



WHAT'S INSIDE

Should we be thinking of fire?

Message from the Team Leader

Northern Grazing Systems Project

Reappearance of Calicivirus

NABRC appoints new Chairman

PEG has no effect – preliminary findings from the PEG pen trial

AussieGRASS Update

Time for the northern cattle industry to put more emphasis on genetics

Heifers from OMP Research Station – Growth in 2009

More weeds in Central Australia

Mongolians visit Alice Springs

Pastoral Market Update – Nov 2010

Should we be thinking of fire?

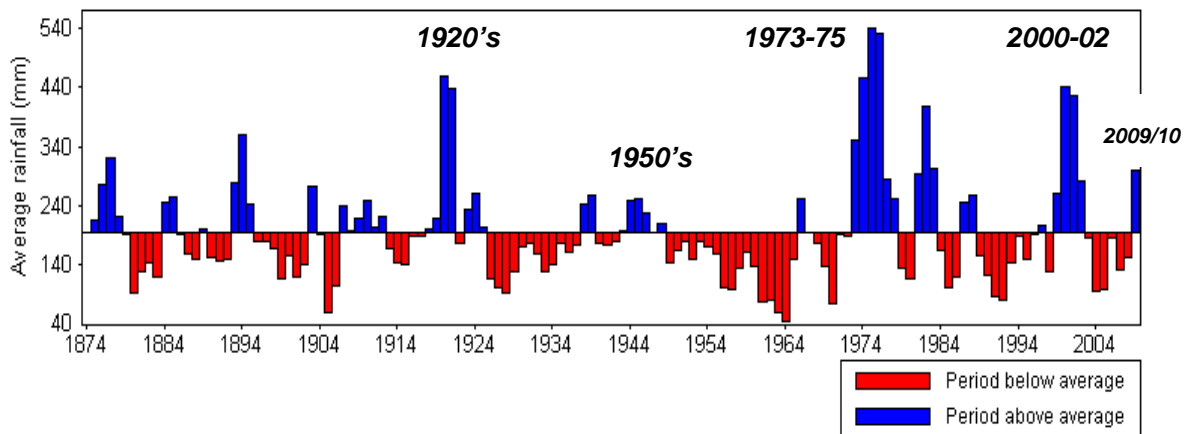
Chris Materne, Pastoral Production Group, Alice Springs

History shows us that periods of sufficient pasture growth followed by a big fire season only come around every now and again, or on average every 20-30 years. Such occasions are often etched into our memories, whether we have heard the associated stories from the old timers or experienced such an event ourselves. Such periods commonly referred to occurred in the 1920's, 1950's, 1973-75 and more recently 2000-02.

Are we in one of these periods now?

2-year moving average rainfall (6 months, Oct in year 1 to Mar in year 2) at ALICE SPRINGS AMO COMPOSIT

Long-term average rainfall (6 months, Oct in year 1 to Mar in year 2) is 196 mm



Ending year of 2-year period

Source: Rainman StreamFlow

Figure 1:

2-year moving "summer" rainfall average showing above and below the "summer" average of 196mm. The periods of above average rainfall followed by an extensive wildfire episode are highlighted.

The pasture growth already experienced around Alice Springs over the 2010/11 financial year has been extensive, and is a follow-up on the significant growth experienced earlier this year (2009/10) and again from the Nov/Dec 2008 growth event (2008/09). Across the Alice Springs district wide spread pasture yield estimates are exceeding 2000kg/ha, and once cured will increase the risk of wildfires.

Should we be thinking fire?

Arguably yes. Right now wildfire mitigation in the form of fire break maintenance and controlled burning of the less productive country needs to be considered, planned and implemented. For example, you may have an opportunity to use strategic burning in breaking-up your spinifex country to protect the productive country from any potential extensive hot wildfires. But should we be considering fire for improving pasture production more?

Does a rare opportunity exist?

For some time now controlled burning has been advocated as a cost-effective land management tool. However, in many cases the opportunity to implement such a strategy depends entirely on these unique growth periods when enough fuel accumulates to implement an effective burn.

Influencing the tree/grass balance

The aim of such burns is to reduce the competition of the trees and shrubs to enable more pasture growth, and especially during smaller pasture growth events.

That is short-term feed reassignment for long-term production gain.

Two vegetation types that are showing signs of increased competition from trees and shrubs that can benefit from fire are the; more productive open woodland country with an oatgrass/bunched kerosene grass (mulga grass) under storey; and 'run-on' areas/drainage systems dominated by perennial grasses (kangaroo grass, silky brown-top). These vegetation types often have an overstorey of coolibahs, ironwoods, bloodwoods, river red gums and other mixed *Acacias* such as victoria wattle, witchetty bush and mulga.

