

SUBMISSION TO SESSIONAL COMMITTEE ON ENVIRONMENT
AND SUSTAINABLE DEVELOPMENT

from

**Department of Regional Development,
Primary Industry Fisheries and Resources**

24 November 2008

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Extent of Drought

Barkly Region

Many properties in the Barkly/Tennant Creek Region experienced zero pasture growth during the 2007-08 summer rainfall season.

Central Australian Region

The south-eastern Alice Springs Region has not received significant rainfall or pasture growth since the 2001-02 summer rainfall season.

Drought Declarations

36 properties in the Central Australian (22) and Barkly (14) Regions are currently declared in drought under the NT Drought Assistance Arrangements. These arrangements require producers to apply for declaration, so reflect minimum numbers of drought-affected properties.

In the order of 70 properties fall within the boundary for the Australian/Northern Territory Government's Exceptional Circumstances (drought) declaration which covers lands to the south and east of Alice Springs to the South Australian and Queensland borders.

Impacts on the Pastoral Industry

Production systems in the Central Australian Region are generally tailored to deal with unreliable rainfall and extreme climate variability, and although not easy in practice, are usually equipped to cope with the occasional year that is void of any significant growth events. However, the accumulation of up to six consecutive years without a significant pasture growth event has resulted in the destocking of core breeder herds. This will have a long-term impact on financial performance.

When a recovery period begins (in terms of climate improvements) the combination of reduced breeder numbers, high transport costs and Australian-wide competition for breeder cattle will limit producer capacity to re-establish herds. The return of breeder cattle from agistment will also be affected by the rising cost of fuel and transport.

Discussions with pastoral producers, livestock agents and extension staff indicate that numbers of stock in the Central Australian Region have reduced by at least 50 per cent from 300 000 to 150 000 during the current drought. While the southern part of the region has experienced a lengthy drought period, not all parts of the Central Australian Region have been affected for as long. This year the entire region and the Barkly/Tennant Creek Region have experienced low rainfall, in previous years, some parts of the Central Australian Region north of Alice Springs experienced some average and good seasons.

Recent rains in the Central Australian Region have provided some temporary relief but good follow-up rains are required and for at least a couple of seasons to enable germination of seed stocks and to sustain the pasture growth required for the region to begin to recover.

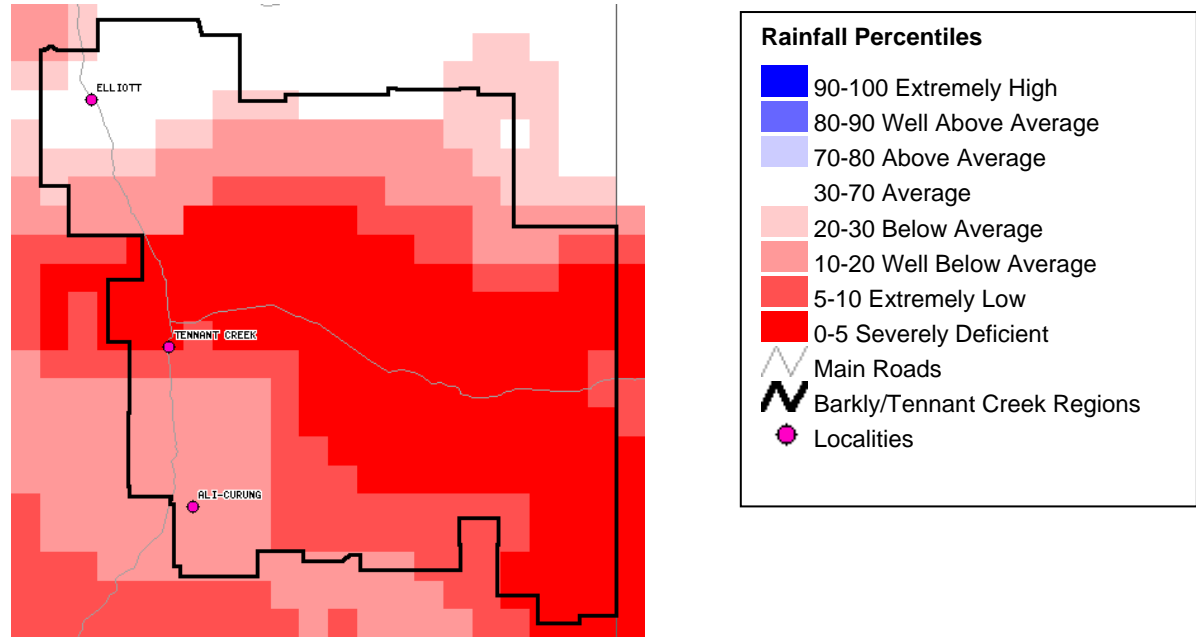
Similarly, for the Barkly/Tennant Creek Region, in the 2008 calendar year to November, approximately 300 000 cattle have been moved into Queensland as a result of the dry conditions. As the Barkly/Tennant Creek area receives more reliable rainfall than lands further south, in some respects a lack of rainfall during the growing season has a more detrimental impact on the industry than a comparable low rainfall period in the Central Region – refer Figure 6 in Attachment.

Attached are Rainfall and Pasture Growth Data for the Central Australian and Barkly/Tennant Creek Regions.

Barkly/Tennant Creek Region

Rainfall

Over the past 12 months (November 2007 to October 2008) the majority of the Barkly/Tennant Creek Region has experienced below average rainfall (below the driest 30th percentile class), and approximately 50% of which also fell into the Severely Deficient category (below the driest 5th percentile class or a rainfall total that is expected less than once every 20 years) (Figure 1).

