



ALICE SPRINGS

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2010 NT Pastoral Industry Survey shows ongoing development and intensification of management

Trisha Cowley, Pastoral Production Officer, Katherine

The 2010 NT Pastoral Industry Survey report is now available – online and in hard copy. It follows on from the 2004 pastoral industry survey, which was widely used as a planning and benchmarking tool. The survey seeks to document cattle and land management practices in order to monitor industry changes and identify industry needs. Between March 2011 and February 2012, 127 cattle producers were interviewed across the Territory, generally over several cups of tea! While the initial aim was to finish surveying by mid-2011, the suspension of live cattle exports led to the suspension of surveying! DPIF staff didn't start survey interviews again until September 2011. However, the focus remained on capturing practices of the 2010 calendar year. Questions regarding development plans and challenges and issues facing cattle producers were undoubtedly affected by the export suspension, as well as the devastating bushfires experienced in the southern districts during 2011.

What's in the report? You will find the percentage of producers carrying out different cattle and land management practices, as well percentage of cattle under different management practices. Some of the topics covered include:

- Infrastructure development
- Turnoff and market
- Cattle management practices
- Animal health
- Grazing land management practices
- Weeds, pest animals
- Improved pastures and hay
- Producer attitudes about the challenges of managing pastoral businesses

The report breaks the results down into the regions of the NT (see Table 1). Separate reports are due to be released soon for each region. The following is a snapshot of the report. (continued on [Page 3](#))

Dear Reader

During the past few weeks the Arid Zone Research Institute (AZRI) had the opportunity to showcase research being done to a wide range of visitors.

In September 2013, Tourism NT launched the NT Business Events Ambassador Program and 16 high profile professionals were appointed as Ambassadors to assist in securing business events for the Territory.

During a recent visit aimed to increase the understanding of Alice Springs as a business events destination and to showcase innovation these ambassadors visited AZRI. Effective collaboration between departments, as well as with other institutions and local groups was demonstrated through the nature of the presentations.



The ambassadors and presenters tasting dates

Sally Leigo presented the Precision Pastoral Management Tools Project, collaboration between the Cooperative Research Centre for Remote Economic Participation (CRC-REP) and Northern Territory Department of Primary Industry and Fisheries, as well as other interstate partners.

Chris Materne presented production data collected over three years from a grazing trial at Old Man. Plains Research Station. This trial will confirm whether the averaged steer growth rate of 0.5 kg per day over the past 3 years can be achieved consistently, regardless of season, by applying recommended grazing practices. Eight producers will participate in this exciting trial through the quality graze steer challenge.

Sarah Fairhead, Director Southern Region Department of Land Resource Management presented information in relation to Pastoral Diversification amendments to the NT *Pastoral Land Act* and the Water Allocation Plan for central Australia.

Vivek Bhat discussed the potential for date production in central Australia. AZRI's wealthy date germplasm is built on using imported clonal materials of over 50 different varieties. Premium dates like *Medjool* and the fresh dates like *Barhee* have performed very well under local conditions providing great potential for expanding the date industry.

Before the visitors were shown the weaner calves and the date plantations at AZRI a presentation by Jane Ulrik, manager of the Akeyulerrre project, explained how a group of indigenous ladies work in partnership with AZRI to strengthen a bush medicine and products social enterprise. More details about this innovating project can be found on [page 5](#).

During late February the centre was also visited by a Chinese delegation interested in the Northern Territory Beef production systems and future investment opportunities. More about this visit on [page 6](#).

But it all comes down to assessing and managing the available pastures by making use of the best available information together with your own historical knowledge. Our quarterly feed advisory update is available on [page 10](#) of this review.

Finally we congratulate Jocelyn Coventry on being awarded a Master's degree after taking on the mammoth task of writing up more than ten years of collaborative research conducted on three separate research projects.

Enjoy the read...

Pieter Conradie

NT Pastoral Industry Survey (continued from cover...)

Regional differences reported in the 2010 NT Pastoral Survey

Region	No. properties surveyed	Average property size (km ²)	Average herd size (hd)	Av. no. staff
Alice	31	3,799	5,800	6
Barkly	13	6,653	36,000	27
Katherine	63	2,232	11,000	8
Top End	20	497	3,600	5
NT Wide	127	2,794	11,000	9

Infrastructure development

Based on producer estimates, 85% of the surveyed area was utilised for grazing purposes, 4% was classified as not yet developed, another 8% was classified as unproductive and the remainder was not classified. The average property size was 2,794 km², down from 3,122 km² in 2004. This may be due to surveying a different sample of properties, or potentially reflects property subdivisions that occurred between surveys. Private businesses owned more properties and land area than corporate companies, but companies ran the largest percentage of cattle, reflecting their greater presence in premier cattle country in the Barkly region and the Victoria River District in the Katherine region.

Data on infrastructure development and changes in carrying capacity suggest that while a moderate investment in development occurred between the surveys, producers did not realise the increases in carrying capacity that they had anticipated. In 2004, producers predicted a 29% increase in carrying capacity by 2009 and a 54% increase by 2014, based on their plans for infrastructure development. Producer estimates in the 2010 survey suggested that there was only a 10% increase in adult equivalents across the NT between 2004 and 2010, lower than anticipated.

Sixty seven per cent of producers carried out water point development and 48% carried out paddock subdivision during 2009 and 2010. This reflected the development intentions captured in

the 2004 survey where 80% of producers stated an intention to develop water points and 60% to subdivide paddocks.