Country with poor soils that support relatively unpalatable pastures such as wiregrasses, erect kerosene grass, bandicoot grass or woolbutt; with or without a woody vegetation layer, generally do not have the capacity to produce productive pastures. These soils are often dominated by thick mulga or a combination of mulga and witchetty bush. What productive pastures that do exist are often only found under the shrubs and trees where there is higher soil organic levels. Therefore burning these vegetation types would be of little benefit pasture wise and may even have a negative effect on productivity while reducing the Top-feed benefits of this country.

Managing the risks

The greatest risk for many producers with the use of fire is a lack of follow-up rain and the loss of feed. This risk can be dramatically reduced by taking control of the situation, and restrict the fire to where you want it to burn rather than to let the fire dictate terms. In most situations numerous small burns are often better than one large burn. The beauty of such a unique growth event as this is the quantity of available pasture and potentially making the amount needed to implement a burning strategy look relatively small in comparison.

Things to think about before burning:

- *Be clear of your production and land management goals*
- *Be realistic when it comes to the soil and country's capabilities*
- *Identify and avoid poor condition country that is at risk of increased erosion from reduced cover.*
- *Reduced grazing pressure following fire is important to ensure the productive pasture species can establish*
- *Take control of the burn and restrict it to areas that you want burnt*
- *Notify Bushfires NT*

Fire has the ability to provide benefits in:

- improving the short-term feed quality of a pasture
- maintaining the tree/grass balance
- opening up country to improve cattle management
- reducing patch grazing
- improving biodiversity



Open oatgrass plain (*Enneapogon avenaceus* dominated) with estimated standing dry matter of 2000kg per hectare - September 2010. This country is highly productive and requires protection from wildfire.



Open woodland (*Cenchrus ciliaris* dominated) with estimated standing dry matter of 4000-5000kg per hectare – November 2010. If the woody vegetation thickening is occurring in this type of country fire may be an option in maintaining the tree/grass balance.

If you are thinking of fire as a management tool please contact me as I would like to hear your views on the practical use of fire as a pasture management tool in an arid environment.

Chris Materne

8951 8135 or 0458 605 883



Message from the Team Leader

Pieter Conradie, Regional Manager Pastoral Production, Alice Springs and Tennant Creek

During the past three months my understanding of the pastoral industry in the Red Centre and the Barkly has grown considerably.

My first priority was to get acquainted with the staff in Alice Springs and Tennant Creek. I soon realised that the Department of Resources is privileged to have highly skilled and very dedicated officials working in the interest of pastoral production in the Territory. There is also a good support system consisting of experienced subject specialists, a capable administrative section and senior officials that have a good understanding of the industry.

Unfortunately we have to say goodbye to Cassie Duggan, Technical Officer Tennant Creek, Tracey May, GIS Officer, and Jillian Fisher, contract CA GLM Officer, who will be following new career paths. I want to use this opportunity to thank them for their contributions over the years and wish them well in their future endeavours. We are in the process of advertising the permanent positions that have been vacated and hope to fill them early in the New Year. In the meantime we have contracted Dr Ken Scott for the month of December to assist with some of the rangeland surveys and thereby use the window of opportunity during this exceptionally good year.

A highlight was to attend the Barkly Grazing Land Management Workshop at Helen Springs, where I met prominent producers from the Barkly and also got a glimpse of the true value of Mitchell Grass. Assisting with data collection at a Swiftsynd site at "Deepwell" provided an opportunity to meet another producer and also do a few hard yards cutting grass samples.

I found the Northern Grazing Strategy Workshop, Drought Committee and ASPIAC meetings most informative and it is great to see how the research findings are being applied in the industry. The next Pastoral Industry survey is planned for early 2011. This survey will not only serve to inform the current status of pastoral production in the Territory, but also allow opportunity for increased interaction between the department and producers.

At present we are assessing all pastoral production research projects, after which we will do future planning to ensure that the research conducted is relevant, focussed and aligned with the priorities of Industry and the Department. We will work through the formal structures to get inputs from industry, but any suggestions from individuals on research priorities will be greatly appreciated.

On behalf of the pastoral production team I now wish you all a Merry Christmas and a prosperous 2011.

Northern Grazing Systems Project

Sally Leigo (DoR – Alice Springs), Dionne Walsh (DoR – Berrimah Farm), and Mick Quirk (MLA)

Local pastoralists in the Alice Springs region would have recently received an invite to attend a Northern Grazing Systems (NGS) workshop. For some this may have been their first opportunity to learn about the project and for others the opportunity to follow some more information about the project and where it is at currently.

The NGS project is a major collaborative research and development project coordinated by Meat & Livestock Australia (MLA) to increase the value from previous research around on managing grazing in northern Australia. The NGS project has identified four land management approaches which offer the most potential for improving land condition and enterprise profitability:

1. Infrastructure development;
2. Stocking rate management;
3. Pasture spelling; and
4. Prescribed burning.

As the success of each of these practices varies from region to region MLA has asked a team of researchers in consultation with local pastoralists, researchers and facilitators to identify the practices that will have the greatest impact in the central Australian region.