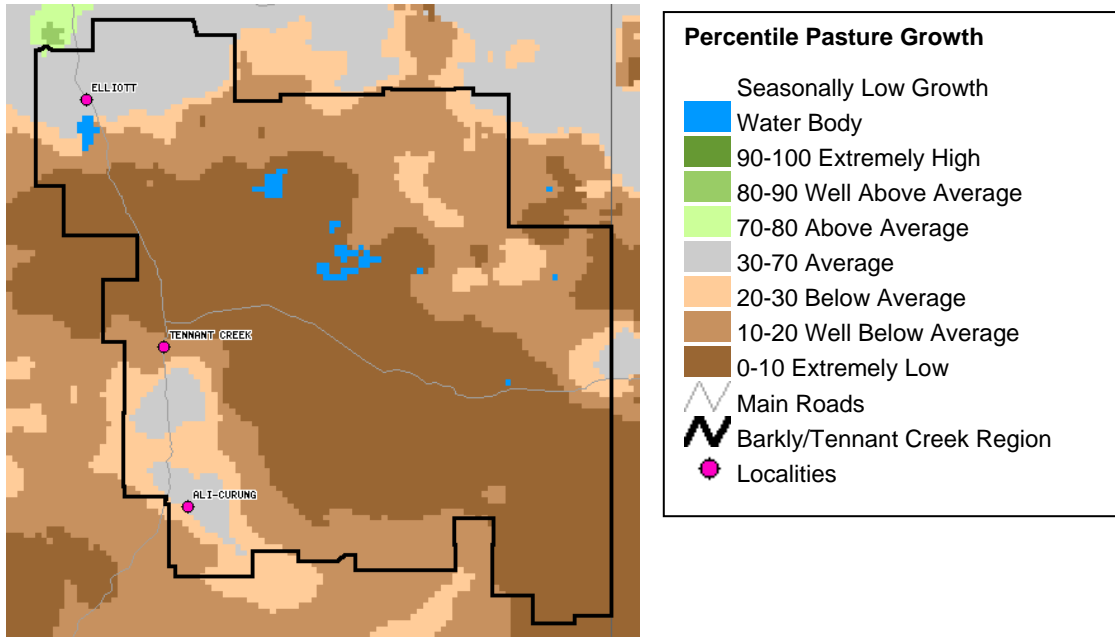


(Source: BoM via the NAMS website)

Figure 1: Barkly/Tennant Creek Region's past 12-month rainfall percentiles (November 2007 to October 2008)

Pasture Growth

AussieGRASS modelled pasture growth over the past 12 months (November 2007 to October 2008) also indicates the majority of the Barkly/Tennant Creek Region has experienced below average (below the 30th percentile class) to well below average growth (below the 20th percentile class) pasture growth, and again approximately 50% of which also fell in the Extremely Low category (below the driest 10th percentile class or growth expected less than once every 10 years) (Figure 2).



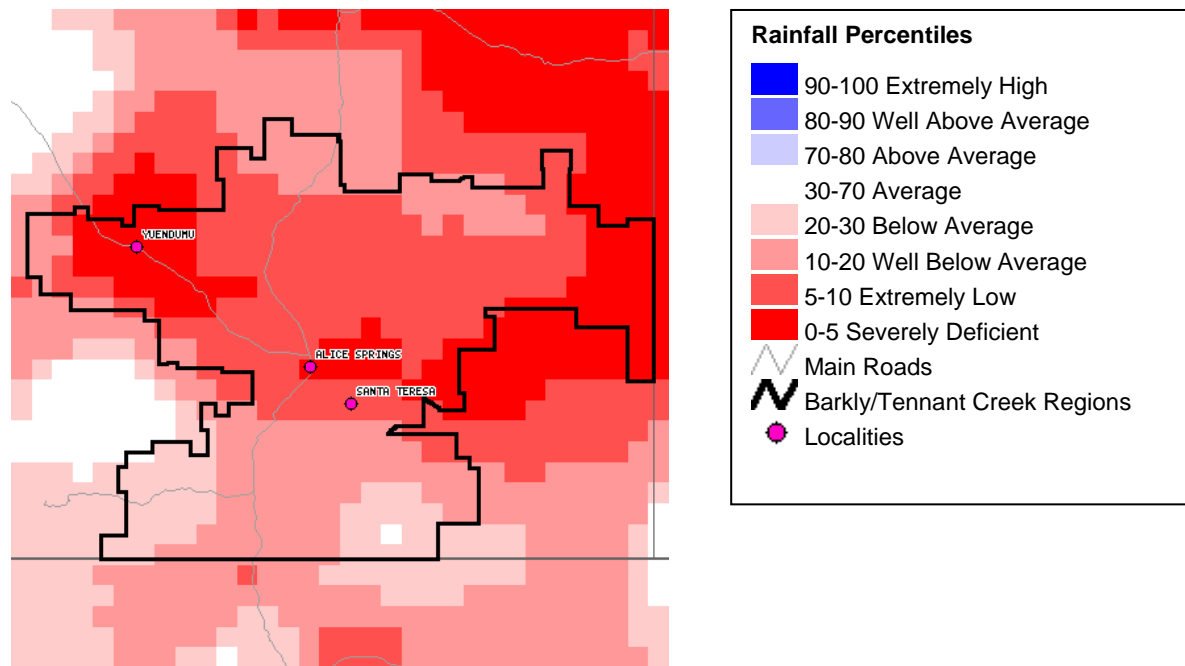
(Source: AussieGRASS via the NAMS website)

Figure 2: Barkly/Tennant Creek Region's past 12-month modelled pasture growth percentiles (November 2007 to October 2008)

Central Australian Region

Rainfall

Over the past 12-months (November 2007 to October 2008) the entire Alice Springs Pastoral District has experienced below average rainfall (below the driest 30th percentile class), and approximately 50% of which also fell into the Extremely Low category (below the driest 10th percentile class or a rainfall total that is expected less than once every 10 years) (Figure 3). In addition, rainfall recorded for Alice Springs and in areas to the north-west and north-east of the district, was classed as Severely Deficient (below the driest 5th percentile class or a rainfall total that is expected less than once every 20 years).