Interestingly, there were no major differences in number of paddocks, paddock sizes or number of waters between the surveys, despite the planned and stated infrastructure development.

On average producers spent \$200,000 per property on capital development over 2009 and 2010. This equated to \$21 per adult equivalent (AE) run. Capital expenditure per property was highest in the Barkly region, no doubt related to larger property sizes. However capital expenditure per adult equivalent run was highest in the Top End at \$49/AE suggesting the greatest intensity of development occurred there.

Producers remained confident about further development potential, predicting a 17% increase in carrying capacity by 2015 and a 25% increase by 2020 in the 2010 survey, driven largely by Barkly and Katherine producer estimates. Crude indicators of watered area (dividing the grazed area by the number of water points) suggest that there is greater development potential in the Katherine and Barkly regions compared to other regions regarding water point development.

Markets

Live export remained a major market for NT producers over both survey periods, with an estimated 57% of turnoff going to live export in 2010. The only significant change was an

increase in the percentage of producers sending cattle to abattoirs, from 38% in 2004 to 55% in 2010. This no doubt reflected the change in cull cow markets as a result of Indonesia enforcing the 350 kg weight limit since early 2010.

Breeder management

There was some evidence of increased intensification of breeder management between the survey periods. In 2010, there was an increased number of producers carrying out 3 rounds of mustering, pregnancy testing, segregating breeders based on pregnancy status, weighing heifers prior to joining and culling empty heifers after joining. The most significant change was the percentage of producers individually identifying animals for performance recording purposes, which doubled.

A moderate number of Barkly and Alice Springs producers used electronic identification tags (EID) in 2004 as this was required when transporting cattle interstate, but very few producers in the Top End and Katherine regions did. In 2010, 47% of producers in the Katherine region and 64% in the Top End reported individually identifying cattle for management purposes, which represented an 89% and 94% increase, respectively.

Bulls

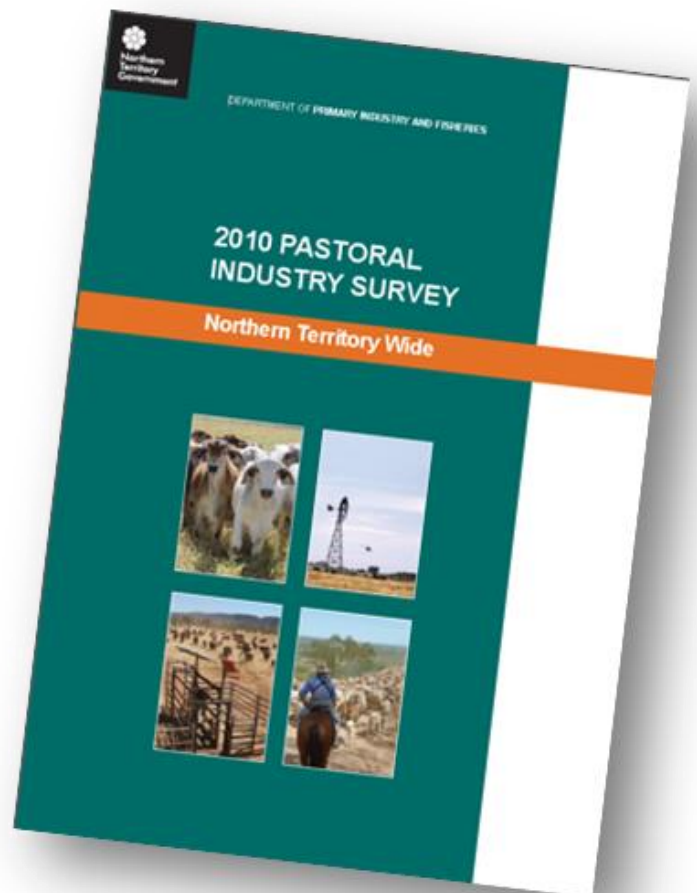
The average reported bull percentage decreased from 4.3% in 2004 to 3.6% in 2010. There was no change in semen testing of bulls prior to purchase (43% of properties), suggesting that this had not led to lowered bull numbers. There was an increase in the percentage of producers breeding their own bulls, from 24% in 2004 to 36% in 2010.

Supplementation

Fewer producers were supplementing cattle in 2010 (80%) compared to 2004 (92%). Dry season supplementation was more common than wet season supplementation across both surveys, with 80% and 62% of producers supplementing across the Barkly, Katherine and Top End regions in 2010, respectively. Those that supplemented in the wet season supplemented a greater proportion of their stock, with 49% of stock on the surveyed Barkly, Katherine and Top End properties supplemented during the 2010 dry and 42% supplemented during the wet.

Producers in the Katherine and Top End regions had the highest reliance on supplementation.

Conversely, Alice Springs producers carried out the least supplementation, with 30% of producers feeding for part of the year, and another 26% supplementing all year.



Staff

On the surveyed properties, 566 seasonal staff and 585 permanent staff were employed in 2010, suggesting that approximately 2,100 staff were employed by pastoral properties in NT in 2010, based on having surveyed 54% of enterprises.