The first workshop was held in Alice Springs in April to collect information from local pastoralists, researchers and facilitators on local management practices, land types, herd structure and performance, business costs and cattle prices received. This information allowed the team of researchers to develop a representative property and the parameters to test how this property would have performed over the past 30 years. This representative property data was then fed into two models: GRASP (for pasture growth, land condition and live weight gain) and Enterprise (for performance) then modelled over the climatic data collected for the past 30 years.

In October the team of researchers returned to Alice Springs to present some of their model results, based on the information provided from the first workshop. The presentations focused on findings about the impact that different stocking rates has on live weight gain, land condition and total beef produced/ha. Participants at the workshop were asked to provide feedback to these presentations and whether they thought the results reflected their own experiences. Figure one and Table one on Page 5 are examples of some of the results provided at the second workshop.



PHOTO: Attendees at the first NGS workshop catch up during one of the session breaks.

Figure 1: The impact of different stocking rates with or without spelling to improve land condition

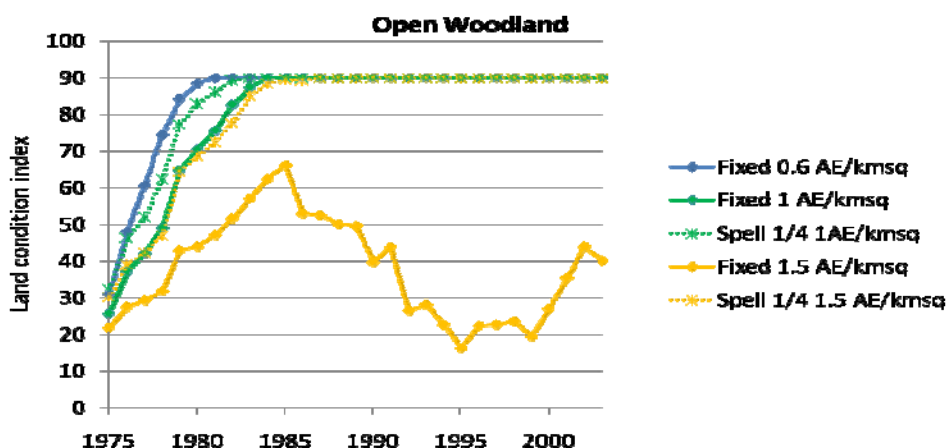


Table One: The impact of different stocking rates with or without spelling on liveweight gain (open woodland)

0.6 AE/ km ² (no spell)	170	30
1 AE/ km ² (no spell)	163	48
1 AE/ km ² (6mo spell every four summers)	163	41
1.5 AE/ km ² (no spell)	34	15
1.5 AE/ km ² (6mo spell every four summers)	158	60

Figure 1 explains the effects different stocking rates with or without spelling have on improving land condition.

Table 1 describes the impact different stocking rates with or without spelling have on liveweight gain. The lowest stocking rate (0.6 AE/km²) led to the fastest land condition recovery and gave the best live weight gain per head (i.e. a good land condition result and a quality beast to turn off). At a slightly higher stocking rate (1AE/ km²), land condition recovered nearly as quickly as the lower stocking rate (0.6 AE/km²), but only if the country was spelled for 6 months once every four summers. To run a slightly higher stocking rate with spelling led to better live weight gain per hectare compared to the lowest stocking rate. At the highest stocking rate (1.5 AE/km²), a spelling regime led to the best live weight gains per hectare, but land condition took longer to recover and this option led to poor live weight gains in poor seasons. At the highest stocking rate with no spelling, land condition never recovered and also gave the poorest live weight gain outcomes.

The feedback given at the second workshop was very worthwhile and the research team now needs to go back and make adjustments to their models to fine tune the results. These results, it is anticipated, will help to reveal which land management practice will yield the best results for land condition and bottom lines for central Australian cattle stations.

A final report is being prepared from the second workshop, if you would like to receive a copy please contact Sally Leigo, 08 8951 8144 or sally.leigo@nt.gov.au.

Dionne Walsh (08 8999 2178 or dionne.walsh@nt.gov.au) and Sally Leigo are also available to answer any of your questions relating to this project.

Reappearance of Calicivirus removes feral rabbit numbers

Kym Schwartzkopff, NRETAS Wildlife Control Officer, Alice Springs

After recent rains in the Alice Springs region, ideal conditions have been produced for the reappearance and spread of the Rabbit Calicivirus Disease (RCD) virus.

NRETAS Wildlife Control Officer – Kym Schwartzkopff said: “the calicivirus was first noticed around the Arid Zone Research Institute (AZRI) on the 15th October 2010, and in the subsequent three weeks, rabbit populations have decreased dramatically to the point of only dead rabbits being sighted” (See photo below).