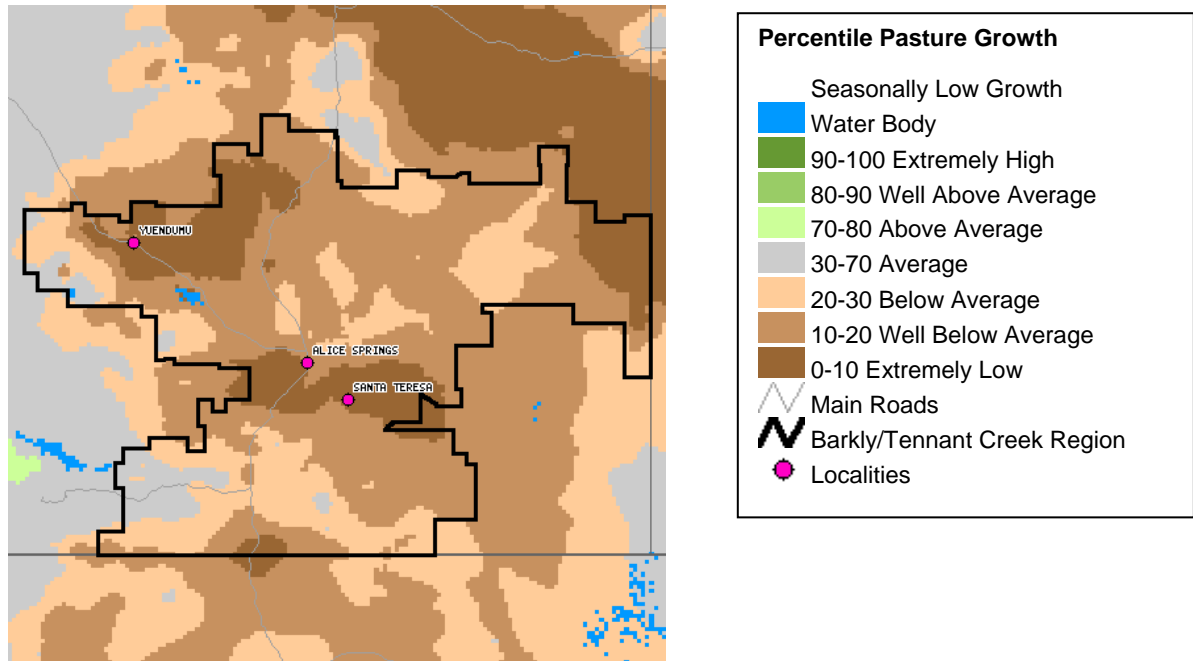


(Source: BoM via the NAMS website)

Figure 3: Central Australian Region's past 12 month rainfall percentiles (November 2007 to October 2008)

Pasture Growth

AussieGRASS modelled pasture growth over the past 12 months (November 2007 to October 2008) also indicates the majority of the Central Australian Region has experienced below average (below the 30th percentile class) pasture growth, and again approximately 50% of the region also fell into the Well Below Average category, while areas around Alice Springs, Yuendumu and far eastern Plenty fell into the Extremely low growth class (below the driest 10th percentile class or growth expected less than once every 10 years) (Figure 4).

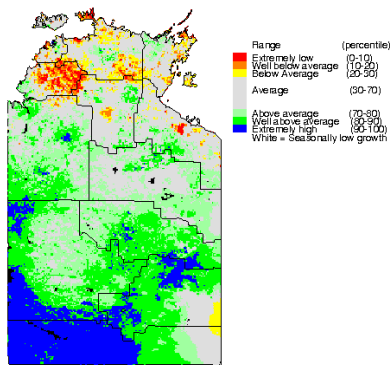


(Source: AussieGRASS via the NAMS website)

Figure 4: Central Australian Region's past 12-month modelled pasture growth percentiles (November 2007 to October 2008)

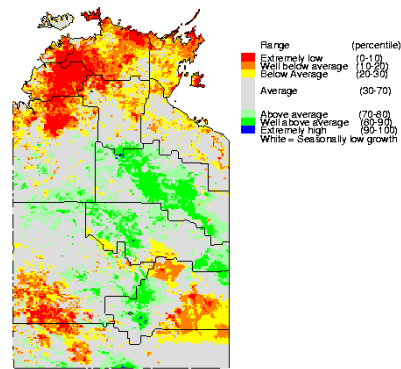
For the south eastern Alice Springs Region, significant rainfall has not been experienced since the 2001-02 growing season (Figure 5).