This is only a taste of NT Wide survey results! If you want to learn more about particular practices, email pieter.conradie@nt.gov.au for a hard copy or grab it online at:

<http://www.nt.gov.au/d/Content/File/p/pi/PastoralSurvey/NT%20Wide.pdf>



Partnerships for future: Indigenous knowledge and science

An Aboriginal Healing Centre in Alice Springs, Akeyulere, is working in partnership with AZRI to expand and strengthen its bush medicine and products social enterprise. Young Arrernte women are making bush products under the guidance of Arrernte Elders. The recipes and methods are based on the traditional knowledge of the Arrernte Elders who have handed this knowledge down for over 50,000 years. The products are sold at local markets and online, under the brand *Interrentye*. According to Jane Ulrik, Manager of Akeyulere:

“The partnership with AZRI significantly strengthens the future of the enterprise. AZRI has provided us with space and facilities to expand our enterprise, which has outgrown our tiny office in Alice Springs. We were also lucky enough to secure funding from the *Inspiring Australia* grants to learn to propagate some of the traditional plants we use to make medicines.

AZRI has provided nursery space, and irrigated fields in which we can experiment with growing these plants. Arrernte people have worked on this project and learnt about horticultural science in the process. *Inspiring Australia* aims to ensure more Australians get excited about science and take up careers in scientific industries. The combination of traditional Aboriginal knowledge and scientific knowledge will help us ensure that the wild populations of these important medicinal plants are harvested in a sustainable way and conserved into the future.”

Akeyulere was established by Arrernte Elders in 2000 as a place where Arrernte people can practice and celebrate their culture and ensure it is handed down to the next generation. It is often called the “healing centre” in recognition that Arrernte culture and traditional knowledge systems are vital to strengthening and healing the community.



Products are sold via local markets,
conferences and on the internet at www.akeyulere.org



Inspecting the Droughtmaster cattle on Old Man Plains Research Station

Chinese Delegation - Yu Xiang Yuan (YXY) Company visits the Alice Springs region in February

The visitors had two busy days, filled with the sights and sounds of central Australia. Pieter Conradie, Manager Pastoral Production, welcomed and introduced the delegation. The purpose of the visit was to see the NT beef production systems, build relationships and investigate the Territory as a potential future supplier for live cattle.

The two days were packed full of information.

A program was carefully prepared to provide the delegation with a balanced overview of the cattle industry in central Australia. Many aspects were reflected on, including:

- *supply chain and central Australian cattle production systems*
- *variable climate and grazing systems*
- *genetics and adaptability of cattle in terms of heat, cold and humidity, feeding, disease and growth potential*
- *property sizes, infrastructure and access to markets*
- *technology such as Remote Livestock Management System (RLMS), traps, mustering and RFID to assist traceability and management*
- *challenges such as drought, disease, distance to market and labour*
- *research on remote management systems and increasing production*

A number of information sessions were prepared for our visitors.

Chris Materne, Rangeland Scientist (DPIF) provided a general overview of the pastoral industry in central Australia with reference to property and herd sizes, management practices, mustering and marketing and prominent cattle breeds. He then explained the research the Department is doing at Old Man Plains Research Station (OMP). Sally Leigo, Research Leader Precision Pastoral Management Tools Project (DPIF and Cooperative Research Centre for Remote Economic participation (CRC REP)) discussed the project to develop a remote decision management system that will incorporate both cattle and pasture production data to assist producers in making informed management decisions.

Tracey Hayes, Executive Officer Northern Territory Cattleman's Association (NTCA), provided an overview of the cattle industry with particular reference to the live export markets worldwide and current marketing strategies of central Australian cattle. A lively discussion followed with YXY Company asking many questions regarding investment opportunities.

YXY Company played a promotional video that gave an insight into its operations. Madam Wang is the Chair of the company which has a supply chain that takes beef from paddock to plate. They put approximately 100,000 cattle through their feedlots annually and sell the majority of the beef through a chain of restaurants most famous for the 'hot pot' style of cooking. Providing quality beef for the fast growing middle class market of consumers in China has created a huge market and YXY Company is currently expanding its operations.



Madam Wang was impressed with the calm temperament of local cattle

A trip to the centre of course requires a few field visits as well. First the delegation met Jocelyn Coventry, a veterinarian with DPIF, and together they inspected the weaners and heard about the weaner training at AZRI. (For further information on weaning see article on [page 12](#)).

The delegation then travelled to OMP where they were shown Droughtmaster bulls, cows and steers. All cattle presented were in good condition and with excellent temperament. The consistent good quality of the natural pastures were pointed out and the production system, stock water systems, RLMS and trap yards were demonstrated. The delegation was shown the 2.5 year old steers, which are being prepared for Meat Standards Australia (MSA) grading at abattoirs. During this visit a local livestock agent was on hand to answer questions regarding marketing systems as well as options and expected prices for the steers and cows.

Day two began with a guided tour by Grant Heaslip of the Wamboden meat works at Bond Springs Station. The meat works is not operating at capacity, and Grant explained the challenges faced to operate such a meat processing facility in the Alice Springs region. A livestock agent familiar with the facility was present to answer further questions regarding the marketing and pricing structure of livestock.

From there the group travelled to the Tilmouth Well Roadhouse where they were met by Roy Chisholm, owner of Napperby Station, who provided the delegation with an overview of the production system, breeding operation and marketing strategy for cattle produced on Napperby.

Discussion was held on the climatic and travel adaptability of *Bos taurus*-type of cattle to potential markets in China. After lunch the visitors inspected a group of cattle typical to what is bred on station's before they were taken on a helicopter ride to provide an aerial view of the property and cattle distribution. The visitors showed an interest in all aspects of the enterprise, as well as in the breeding and cattle management skills shown by the producer.