The RCD virus prematurely reached the Australian mainland in 1995, but very quickly showed its capacity to decimate large populations of feral rabbits when the adult rabbits had no prior immunity. It is encouraging to see that given ideal conditions (after rain and with flies), the virus still has a capacity to quickly remove large numbers of the feral rabbit pest.

Note: Owners of pet rabbits are strongly encouraged to have their rabbits vaccinated against the RCD virus.

For more information about the spread of RCD to control feral rabbit numbers in the Alice Springs district, contact the NT Department of Natural Resources, Environment, The Arts and Sport (ph (08) 8951 8250).

Photo: The discovery of fresh rabbit carcasses with no visible sign of struggle or emaciation demonstrates how quickly the virus has acted (photo courtesy of K. Schwartzkopff, NRETAS 2010).



NABRC appoints new Chairman

Facilitation specialist Mr Ralph Shannon has recently been appointed as the new Chairman of the Northern Australia Beef Research Council (NABRC).

Mr Shannon succeeds John Cox who completed his six year tenure as Chairman.

Mr Shannon has a lifetime of involvement in the north Australian beef industry and brings a strong background of organisational development and strategic planning experience to the role.

Having previously held a myriad of positions both within industry and as an independent consultant, Mr Shannon's background includes being the chair of the Beef Industry North Australia Program (NAP2); Chairman of the Working with People consulting group; Initial co-ordinator of the dairy industry's Subtropical Dairy Program; Chairman of Centre for Agricultural Technology and Executive Chairman of Beef Expo 94.

As Chairman of NABRC, an element of the position will involve developing and fostering effective networks between producers, research development and extension providers and other key industry stakeholders.

Ralph has a passion for this industry and looks forward to representing the interests of those who produce in excess of 50% of the beef cattle in Australia. He is keen to represent the needs of producers to the MLA and other research institutions and ensure that what is important to them makes it onto the agenda. At the same time, producers through NABRC, act as a filter to review research programs, targeting the outcomes before they are implemented.

Ralph has foreshadowed a significant period of change in the research, development and training environments in the coming few years and is looking forward to using his skills and networks to work through these issues.

Ralph has a high level of energy, passion and drive to work with and add value to the northern beef industry. Ralph's extensive previous experience with the northern cattle industry and his affinity for regional Australia will stand him in good stead for the role.

NABRC is pleased to have Ralph on board and look forward to a strong future with him as their Chairman.

PEG has no effect – Preliminary findings from the PEG pen trial

Sally Leigo, Pastoral Extension Officer, Alice Springs



Pen #2 tucking into her freshly plucked mulga

The eight week PEG pen trial has now wrapped up and the process of finalising all of the results is being undertaken. Before presenting the results we have to date, here is a bit of background to how the project approached supplementing cattle with PEG.

Background

PEG stands for Poly-Ethylene Glycol (PEG) and is synthetic (or man-made) compound that is used in a range of pharmaceutical (eg. laxatives), cosmetic (eg. shampoos, skin cream) and chemical products (eg. green wood stabiliser, lubricants). Most importantly, PEG dissolves in water, which made it very easy to administer to the cattle in the trial.

For the purpose of the trial we had ten head of one year old Droughtmaster heifers, who were daughters of the same sire, with an average weight of 290kg at the start of the trial. Each animal was housed in individual sheltered pens and half were supplemented with PEG (PEG Group) while the other half were not (Control group).

The cattle were weighed weekly for the entire eight weeks to monitor their live-weight. In the final two weeks of the trial a more intensive phase of data collection was undertaken, where the following was monitored:

- Feed intake
- Feed refusal
- Faecal output

We also collected numerous samples:

- Faecal samples to look for any changes in nitrogen absorption
- Mulga samples to look at nutrient and tannin levels
- Hay samples to look at nutrient levels
- Blood samples to analyse for blood urea and phosphorus levels

It was decided that PEG 4000 which is the most common among the various ruminant supplements available would be used and was sourced from a supplier in Queensland. The costs were \$5.50/kg excluding transport or \$7.40/kg with transport.

How we supplemented with PEG for the trial

The aim was for the cattle being supplemented with PEG to receive 212g PEG/head/day. This ration was mixed in with water at a ratio of 212g PEG:30L water or 7g PEG:1L water. For the first six weeks of the trial this intake was not achieved as individual water intake was lower than expected, due to cooler weather and the cattle being penned and not exercising as they would in a paddock. Water intake during this period varied from 2L – 15L/head/day resulting in a PEG supplement intake of 14g – 105g/day. For the final two weeks of the project to increase intake we drenched the cattle daily with a PEG solution. Each animal received 600ml of solution containing 200g of PEG.