Pasture Growth Relative to Historical Records from 1957
July 2001 to June 2002



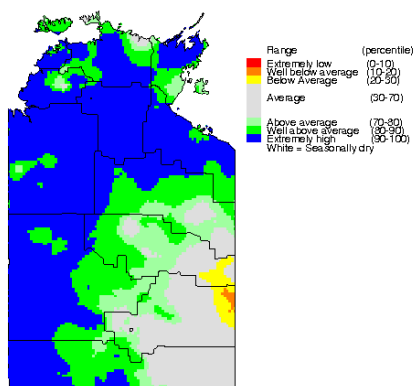
www.LongPaddock.qld.gov.au

Pasture Growth Relative to Historical Records from 1957
July 2002 to June 2003



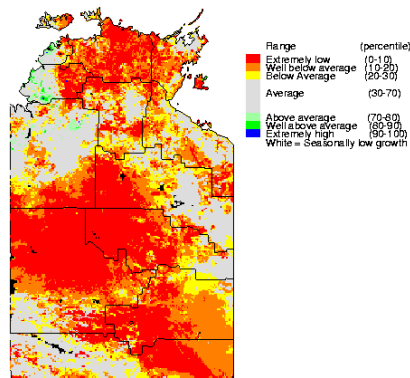
www.LongPaddock.qld.gov.au

Rainfall Relative to Historical Records
July 2003 to June 2004



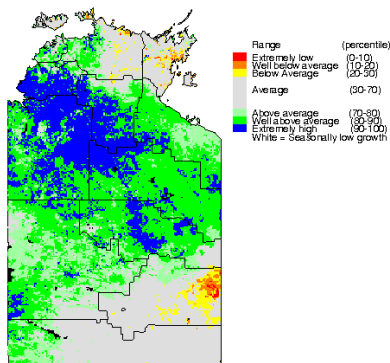
www.LongPaddock.qld.gov.au

Pasture Growth Relative to Historical Records from 1957
July 2004 to June 2005



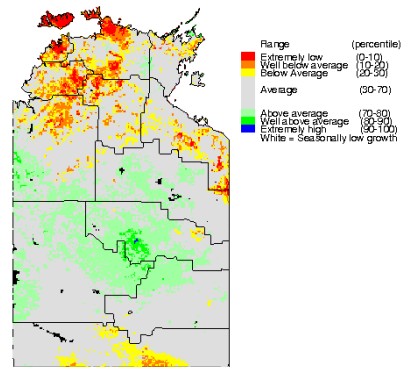
www.LongPaddock.qld.gov.au

Pasture Growth Relative to Historical Records from 1957
July 2005 to June 2006



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Pasture Growth Relative to Historical Records from 1957
July 2006 to June 2007



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Pasture Growth Relative to Historical Records from 1957
July 2007 to June 2008

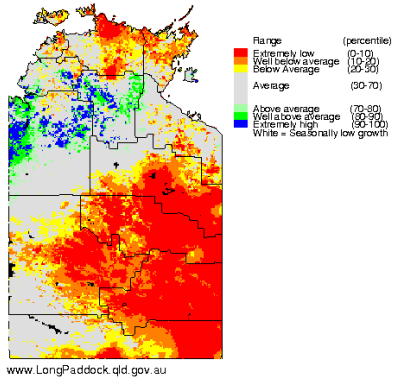
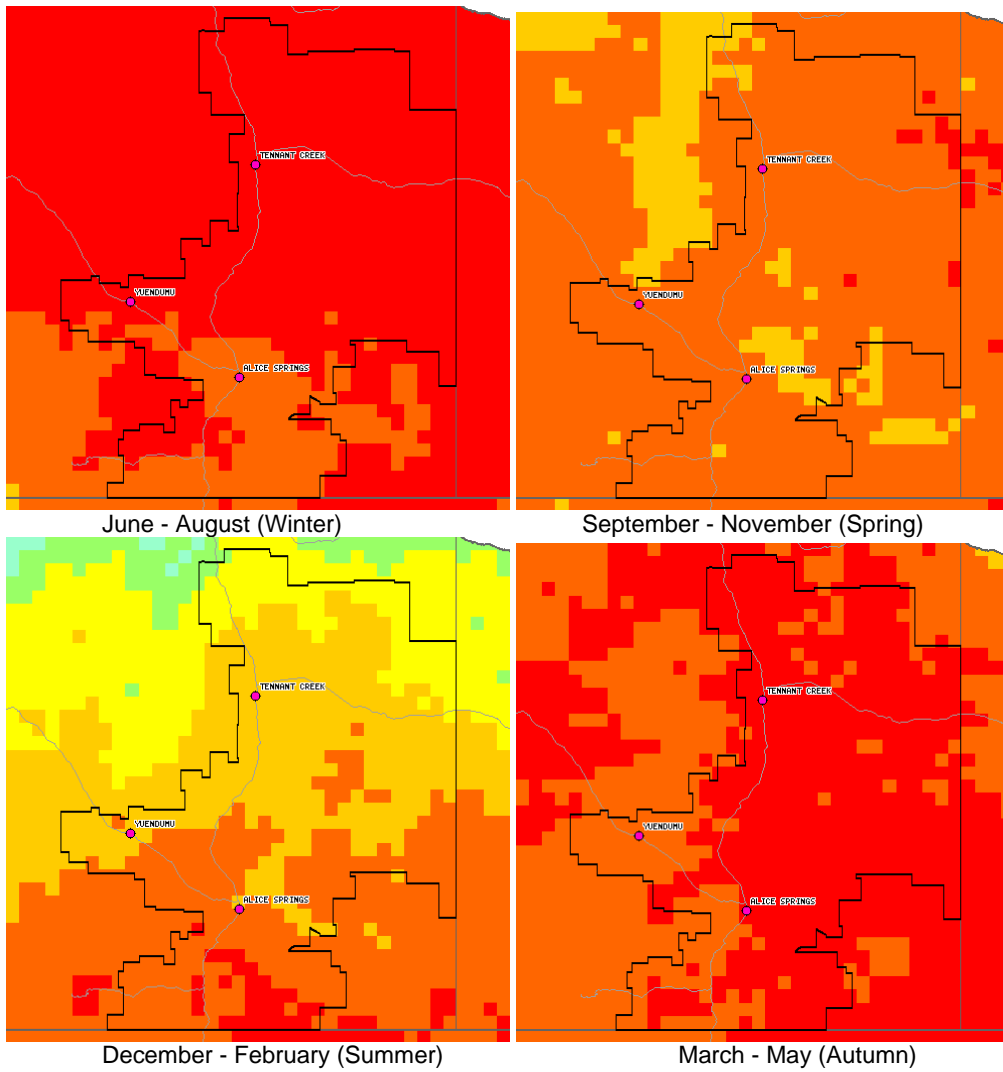


Figure 5: 12-month financial year modelled pasture growth, indicating a lack of any significant growth event for the south eastern Alice Springs Region since the 2001-02 season.



(Source: BoM via the NAMS web site)

Figure 6: Rainfall reliability for the Central Australian and Barkly/Tennant Creek Regions; showing increased summer rainfall reliability over the Barkly/Tennant Creek Region, and hence increased impact upon a production system of insignificant rainfall over a 12-month period.