The visit ended with dinner at the homestead where, with thanks to Janet Chisholm, they could experience the hospitality and operation of a cattle station in central Australia. The visit was concluded with a visit to the meat house, where fat distribution and marbling was demonstrated on a chilled carcass.

During the two day visit to the Alice Springs region, the delegation was provided with a comprehensive overview, which included opportunities and challenges, of the cattle industry in central Australia. Lively discussions were held after all visits and presentations and the delegation was considered a great success.

Exercise Odysseus tests preparedness for FMD

If Australia is ever unfortunate enough to have an outbreak of foot-and-mouth disease (FMD), a critical measure in limiting the spread will be to stop the movement of all susceptible livestock, initially for a period of 72 hours. This is known as a National Livestock Standstill.

Later this year, the NT Animal Biosecurity Branch will be taking part in Exercise Odysseus – the National Livestock Standstill Exercise Program – which will test our capacity to implement a livestock standstill in the NT.

Nationally, Exercise Odysseus is a series of discussion exercises and field-based activities which will be held throughout 2014. The exercises were developed to enhance national (government and industry) preparedness for and implementation of a standstill response. The exercise scenario, which will be consistent across the exercise program, is based on a hypothetical outbreak of foot-and-mouth disease (FMD), which is initially detected in Queensland. It must be recognised that this is an exercise only and there is NO FMD in Australia.

The objectives of the exercise are to:

Assess national, jurisdictional and industry arrangements for implementing and managing a livestock standstill.

Assess national, jurisdictional and industry decision-making processes in declaring and implementing a national livestock standstill.

Assess mechanisms for communicating a national livestock standstill and their effectiveness.

Assess coordination within and between government and non-government agencies and industry, prior to and during a national livestock standstill.

A national planning team for Exercise Odysseus is in place, representing government agencies responsible for biosecurity, livestock and associated industries as well as Animal Health Australia.

Discussion exercises are planned for the NT on 30 July 2014 (Alice Springs) and 13 August 2014 (Darwin). These will be preceded by a number of regional workshops to familiarise stakeholders with the potential impact of foot-and-mouth disease, and the purpose of a livestock standstill, as well as the role of different agencies and stakeholders

(including industry, the NTCA, stock agents, export and trucking yards, RTA and Darwin Ports Authority) in the implementation of a standstill.

The discussion exercises will consider a number of possible scenarios which may arise in the NT following the hypothetical detection of FMD in Queensland and will seek input from all the stakeholders in addressing the many issues which may arise.

Invitations to the workshops and exercises will be circulated soon and we hope that this important activity will be supported by all concerned.

DPIF's Coordinator contacts for Exercise Odysseus are as follows:

Graham Schulz, Darwin District
p. 89992206 / m. 0401111181

John Eccles, Katherine District
p. 89739716 / m. 0437527372

Tom Haines, Tenant Creek and the Barkly
p. 89624458 / m. 0401113445

Greg Crawford, Alice Springs District
p. 89518125 / m. 0401118125

Anyone requiring further information on the exercise or clarification please contact:

Peter Saville, Exercise Co-ordinator
p. 895181818 / m. 0401118181



Congratulations Jocelyn Coventry!



Congratulations are extended to Jocelyn Coventry, who has just been awarded her Master Degree of Philosophy by research thesis from Murdoch University, Western Australia. The document, titled *Review of aspects of breeding herd performance from beef cattle projects on the arid rangelands of the Alice Springs District*, is

already proving to be popular, with over 70 interested parties downloading the substantial document in a very brief period. The Research Repository of Murdoch University's Library and Information Services database indicates the wide range of countries (from as far away as the United States and the Ukraine, India and the United Kingdom) that requested the thesis.

With great persistence Jocelyn analysed three historical (primary) beef cattle projects to highlight breeding herd performance as well as gaps in data analyses; and when gaps were identified, new analyses were undertaken. The conclusion provided a comparison with existing contemporary knowledge about beef cattle production on arid rangelands, as well as new information on reproductive performance, mortality, nutritional deficiencies, infestations and infections in continuously-mated herds of the Alice Springs district.

This thesis document can also be viewed online at Murdoch University:
<http://researchrepository.murdoch.edu.au/18322/>

Jocelyn has made a special point of acknowledging and thanking the people who inspired this work, including the owners, managers and staff of the three Alice Springs pastoral stations, where the primary beef cattle projects were undertaken. The first project was a ten

year rangeland ecosystem dynamics study undertaken by CSIRO on Hamilton Downs Station (Dr. Bill Low, former CSIRO researcher also graciously provided encouragement for Jocelyn's thesis). The second was a five year pilot cattle herd health and performance study undertaken by this department on Mount Riddock Station. A special mention goes to the Cadzow family and their staff for their enormous contribution to the project. Third was a four year MLA producer demonstration site, also undertaken by this department on Narwietooma Station. Former staff member, Keith Hill, is credited with leading this keynote project. And of course, other present and former colleagues of the (now) Department of Primary Industry and Fisheries, Alice Springs, are also thanked for their contributions. The many published and unpublished project documents that formed the building blocks of meta-analysis for this thesis are represented by the three references (1, 2 and 3) found below.