The Results

At the time of writing this article the samples collected were in the process of being analysed and as such those results can not be presented, but keep an eye out in coming *Alice Springs Rural Review* issues!

The results presented here relate to the liveweight performance of the cattle, their feed intake and digestibility of the mulga.

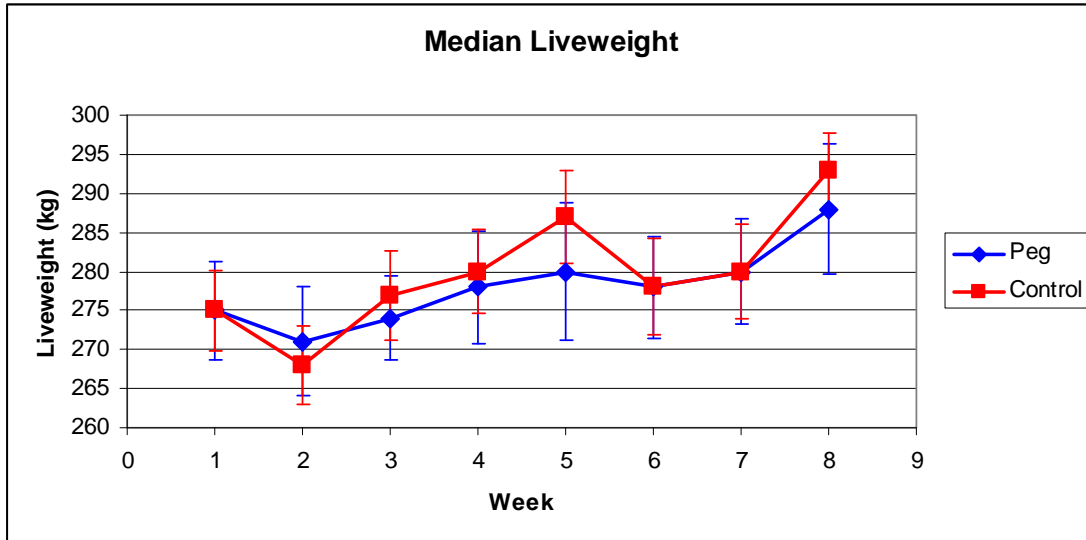


Figure 1: Shows the live-weight performance of the two groups of cattle, those supplemented with PEG (PEG) and those that were not (Control). The graph shows that there is no significant difference between the groups of cattle. Weeks 1 – 6 was the period of low supplementation (14g – 105g/head/day) with PEG and weeks 7 – 8 was the period of high supplementation (200g/head/day).

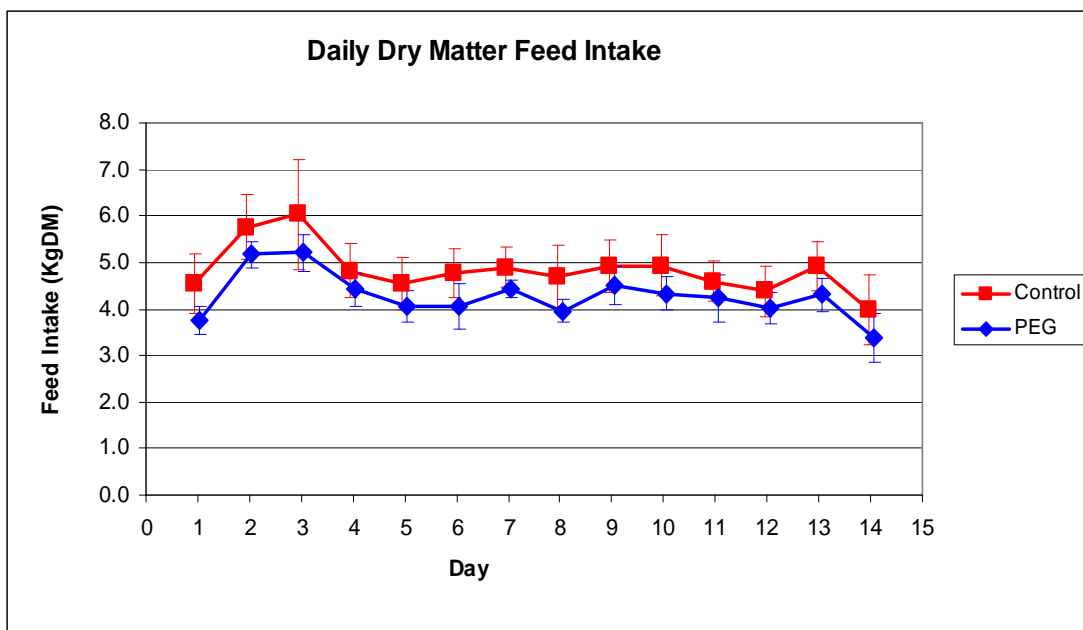


Figure 2: Shows the feed intake (mulga and hay) results from the final two weeks, again demonstrating no significant difference between the two groups of cattle.