BoM is the Bureau of Meteorology
 NAMS is the National Agricultural Monitoring System

Environmental Overview

Production Issues

Agricultural production in the Northern Territory is limited by a number of factors. Growth can only be sustained on combinations of appropriate land and water resources in proximity to required infrastructure, including transport, to deliver products to market. Soils and land systems suitable for agricultural production are fragmented. This is a major limiting factor for the future expansion of agricultural production in the Territory.

Resource Base

The resource base in the Northern Territory is largely intact. Less than 1 per cent of the Territory is cleared. Other uncleared land is used for extensive grazing, such as pastoral properties. Most rivers have been assessed as having little current development.

Top End

The Top End of the Territory has a consistent rainfall pattern in the sense that it receives rainfall every Wet Season. This factor alone means that comparisons with southern river systems are improper. The majority of surface water flow in Top End rivers occurs during the Wet. Some rivers are perennial, others stop flowing in the Dry season and others have Dry season flows reliant on groundwater discharge.

Similar to other rainfall systems there is variability in the amount of rain which will fall, including within the bimodal Wet and Dry rainfall cycles. Early Wet Season rain is characterised by patchy thunderstorm activity, with the later formation of the monsoonal system bringing more consistency in rainfall. Longer-term trends in rainfall are correlated with the relevant oscillation indexes.

Daily temperatures and day length also cycle annually, with higher temperatures in the early and late Dry Season and longest day length at the summer solstice in December. All these factors affect the crops which can be grown. Towards the end of the Dry Season, the combination of low soil moisture and high daily temperatures limits production and has the effect of breaking growing cycles.

An often quoted figure is that around 70 per cent of Australia's fresh water resources are held in tropical rivers (referred to as surface water) and groundwater systems, no doubt contributing to the increasing interest in the future use of this resource. However, the availability of this water is a critical issue in terms of its potential use for agricultural production. As well as seasonal availability, resource availability is influenced by the physical characteristics of the water resources, the availability of storage capacity and regulatory controls. Northern Territory water allocation policy dictates that over 80 per cent of available water is allocated to the maintenance of water-dependent ecosystems.

Isolated patches of soils in the Top End have favourable physical characteristics for more intensive development. Almost all soils are nutritionally poor, requiring fertiliser input to be productive. Growers have developed sophisticated, lower cost tools to minimise fertiliser use such as fertigation and precision agriculture. As high intensity rainfall poses a greater erosion risk than in southern States, soil structure must be protected.

Central Australia

Central Australia relies on summer rainfall from the breakdown of Wet Season tropical rain-bearing systems or the northward extension of southern systems. Other than areas such as Ti Tree and other scattered fragments of good soil and groundwater resources in combination, agricultural production in the Centre is based on cattle in extensive grazing systems. These systems are not unsophisticated, they require skilled management and significant input costs. There have been considerable changes in management practices which have enabled sustainable increases in stocking capacity and turn-off.

Due to the high evaporation rates in the semi-arid and arid centre, water resources are groundwater resources and production is reliant on finding water of a suitable quality and quantity.

Resource Use

Generally speaking, irrigated production systems depend on ground water resources, extracted through bores, to sustain their water requirements. Similarly, surface water availability for irrigation is limited; there are no major public dams for this purpose, unlike in the southern States and a few minor dams on private land. Surface water systems are therefore only used for smaller irrigation projects such as tree crop and vegetable production as there is little allocated for this purpose.

For water allocation planning and therefore water licensing to be undertaken with confidence, there must be sufficient base information about the characteristics of the water resources and the natural systems dependent on them. Two water allocation plans for the Northern Territory have been finalised for the Ti Tree Region - the Ti Tree and Alice Springs Water Resource Strategies. A water allocation plan for the Tindal Limestone Aquifer in Katherine is nearing completion. Water allocation plans are developed by the Department of Natural Resources, Environment, the Arts and Sport, for priority areas as they come under development and/or extraction pressure.

Climate Change

It is clear from available climate change modelling and forecasting that there will be an increase in dry and hotter conditions in the Territory in terms of both area covered and frequency. Rainfall is forecast to drop in the Centre, but to remain around the same, on average, in the Top End. Drought will occur more often in the Centre. Temperatures will increase by at least one degree Celsius from 2030. This means that semi-arid and arid zone agricultural production systems will need to adapt to deal with the impacts of soil moisture deficit, both seasonal and associated with longer dry periods and higher temperatures. For central Australian producers, this will mean more refined drought preparedness strategies.

The Australian Bureau of Agricultural and Resource Economics (ABARE) has predicted that climate change will impact Australia in terms of its declining productivity and output as well as having global impacts on other countries and their production. Taken together, the relative declines mean that Australia will be one of the most adversely affected regions in terms of its production and exports. ABARE concluded that the additional pressures emerging from climate change point to the need to continue technological improvements to reduce potential impacts. Structural adjustment must also be encouraged, to enable marginal enterprises to leave their respective industries.

Other work ABARE has been commissioned to undertake on the vulnerabilities of different production regions to climate change scenarios, indicates that broader scale (northern) production systems will be less susceptible than annual cropping (southern) systems. All of these general conclusions are relevant to the Territory.

Total Northern Territory Cattle

| | |
|------------------|---|
| Production Value | (2007-08 forecast) ~ \$238 million |
| Animals Sold | ~ 550 000 |
| Markets | ~ 270 000 live exports; remainder interstate |
| Potential | Demand is likely to outstrip supply and there is a danger of losing markets to interstate and international competitors in this scenario. |

Top End

| | |
|--------------|---|
| Value | 10% of Territory Value |
| Animals sold | ~ 50 000 head pa |
| Market | Live export |
| Potential | Significant potential to double output through intensification. |

Katherine

| | |
|--------------|--|
| Value | 40% of Territory Value |
| Animals sold | ~250 000 head pa |
| Market | Predominantly Live Export |
| Potential | Potential to increase output by 30% due to intensification and productivity gains. |