Jocelyn Coventry, BSc, BVMS, MACVSc, MPhil, has worked for the Northern Territory Government for over 25 years and is currently a Pastoral Production Officer in Alice Springs. She began her career with the national 'TB and Brucellosis Eradication Program' and continued as an Area Veterinary Officer until the late 1990s. Please feel free to contact Jocelyn on p.8951 8142 email Jocelyn.coventry@nt.gov.au at the Arid Zone Research Institute to discuss her thesis.

- 1 Low, WA & Wood, JT c. 1980, *Weight changes and reproduction in British breed cattle in central Australia*, manuscript drafted with hand written amendments, dated 8 March 1988, in possession of AZRI Library, Alice Springs, NT.
- 2 Coventry, J, Leigo, S & Saville, P (Eds) 2007, *Herd health and performance on Westside Mount Riddock station, NT: A report on a five-year study (1991-1996)*. Northern Territory Department of Primary Industry, Fisheries and Mines: Alice Springs, NT.
- 3 Hill, K 2003, *Effectiveness of water medication to supplement breeder cattle in spinifex country, producer demonstration site, Alice Springs district, December 1998-November 2001*, Final Report, Project PDS 97/10, Meat and Livestock Australia: NT Department of Business, Industry and Resource Development (Primary Industries Group), Alice Springs, NT.

DRIVING PROFIT IN THE ARID ZONE

Mt Riddock Station in Alice Springs will be the location for the "Beef Producers' Workshop" on Monday the 12th and Tuesday the 13th of May. The informative two day program has many presentations to support pastoral production and your productivity and profitability.

There is no cost to you; however it is essential to register by 2nd May.

To register by phone: call 02 6772 1399 or email: info@herefordsaustralia.com.au

This is a comprehensive program designed for beef producers in central Australia. There are highly qualified presenters such as John Bertram for all sessions. Two morning teas, two lunches, an afternoon tea, along with Monday night Happy Hour, barbeque dinner and breakfast the following morning is included. Overnight accommodation on Mt Riddock Station, if required (bring your own swag or campervan). Cabins are also available at Gemtree Caravan & Tourist Park.

Looking forward to seeing you there!

Summer growth restricted to the northwest!



Chris Materne, Pastoral Production, Alice Springs

AussieGRASS – March 2014 update

2013/14 Summer Pasture Growth

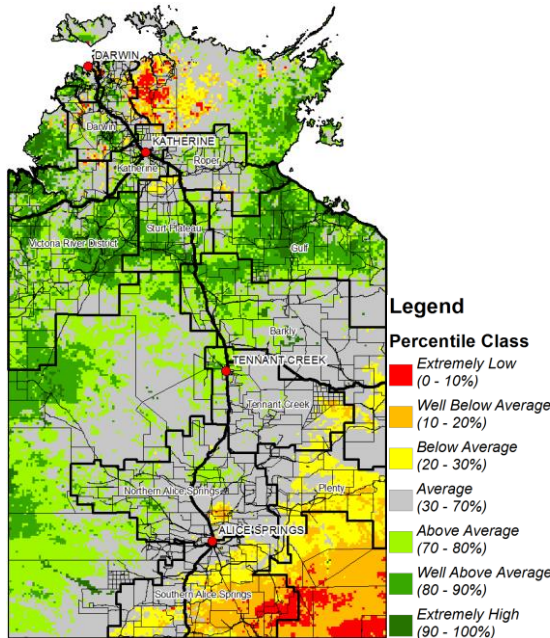


Figure 1: Past 6-months pasture growth relative to historical records since 1957 (1 September 2013 to 28 February 2014)

Predicted Pasture Growth (March-May 2014)

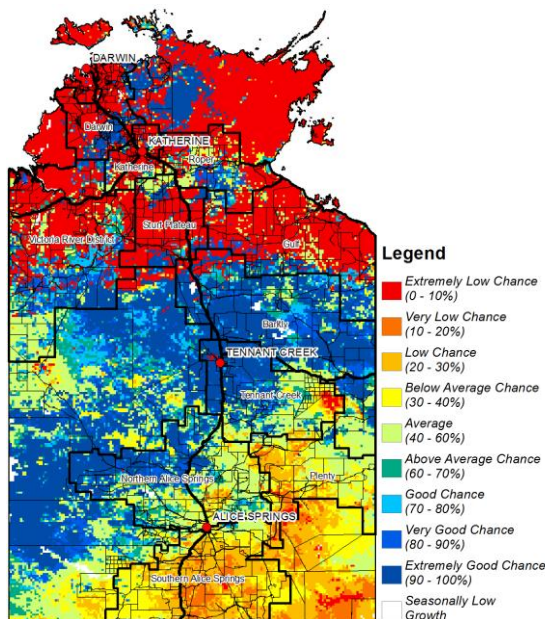
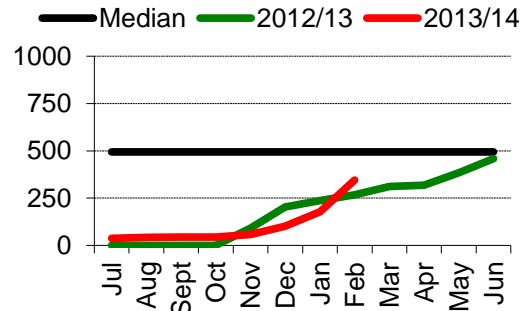
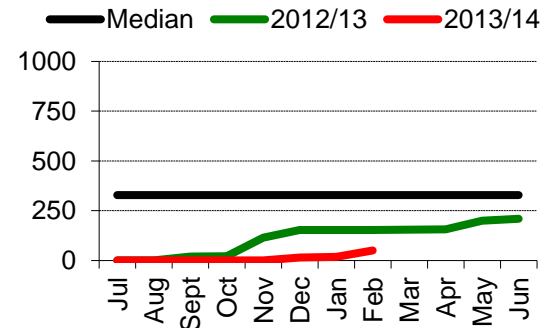