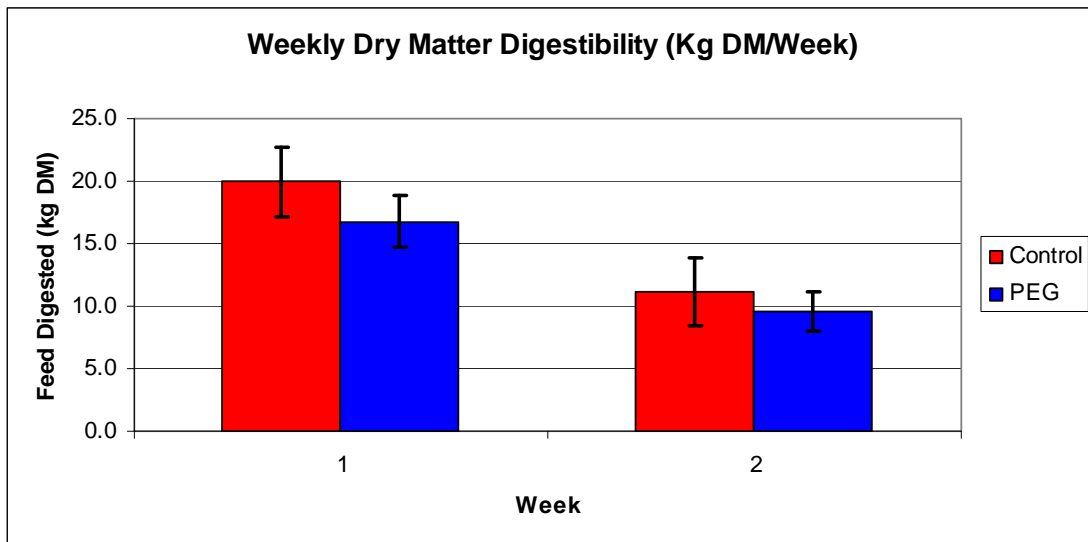


Figure 3: Looks at how much of the feed was actually digested by the cattle over a week. This graph again shows that there was no significant difference between the cattle supplemented with PEG or not supplemented at all.

At this stage the pen trial indicates that there does not appear to be any benefit from supplementing cattle eating mulga with PEG. These results are vastly different to what we were expecting and with analysis of our samples we hope to explain why this has occurred during this trial.

The completion of this pen trial has taken a huge effort from the staff at AZRI and also the men from the Alice Springs Correctional Centre. I thank them whole heartily for all their efforts to ensuring that the best data possible could be collected.

If you have any questions about the PEG trial please do not hesitate to contact Sally Leigo, 08 8951 8144 or sally.leigo@nt.gov.au



Sally Sims and Bryan Gill preparing faecal samples, which are currently being analysed

AussieGRASS – December 2010 Update

Chris Materne, Pastoral Production, Alice Springs

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 tool to assist pastoralists make informed land management decisions.



For more information on AussieGRASS see <http://www.longpaddock.qld.gov.au/>.