Barkly

| | |
|--------------|--|
| Value | 30% of Territory Value |
| Animals sold | ~ 180 000 head pa |
| Market | Combination of interstate feedlot market for meat export, and live export. |
| Potential | Potential to increase output by 30% due to intensification and productivity gains. |

Central Australia

| | |
|--------------|---|
| Value | 20% of Territory Value |
| Animals sold | ~ 70 000 head pa |
| Market | Mostly Domestic Slaughter Market |
| Potential | Potential to increase output by ~15% through productivity gains |

Pastoralism into the future:

A range of considerations will dictate the potential development of the pastoral industry into the future. These include:

- Industry investment which will be partly influenced by:
 - Political and corporate timeframes that may inhibit long-term investment in capacity building at strategic, management and operational business levels.
 - Other financial investment considerations such as land values and finance.
- Markets – which will determine economic return for product.
- Public Accountability – for use of natural resources, and responsible industry practice. (Proven sustainable development practices, and accountable animal welfare practice).
- Animal and Management productivity gains (efficiency gains in animal production and enterprise management).

The last two points will be influenced by:

- Policy - Tenure and legislation to allow intensification and development.
- Research – provision of scientific evidence for increased development.
- Education - extension to adopt change in management practices through proven practices that address both economic and environmental gain.

Indigenous Pastoral Industry Overview

Figures

| | |
|------------------|---|
| Production Value | ~ \$10 million |
| Total Herd | ~ 80 000 |
| Animals Sold | ~ 24 000 |
| Markets | ~ predominantly live exports, some interstate, and some local supply. |
| Potential | Significant potential to develop current un(der) utilised Aboriginal Land Trust (ALT) land where that development is in line with the aspirations of Traditional Owners. To realise that potential significant hurdles will need to be addressed. These include: <ul style="list-style-type: none">• Tenure and related legislation to allow economic development on ALT land.• Political and Corporate time frames inhibiting long-term investment in capacity building at strategic, management and operational business levels.• Significant Indigenous political and other issues to be addressed. |

The Indigenous Pastoral Program

Past:

- The Indigenous Pastoral Program (IPP) is an agreement between several agencies established to increase Indigenous participation within the Northern Territory pastoral industry.
- It was initiated in 2002, for three years, with a recent renewal of the governing Memorandum of Understanding expiring on 30 June 2011.
- The program is implemented through multi agency arrangements and includes staff placed in the Central and Northern Land Councils, Northern Territory Cattlemen's Association (NTCA), and significant funding support from the Indigenous Land Corporation (ILC), and Commonwealth Department of Education, Employment and Workplace Relations.
- The Department of Regional Development, Primary Industry, Fisheries and Resources administer the program and contribute a significant staffing commitment of eight officers.
- The program has two prime goals
 - Firstly; an increase of cattle numbers on Aboriginal Freehold Land, and
 - Secondly, increasing participation by Aboriginal people in the Pastoral Industry.

Present:

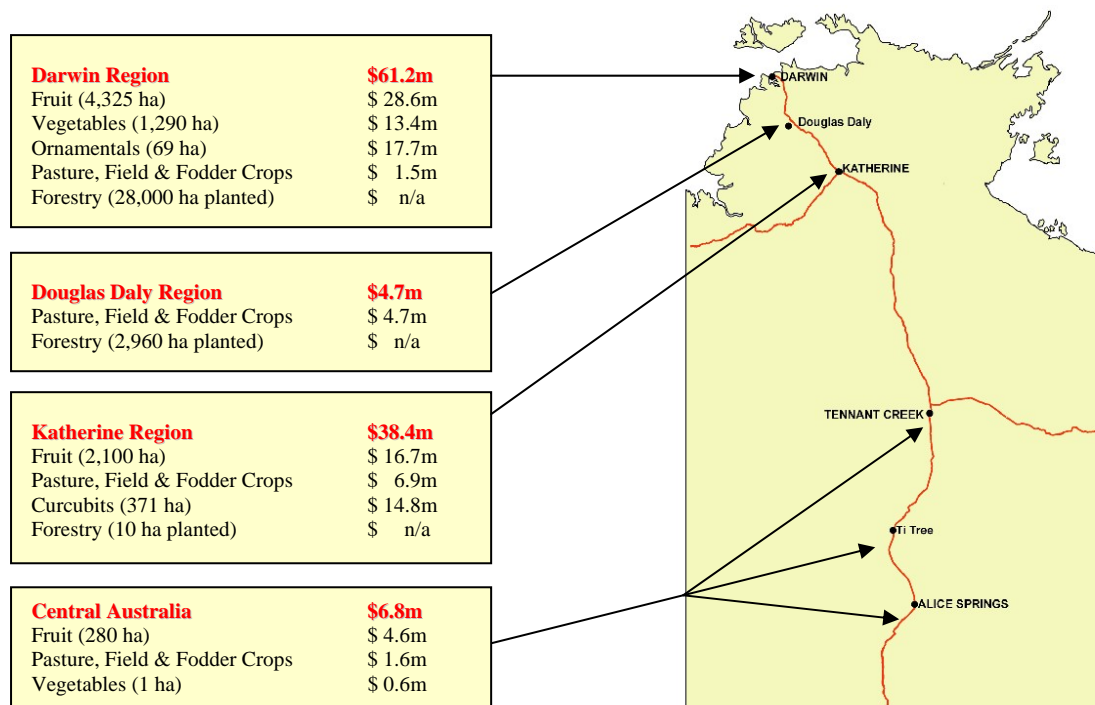
- The IPP currently works with 18 high priority properties, 6 are run by owner management, and 12 are leased to outside pastoralists.
- This is a land area of over 53 000 square kilometres.
- The program has realised an increase in cattle numbers of over 53 000 head with a remaining capacity for increase in cattle numbers of 61 500 head.
- The program provides a number of support mechanisms to build the long-term capacity of Indigenous Pastoral Enterprises.
- This includes:
 - Pastoral extension support including providing access to relevant industry information to Indigenous cattlemen through the provision of a number of workshops held each year specifically for Indigenous audiences.
 - Enterprise skills development provided by Indigenous Business Development officers who assist with business planning management; and
 - Assisting with the development of Natural Resource Management benchmarks based on regional criteria.

