to purchase high security water from the Hunter River regulated water supply for storage on farm.

Vignerons unable to access the PID or regulated river flows have invested in substantial on farm storages and irrigation facilities.

The Hunter Valley Research Foundation (HVRF 2005) reported that in 2003-04 vignerons invested over \$75million in on farm capital works.

Other critical infrastructure needs are:

- a reliable electricity supply to irrigate vines and for the operation of wine making and wine storage facilities and cellar door outlets, and
- road access to vineyard areas for wine tourism and for the transport of grapes, juice and wine.

Consultation with vineyard district communities (Straight talk 2011) continues to highlight concerns about the need for substantial road infrastructure improvements.

Whilst there is an extensive network of public roads, the rapid growth of the vineyard districts and increased traffic flows, especially for major events, has outpaced the capacity to maintain and upgrade the rural road networks.

Development prospects

From 2000 to 2008 a rapid expansion of Australia's vineyard area occurred due to relatively high wine grape prices driven by a strong demand for Australian export wine and a new industry development strategy. The resultant attraction of industry entrants and rapid expansion of production, created a grape over supply. This coincided with the increased value of the Australian dollar, a decreased demand for Australian wine due to increased competition from the export market and the global financial crisis (ABARES 2012).

The same factors continue to place downward pressure on the price of wine grapes, wines, and wine properties across Australian wine growing regions (ABARES 2012).

National wine grape production from the 2011 to 12 vintage is forecast to be 2 per cent lower than the previous vintage, due to seasonal conditions and the removal of unprofitable vines.

Market forces combined with competing land uses (including mining and equine developments) has also resulted in a reduction in the extent and number of vineyards in Muswellbrook and Upper Hunter LGAs over the last decade.

Impacts on Hunter wineries however, has been buffered by the regions' reputation for quality wines; established mix of domestic and export markets; and its diversity and integration with wine tourism. This also boosts the longer term development prospects for the region.

Viticulture in the region has also proved to be highly capable of adapting to repeated cycles of growth and rationalisation. This includes recovering from industry booms and declines driven by pest outbreaks, past economic down turns and changing wine tastes.

Recent vineyard sales are viewed as a positive indicator of industry renewal and scope for future expansion. This includes purchase of wine properties by Chinese investors and larger domestic producers (Friemann, 2012).

Capacity for growth in the Hunter will largely rely on areas in the Upper Hunter region and on closely integrated development. Significant expansion in Upper Hunter region wine tourism has recently been approved, including the redevelopment of the iconic Arrowfield Winery (MSC 2012).

Figure 4 - A typical Upper Hunter vineyard on the footslopes of the sandstone ranges (Photo: Tony Somers)



Important viticulture lands

The unique geography of the Hunter Valley allows maritime influences to extend much further inland than other coastal catchments. The resultant climate with year round rainfall and modest evaporation are well suited for viticulture.

Various sub-regions have been formally registered as distinct locations for viticultural production based on their unique combination of soils, topography and climate (Geographic Indications).

The Upper Hunter Geographic Indication sub-region incorporates the viticulture and related developments in the Upper Hunter and Muswellbrook LGAs. Other formally recognised viticultural sub regions are Broke-Fordwich and Pokolbin (Wine Australia 2012).

Vineyards nearer to Cessnock, particularly around Pokolbin and Lower Belford, are relatively compact and are supported by diverse wine experiences and large scale events. They also typically experience a wetter, milder climate.

Vineyards in the Upper Hunter region tend to be larger and historically contribute half the volume of wine grapes produced in the region. They also experience typically lower rainfall and hotter summer temperatures and offer a more rural and relaxed wine experience.

These differences have encouraged regional wine makers to adopt a highly integrated approach to wine making, wine sales and wine tourism.

Figure 5 - Upper Hunter Vineyards are typically larger than those in the Pokolbin area and have scope to expand. (Photo: Glenda Briggs)



Important Viticulture Lands within the Upper Hunter region feature:

- reliable access to low salinity water (within 2km of the PID, the Hunter River or alluvium);
- well drained soils with moderate slopes
- support diverse grape varieties and wine styles (Land and Soil Capability 1 – 5 and moderately low – high soil fertility);
- located within a renowned wine producing area with an established reputation / branding, viticultural heritage, (Geographic Indication or industry nominated sub regions); and
- a critical mass of viticulture related industries (cluster of growers within 20km of Denman)

Also important and available in all Upper Hunter wine growing region is a;

- temperate climate and suitable micro climate (low frost risk, moderate evaporation);
- an attractive setting (eg forested backdrop, rural atmosphere, well managed vineyards); and
- close proximity to population centres and markets.

The map shown in Figure 6 identifies locations that are particularly suited to viticulture production in the Singleton and Muswellbrook LGA's and part of Cessnock LGA (the study area). These locations may be currently used for other agricultural land uses. This indicates how valuable the land resources are in this region for a variety of uses.

Land use planning implications

The sustainability of viticulture in the Hunter depends on minimising land use conflict risks whilst maintaining the diversity of wine experiences and opportunities for future adaptation or expansion.

Land use planning can support viticultural developments and socio-economic values by strategically recognising the important viticultural clusters and prioritising viticultural development within those target areas.