Figure 2: Chances of exceeding median growth over the next 3-months (March to May 2014)

Northern Alice Springs district



Plenty district



Southern Alice Springs district

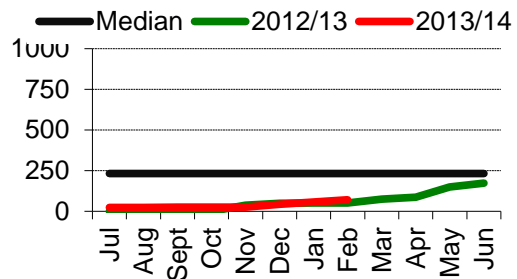


Figure 3: Median district pasture growth (kg/ha) - running total

What is AussieGRASS?

AussieGRASS is a spatial modelling framework that estimates various pasture characteristics (such as growth and total standing dry matter) over a given time period and compares it with historical records. It does this by using rainfall, climate, soil and pasture type information to estimate average pasture growth (among other parameters) over 5km x 5km square grids across Australia. Seasonal benchmarking tools such as this are potentially valuable in assisting pastoralists make informed land management decisions.

For more information on AussieGRASS see www.longpaddock.qld.gov.au/about/researchprojects/aussiegrass/index.html

Relief for the Plenty and Southern Alice Springs regions unlikely.

(Sourced from the Australian Bureau of Meteorology)

http://www.bom.gov.au/climate/ahead/rain_ahead.shtml



The national outlook for March 2014 to May 2014 indicates that:

- **Drier** than normal season is more likely for southeastern NT.

Climate influences include neutral tropical Pacific, and local sea surface temperature patterns.

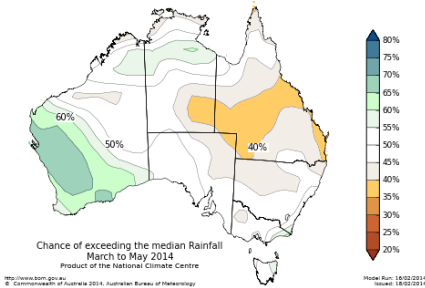


Figure 4: Rainfall outlook

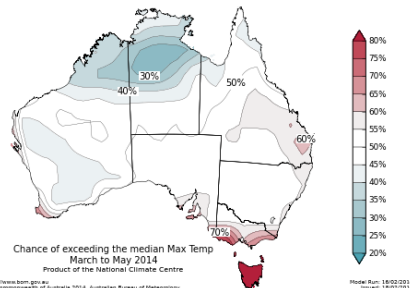


Figure 5: Temperature outlook

Seasonal Indicators	Comments
<p>El Niño Southern Oscillation (ENSO)</p> <p>http://www.bom.gov.au/climate/enso/</p> <p>Current outlook:</p> <p>Neutral</p>	<p>ENSO remains neutral, warming expected</p> <p>The El Niño-Southern Oscillation (ENSO) remains neutral. However, warming of the tropical Pacific Ocean is likely in the coming months, with international climate models surveyed by the Bureau showing Pacific Ocean temperatures approaching or exceeding El Niño thresholds in the austral winter. Model outlooks that span autumn tend to have lower skill than outlooks made at other times of the year, and hence should be used cautiously. Recent observations add weight to the model outlooks. The tropical Pacific Ocean subsurface has warmed substantially in recent weeks, which is likely to result in a warming of the ocean surface in the coming months.</p> <p>The Southern Oscillation Index (SOI) has continued to drop over the past two weeks as was expected.</p> <div data-bbox="435 1182 847 1473"> </div> <div data-bbox="507 1480 871 1514"> <p>Figure 6: 30 day moving SOI</p> </div> <div data-bbox="970 1182 1461 1473"> </div> <div data-bbox="1002 1503 1437 1565"> <p>Figure 7: Modelled tropical Pacific Ocean sea surface temperature</p> </div>
<p>Indian Ocean Dipole (IOD)</p> <p>http://www.bom.gov.au/climate/enso/</p> <p>Current outlook:</p> <p>Neutral</p>	<p>IOD remains neutral</p> <p>The Indian Ocean Dipole (IOD) typically has little influence on the Australian climate from December to April. Current model outlooks suggest neutral IOD conditions for late autumn into early winter. The risk of a positive IOD event occurring is elevated during El Niño events.</p> <div data-bbox="970 1608 1461 1899"> </div> <div data-bbox="1010 1906 1414 1968"> <p>Figure 8: Modelled Indian Ocean sea surface temperature</p> </div>

Weaning — a demonstration of options for best practice

by J. Coventry and B. Gill, Pastoral Production – Alice Springs

The department in Alice Springs has completed their calf-weaning program for 2014. This includes yard weaning and education of the calves. Although only small numbers, this is undertaken not only as a demonstration of best practice weaner (cattle) management, but also as preparation for Pastoral Production trials, the Biosecurity sentinel cattle programs in Darwin and Alice Springs, selection of future bulls for the Old Man Plains (OMP) research station breeding herd, and selection of future heifers for the OMP AI Program.