Future:

- The IPP is a solid example of government working with Land Councils, the ILC and other key stakeholders – such as the NTCA.
- Delivery of the program is expensive and personality based but it is achieving results.
- It is however a fragile process and the future will require continual focus on ensuring the work done to date does not come undone by trying to spread the program too thin.
- The program therefore will need to continue to concentrate on building up the capacity of people within the current list of priority properties so that they results achieved to date remain sustainable.

CROPS, FORESTRY & HORTICULTURE - PAST, PRESENT & FUTURE

NT PLANT INDUSTRIES PROFILE - 2007



CROPS, FORESTRY & HORTICULTURE - SEASONALITY & HARVEST ISSUES

- The majority of horticultural production and harvesting is in the Dry Season, from May to November. Vegetable crops, melons and bananas are harvested right through this period. Bananas are also harvested through the Wet, along with some tropical fruit such as rambutan.
- The Top End has the advantage of being able to produce “summer” vegetables and some fruit, such as banana, when southern States cannot (i.e.: during Autumn, Winter and Spring).
- Mangoes, melons and bananas are the biggest users of horticultural labour in the Top End.
- September, October and November are the busiest months for harvesting in the Top End, as mangoes start to ripen while melons, vegetables, bananas and some tropical fruits are still being harvested.
- The Darwin mango harvest is slightly earlier than the Katherine harvest. This spreads the demand for labour and transport across the two centres, but sometimes there is overlap.
- Shortages of labour and transport have both been known to occur at the height of the mango season.
- Hay, fodder and grain production occur over the Wet Season in the Top End, and mechanical harvest occurs at the onset of the Dry in April/May. Irrigated peanut and grain production also occurs at Katherine, with mechanical harvest at the end of the Dry in October.
- Horticultural production in the Arid Zone is based on Table Grapes. They are harvested from November to January.

DRDPIFR STRATEGIES TO FACILITATE SUSTAINABLE PLANT INDUSTRY DEVELOPMENT IN THE NT

- Policy development for sustainable agriculture, e.g. in areas of land clearing, water allocation and management, forestry.
- Productivity-enhancing research and extension for sustainable plant industries, including for crop rotations with lower inputs, and for 'water use efficient' and 'best practice farming' systems.
- Research and extension to facilitate adaptation of plant industries to climate change.
- Research and extension for efficient supply chains management.

WHY FUTURE PLANT INDUSTRIES ARE IMPORTANT FOR THE NT

- *The global food security issue is elevating the importance of agriculture, including plant industries.* With rising global food demand and farm commodity prices, the private sector is increasingly viewing agriculture as offering unprecedented business and investment opportunities.¹ Worldwide, public sectors are turning policy attention to food security, and the pressing need to reverse the decline in agricultural productivity growth, a decline that has taken place in recent decades. Lower productivity translates into higher costs and lower profits for farmers (estimated in the billions globally), and more stress on limited land and water. A key cause of slowed agricultural productivity growth has been the public investment decline in agricultural research, development and extension (RD&E), a point made by several internationally renowned agricultural economists.
- *Agriculture's importance is central to regional development.* The primary industries sector is a key sector of the regional economy, and provides positive flow-on impacts to other sectors in regional and rural areas. It is often a key employer in regional and rural Australia. When agriculture suffers, rural service provision suffers, and populations decline. Input suppliers, agricultural traders, stock agents, banks, schools, shops, infrastructure, and others, may all be affected. Quite simply, an interest in regional development, necessitates interest in primary industries.
- *Primary industries are central to how we care for country.* Farmers and pastoralists are central to the management of the natural resources on which agriculture depends. How farmers and pastoralists manage land determines its health, and its long-term productive capacity to sustain people and livelihoods. In sustaining people and livelihoods, primary industries have potential to contribute to Indigenous economic and social development in rural and remote areas.

¹ Ref: *Why the Smart Money is Moving Into Agribusiness*, BRW, June 19-25, 2008.

FUTURE DEVELOPMENT OF NT PLANT INDUSTRIES

| Positives | Challenges | Drivers |
|--|---|--|
| <ul style="list-style-type: none"> • Growing rapidly – doubled in last 10 years • Regionally based – critical for regional economies • Provides semi-skilled jobs in the regions • Under-developed – significant expansion potential | <ul style="list-style-type: none"> • Access to labour - critical constraint • Input costs – fuel and fertiliser • Freight costs and availability • Demonstrating sustainability • Access to land and water and community approval • Research and development • Biosecurity threats • Access to markets – pests and diseases • Regulation – too hard for smaller producers • Indigenous engagement – critical opportunity • Climate change impacts – positive and negative • Investment attraction – PCA, Forestry • Peri-urban encroachment • Ground water limiting | <ul style="list-style-type: none"> • Katherine and Douglas Daly land use change • Mangoes already planted • Water use efficiency • Climate change opportunities north • Mechanisation • New varieties extend supply • Capital from southern regions |

SUMMARY OF INDIGENOUS PLANT INDUSTRY PRODUCTION 2008

OVERVIEW

- There are few commercial-scale crops, forestry and horticultural enterprises on Indigenous owned land in the Northern Territory, and indeed on Indigenous land elsewhere. There are no commercial-scale Indigenous-owned and Indigenous-managed enterprises in this sector (see constraints, below).
- In remote communities, there are numerous small-scale community or market gardens producing fruit and vegetables as input replacement. As these are “on again-off again” activities, there is no available data on the current situation. The Indigenous sector of the crops, forestry and horticulture industry is small and no data is available for value or volumes.
- Two major commercial enterprises are outlined below.