Planning guidelines and policies for important viticultural lands can also help to retain the character of the region and enhance the regions reputation and brand.

Viticulture may conflict with other land uses due to the intensive nature of farming operations such as spraying operations for disease control, night time harvesting that can cause noise and require lighting and vehicles on roads at times of peak operations.

Preventative approaches are the most effective means of managing land use conflicts. This includes good industry practice and supporting compatible developments.

Residential and rural lifestyle developments should be strategically provided for at locations with a low risk of land use conflict away from important viticultural lands.

Appropriate minimum lot sizes can support the sustainable development of important vineyard areas by; allowing for adequate set backs and buffers; protecting environmental values; and promoting economically sustainable viticultural operations.

Viticultural related development planning controls and buffers should be:

- developed in consultation with the industry and the viticultural community
- consistent across all councils within the region
- applicable to all forms of development within important viticultural lands, both new and existing.

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Additional reading

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<http://www.nsw.gov.au/strategicregionallanduse>
- Wine Australia, Hunter Wine region, description and characteristics accessible at <http://www.wineaustralia.com/australia/Default.aspx?tabid=4470>

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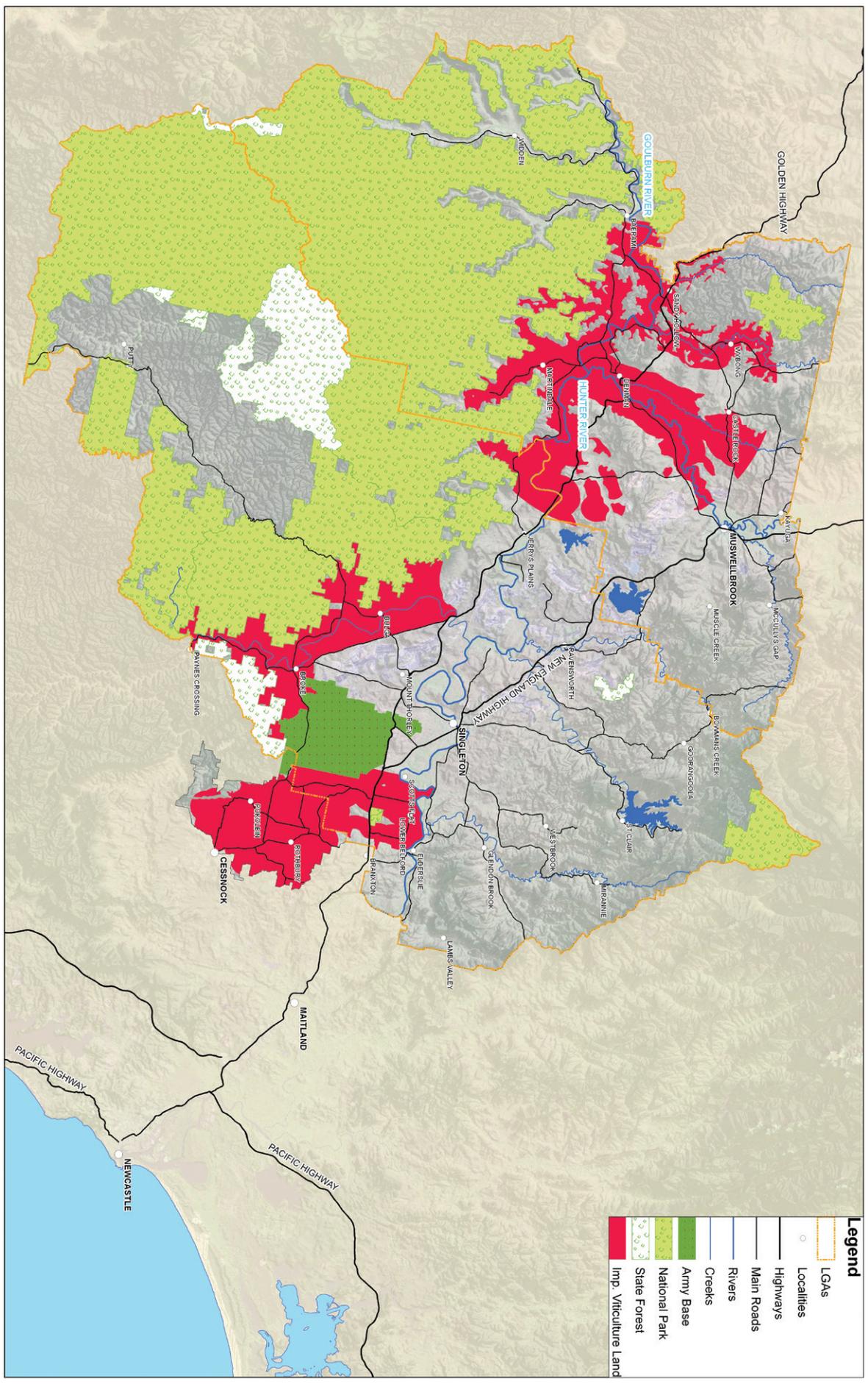
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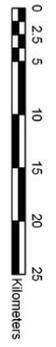
Figure 6 Land Important for Viticulture in the Singleton-Muswellbrook LGAs



Singleton - Muswellbrook Pilot Area Important Viticultural Land



Department of Primary Industries



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