Past

Pasture Growth Relative to Historical Records since 1957

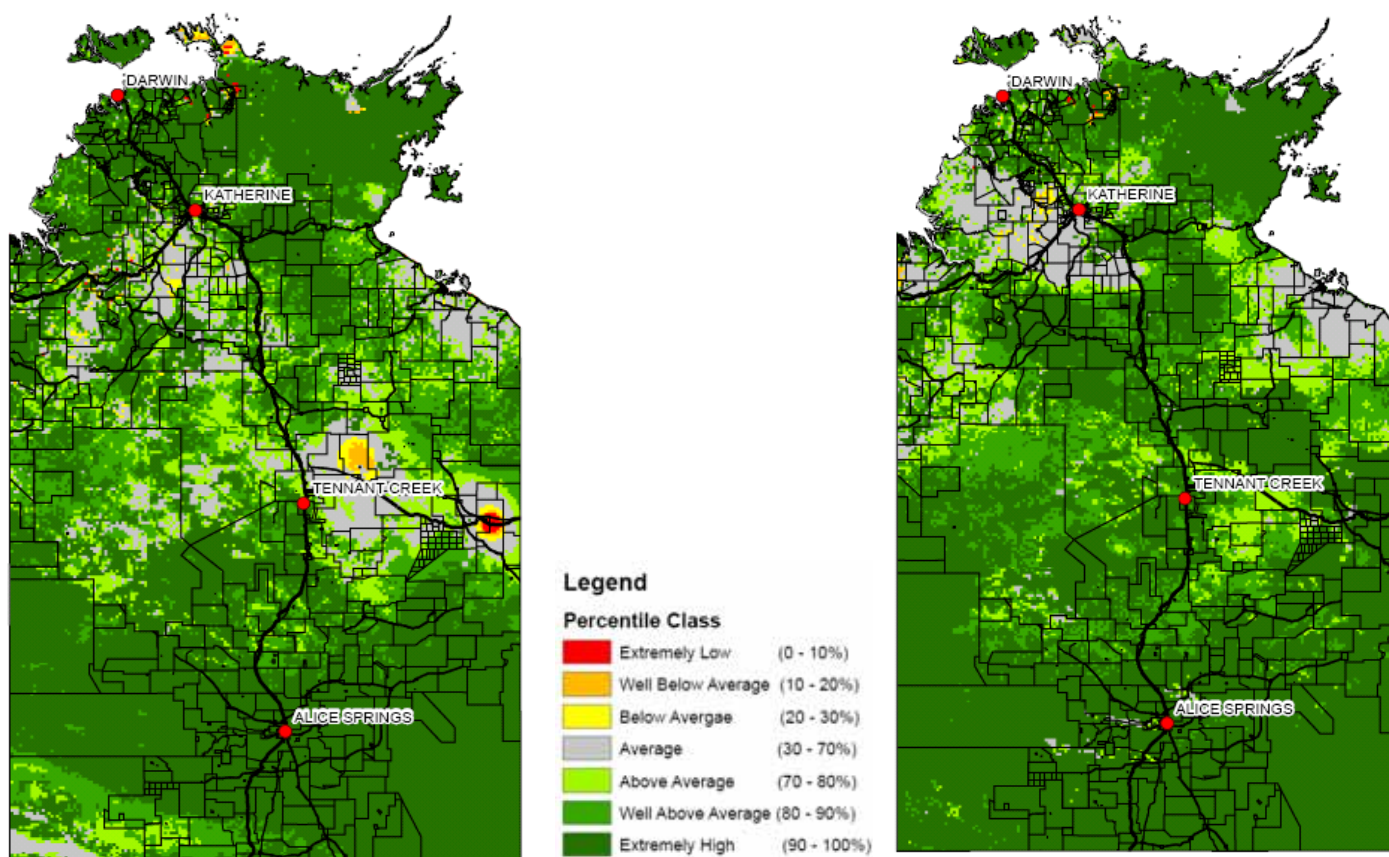


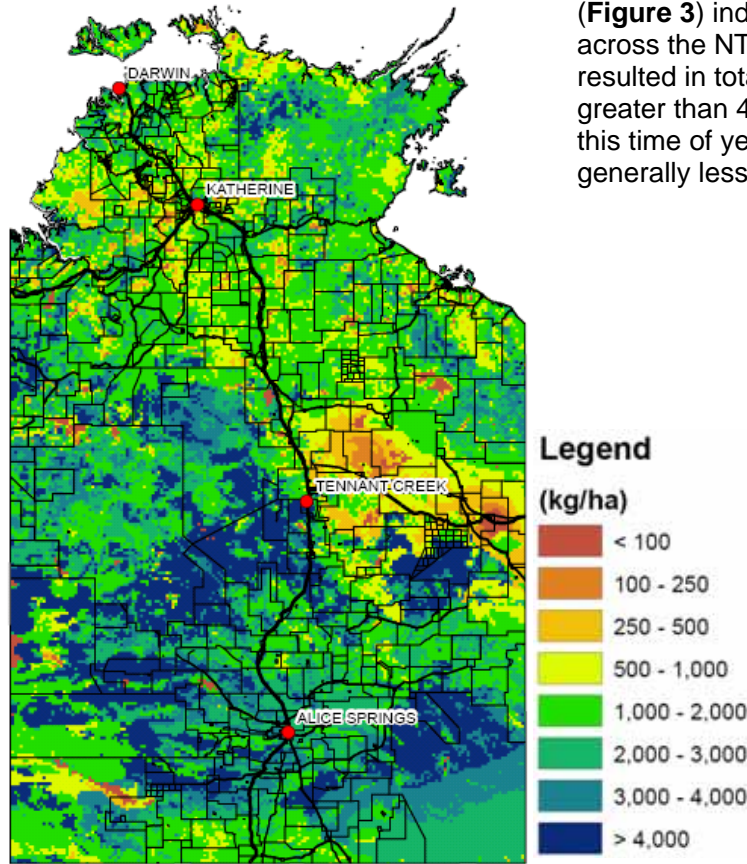
Figure 1: November 2010 Pasture Growth

Figure 2: Past 12 – Months Pasture Growth (1st December 2008 to 31st November 2010)

Modelled pasture growth for November (**Figure 1**) indicates that an early start to ‘wet season’ has been experienced across the Barkly and ‘Top End’ districts, while the exceptional growth event across central Australia continues. The past 12 months modelled growth (**Figure 2**) shows that the majority of the Northern Territory has had an above average 2009/10 wet season and extremely high growth across the Alice Springs district.