MAJOR COMMERCIAL OPERATIONS

Horticulture

- Desert Springs Melon Farm at Ali-Curung on the Warrabri Aboriginal Land Trust lands is the first commercial horticulture enterprise to be developed on Aboriginal land through Centrefarm. This is supported by the Central Land Council. A 1000 hectare (ha) property is leased to PMG Agriculture on a 90-year lease to grow watermelons. The first melons from the initial 30 ha planting were harvested in May 2008. The enterprise aims to develop 400 ha of watermelon over 5 years. Value and volume figures are not available.

Forestry

- Great Southern Plantations (GSP) operates forestry on Melville Island in the Tiwi Islands where 30 000 ha are under plantation. GSP has employed 11 Tiwi forestry workers, 12 apprentices, and 8 full-time trainee rangers.

Note: Both of these operations are not Aboriginal-owned enterprises but are commercial enterprises undertaken on Indigenous-owned land.

OPPORTUNITIES

- For the Centrefarm-type model to provide opportunity for development on Indigenous-owned land in the Northern regions, would require support from the Northern Land Council which, to date, has been reluctant due to the perception of this constituting an inappropriate use of land.
- Potential exists for enterprises that link conservation and natural resource management with enterprise development. Numerous papers and publications identify that Aboriginal people have shown greater interest in, and are more likely to establish, these types of enterprises than commercial horticulture production.

CONSTRAINTS

Social, Societal and Cultural Issues

- Lack of expertise and capacity to develop enterprises that do not require outside management.
- Absence of horticultural traditions resembling commercial practice.
- The Aboriginal economy is characterised as a service/gift economy, i.e. it is better to spend money and gain social capital than keep it, or invest it, as economic capital.
- Cash to support the Aboriginal economy is available from more reliable and less vulnerable sources.
- Perception by Indigenous people that forestry and farming operations are not culturally appropriate uses of their natural resources. Land clearing etc.
- Disputes over rights to land.
- Aboriginal people are often absent from country, and unable to maintain high-input horticultural ventures for extended periods.
- Crops, forestry and horticulture development may not offer the best economic gain for the use of Indigenous land.

Land Access, Use and Regional Issues

- Land use agreements take long to develop and prospective commercial developers do not work in these timeframes.
- Traditional Ownership of land restricts development. Indigenous people who are not Traditional Owners (TOs), and who wish to develop enterprises, require support of TOs and may have to pay compensation for land use or development.
- Remoteness from markets for perishable produce.
- Much Indigenous-owned land is marginal for horticulture production.
- Remoteness from supporting/allied industries.
- Lack of Infrastructure poses constraints, e.g. reliable power supply, all-weather roads.

Political/Legislative Issues

- Legislative requirements that Aboriginal people act collectively, rather than individually, to develop business on Aboriginal land.
- In the case of wild harvest of plant products, Australian and Territory legislation restricts the use of wildlife by Indigenous people for commercial purposes without onerous resource management plans, e.g. via the *Territory Parks and Wildlife Conservation Act 2000*, the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*, and the *Biological Resources Bill 2006*.
- Welfare, lack of incentive to work or develop enterprises.

Aquaculture Industry Overview

NT Aquaculture Industry

Production Value 2006-07 - \$24.6 million

| Industry Sector | (\$million) | Production |
|--------------------|-------------|----------------------------|
| Pearls | 18.0 | 112.3 Kan (112,300 momme)* |
| Barramundi | 3.2 | 378 tonnes |
| Prawns | 2.26 | 140 tonnes |
| Algae/ Aquarium | 1.1 | N/A |

**Kan and momme are old Japanese units of weight. (1000 momme in a Kan) A momme is equal to 3.75 grams. A 13 mm round pearl weighs about one momme.*

Industry value is expected to remain much the same for next 1-2 years.

Status 2006-07

The NT aquaculture industry contracted by just over 5% in total value in 2006-07 compared to 2005-06. Total industry value reduced to \$24.6 million, down from \$26.0 million. The drop in value was mainly due to lower production from the barramundi farming sector.

Over the past twelve months increasing competition from cheap imported seafood from Asia has placed pressure on the farm gate price for barramundi which has resulted in whole fish prices falling from around \$9.00 to \$7.00 per kilogram. This is on the back of increasing production costs.

A pilot hatchery for Trepang (sea cucumber), continued to meet its research objectives and progress towards the goal of establishment of a sea cucumber farming industry.

Two Indigenous projects continued their investigation of mud crab farming.

Industry Outlook

The NT Aquaculture Industry is going through a period of consolidation. After the closure of the Marine Harvest barramundi sea cage farm at Port Hurd, Bathurst Island (for reasons unrelated to the economics and viability of barramundi farming) the remaining three pond-based farms have continued to slowly expand production and to refine production techniques.

In order to ensure the viability of the local barramundi industry the NT Government, through the Darwin Aquaculture Centre is working actively with the farmers to improve production efficiency.

It is unlikely that there will be extra major investment in the near future due to global economic issues. The infrastructure from the sea cage farm that was closed by Marine Harvest remains available to potential investors to use to restart the farm.

The falling value of the Australian dollar should assist the pearling industry, although the current world economic climate is likely to have a significant impact.

Sea cucumber farming is a bright prospect for the NT aquaculture industry over the next one to three years. The technology for hatchery production that has been developed by a private company in Darwin (at the Darwin Aquaculture Centre) has resulted in the mass production of juvenile sea cucumbers. Work is underway in relation to possible on-shore farming and sea ranching trials which may represent a significant opportunity for industry development in remote Indigenous communities.

The NT Government remains committed to supporting the development of the aquaculture industry. Support is achieved by the commercial production and sale of seedstock from the Darwin Aquaculture Centre as well as an active research program investigating and developing management strategies for aquatic animal health, improving on-farm production efficiency and the development of policies to protect and enhance the industry.

Through its Indigenous liaison program the Government is working with remote communities to assist them become involved in the aquaculture and wildstock fishing industries. The Government is also using the Darwin Aquaculture Centre as an 'incubator' to assist private companies conduct their own research and development programs.