Best practice for yard weaning requires clean water troughs, freshly filled hay racks, plus supplements or treatments to boost dietary protein or control internal parasites. This is the time to teach the calves to drink from a trough, eat from a hay rack, socialise and live independently.

Hay

Continual access to an adequate number of hay feeders with fresh, palatable hay has been the lynch pin of good yard weaning with allowance made for hay consumption at 2% of weaner bodyweight. Attention has been paid to topping-up the hay in the feeders before it drops below the level of the supporting lower mesh (approximately 40cm). An adequate level of hay in the feeders stops the weaners from wanting to climb inside to eat the hay. An adequate number of hay feeders discourages eating off the ground especially for the smaller calves that are bullied away from the feeders when hay is running short. It is suggested that there be 15 to 20 cm of head space per weaner for feeding equipment.

Supplement

Since 2012, the weaned calves from OMP have been provided with a supplement that contains crude protein and coccidiostat. In the first year, this was provided in a lick block, but once taken back out into the paddock for grazing, weaners lost interest in these blocks. In 2013 and 2014, we have instead fed commercial pellets over four weeks (containing: 17% crude protein, 33 mg lasalocid sodium [coccidiostat] per kg).



OMP weaner calves eating locally grown sorghum hay from a hay feeder

When fed for at least three weeks at 0.25 to 0.5 kg per head per day (average cost: \$0.39/ head/day), this provides protection from coccidiosis (black scours)—first during the high risk period in the yards and then in the paddock while natural immunity is being developed. These pellets also boost the overall level of nutrition and efficiency of digestion. Even at this low level of pellet consumption, the improved weight gain and health of the OMP weaners has been obvious.

As a bonus, the feeding of pellets has helped to quieten the calves. Together with 'low stress stock handling' to handle the calves quietly in the yard and 'tail' them in the paddock, this helps to provide lifetime ease-of-handling.

These and other options for best practice are presented with case studies in the 2012 publication by Meat and Livestock Australia: *Weaner management in northern beef herds* by Partridge, I. (ed.) 2012. The key messages from this have been reprinted on the following page ([14](#)) for our readers; however, the entire publication can be downloaded from the MLA internet site at <http://www.mla.com.au/News-and-resources/Publication-details?pubid=5884>.

For more information about the weaning of calves from Old Man Plains Research Station, contact either the Research Cattle Manager, Bryan Gill on 040118127, or the Pastoral Production Officer, Jocelyn Coventry on 08 89518142



OMP weaner calves eating pellets from suspended feeding trays

Key messages for managing weaning and weaners (ref. Partridge, 2012)

Some general principles can be applied to weaning strategies and weaner management.

- Calves are taken from their mothers mainly for the benefit of the cow.
- When the need to produce milk is stopped, the cow's nutrient requirement is reduced, allowing her to regain condition.
- When the need to produce milk is stopped, it is equivalent to feeding the cow with 2kg of grain or 3kg of fortified molasses each day.
- Lighter stocking in breeder paddocks maximises the opportunity for the cows to maintain good body condition.
- The cow needs to have a body condition score of 3.5 or higher at calving to maximise the chance of getting pregnant again while rearing her calf.
- A cow must get pregnant within 75 days of calving to produce a calf every year.
- Weaning to maintain the cow's body condition will improve re-conception for the next mating. It is too late for the current re-conception.
- With seasonal mating, calves are normally weaned at four to eight months of age between April and June.
- With year-round mating, calves are at a wide range of ages at the first muster (April–June); weaning all calves over 100kg allows the cows to recover body condition and better survive the dry season.
- If the wet season fails, all calves can be weaned younger under both seasonal and continuous mating systems.
- Hay is the main feed for weaners in the yard. Good quality hay must always be available from the first day of weaning.
- Calves weaned under 150kg should gain at least 100g per day, and will need supplements of highly digestible protein and energy if pasture quality is insufficient.
- Heifer calves retained as breeders should be fed to gain at least 100g per day over the dry season after weaning.
- Weaning is the time for educating young animals to set them up for ease of handling throughout their lives.
- Weaner education includes being worked calmly through the yards and being tailed out from the yards to the weaner paddock and back for five to seven days.
- Weaner paddocks should be rested over the year to accumulate a body of good grass and herbage; they should not be used as holding paddocks for sale or sick stock, or for the working horses.

iv Weaner management in northern beef herds



Weaner management in northern beef herds





Live Cattle Exports via Darwin Port – MARCH 2014

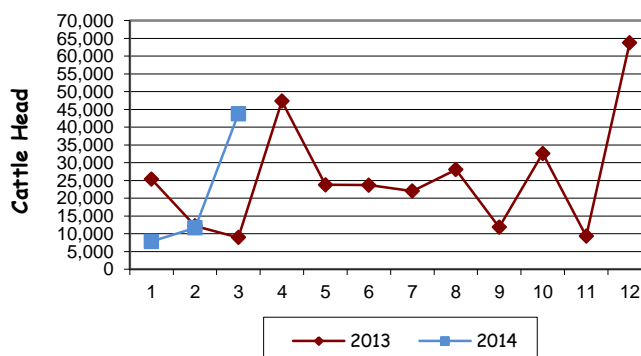
Please note that the "NT CATTLE" figures are NT cattle exported through the Port of Darwin only, some NT cattle are exported through interstate ports.

Destination	TOTAL CATTLE (including interstate)							# NT CATTLE						
	2012	2013	Last year 31/3/13	YTD 31/3/14	1-31 MAR	Previous Month	Difference	2012	2013	Last year 31/3/13	YTD 31/3/14	1-31 MAR	Previous Month	Difference
BRUNEI	4,639	4,043	1,054	1,079	0	1,079	-1,079	4,639	4,043	1,054	1,079	0	1,079	-1,079
INDONESIA	201,748	282,022	40,592	80,945	48,496	20,526	+27,970	189,994	243,978	36,352	53,455	39,106	7,926	+31,180
PHILIPPINES	27,324	22,403	7,946	0	0	0	0	26,337	15,063	2,356	0	0	0	0
SABAH	460	0	0	0	0	0	0	460	0	0	0	0	0	0
SARAWAK	0	800	0	0	0	0	0	0	800	0	0	0	0	0
W-MALAYSIA	10,018	14,952	4,232	4,046	3,647	399	+3,248	10,018	12,094	2,432	4,046	3,647	399	+3,248
VIETNAM	2,801	35,396	4,288	4,643	980	2,249	-1,268	2,801	32,806	4,288	4,643	980	2,249	-1,268
EGYPT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	246,990	359,616	58,112	90,713	53,123	24,253	+28,870	234,249	308,784	46,482	63,223	43,733	11,653	+32,080
				+32,601										+16,741

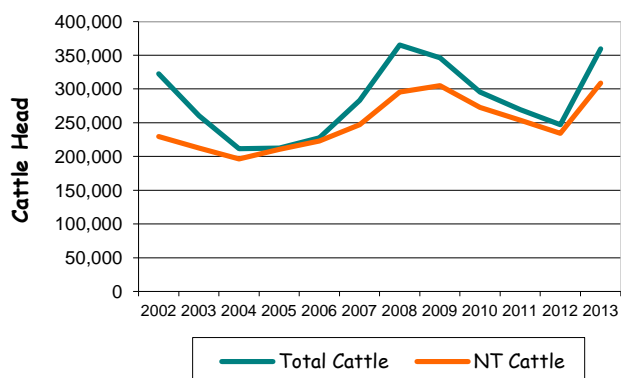
MARCH at a glance

- 53,123 head of cattle through the Port of Darwin during March, 28,870 more than February and 36,247 more than March last year.
- 2014 total cattle figures indicate 32,601 head more than last year. NT cattle 16,741 more than last year.

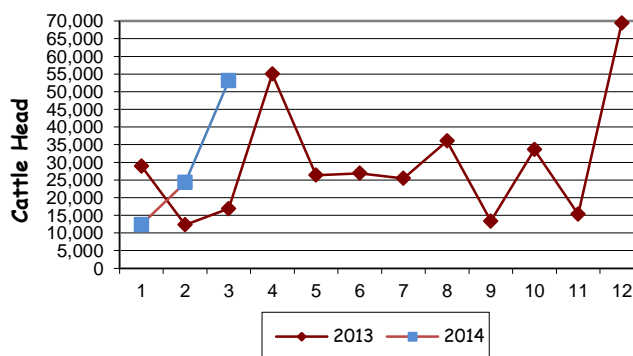
NT Live Cattle Exports thru Port of Darwin 2013 v 2014



Live Cattle Exports thru the Port of Darwin (last 10 years)



TOTAL Live Cattle Exports thru Port of Darwin 2013 v 2014



PREVIOUS 8 YEARS

Total Cattle, Port of Darwin								NT Cattle, Port of Darwin							
2006	2007	2008	2009	2010	2011	2012	2013	2006	2007	2008	2009	2010	2011	2012	2013
227,648	283,046	364,944	347,314	295,605	269,617	246,990	359,616	223,407	247,281	295,539	304,818	272,749	253,797	234,249	308,784

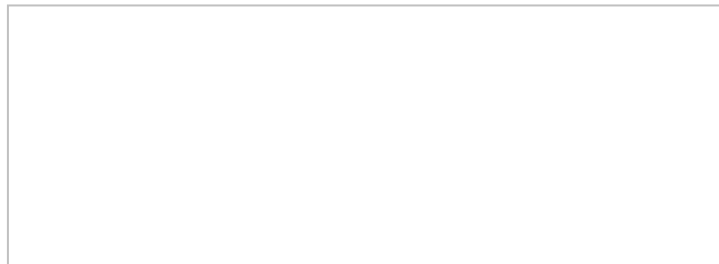
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GLOSSARY

ASPIAC:	Alice Springs Pastoral Industry Advisory Committee	DPIF:	Department of Primary Industry and Fisheries
CAGLM:	Central Australian Grazing Land Management	GRASP:	Pasture Growth Model
CLMA:	Centralian Land Management Association	MLA:	Meat & Livestock Australia
CSIRO:	Commonwealth Scientific & Industrial Research Organisation	NABRC:	North Australian Beef Research Council
DAFF:	Department of Agriculture, Fisheries & Forestry	NBRUC:	Northern Beef Research Update Conference
DCQ:	Desert Channels Queensland Inc.	NLIS:	National Livestock Identification System
DoE:	Department of Education	NLP:	National Landcare Program
DK-CRC:	Desert Knowledge Cooperative Research Centre	NTCA:	Northern Territory Cattlemen's Association
DLRM:	Department of Land Resource Management	PIC:	Property Identification Code
		RFID:	Radio Frequency Identification Device
		VRD:	Victoria River District