Present

Figure 3: Total Standing Dry Matter (TSDM) as of 31st November 2010.



Total standing dry matter (TSDM) is estimated by incorporating pasture carried over from previous season (less grazing, fire and detachment) and the current season's growth. The TSDM map (Figure 3) indicates pasture quantity continues to vary considerably across the NT. The exceptional year across the southern NT has resulted in totals exceeding 1000kg/ha with large areas showing greater than 4000kg/ha. As expected across the northern NT for this time of year (end of the 'dry season'), totals have fallen to generally less than 1000 to 2000kg/ha.

Figure 4 represents the chance of exceeding median pasture growth over the coming three month period based on the SOI index. This model is predicting an extremely good chance of exceeding median pasture growth over the next three months across the majority of the NT, with the exception of the 'Top End'. Areas around Alice Springs are starting to show a low chance of exceeding median growth for the first time this year. Low growth in these areas however may not necessarily be from a depletion of nitrogen reserves following the exceptional year being experienced in the district.

Figure 5 shows the level of skill or confidence in these growth predictions which is generally high over the 'Top End' but variable across the rest of the NT.

Future

Growth Predications

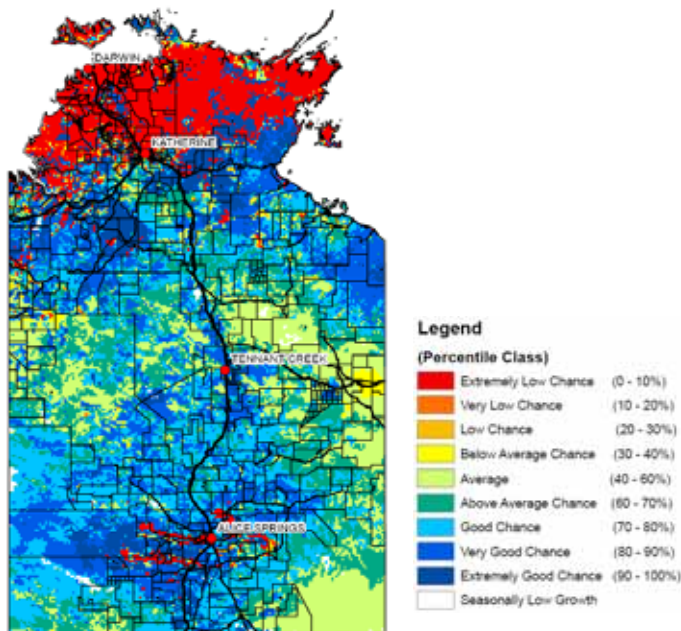


Figure 4: Chances of exceeding Median Growth between December 2010 and February 2011

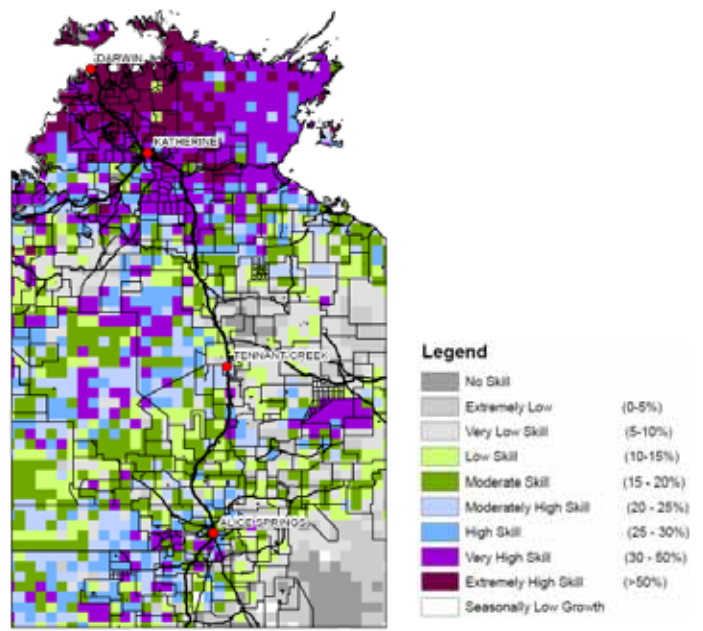


Figure 5: Prediction Skill based on SOI Phase 2 in November 2010

PERSONALISED PROPERTY MAPS

Are you interested in obtaining detailed AussieGRASS maps for your property?

If so get in touch with Chris Materne DOR Alice Springs (89518135) chris.materne@nt.gov.au.

General NT and Australia scale maps are available on line at:
<http://www.longpaddock.qld.gov.au/RainfallAndPastureGrowth/>

Time for the northern cattle industry to put more emphasis on genetics

Neil MacDonald, Director Research, DoR, Katherine

At a cattle industry meeting a few weeks ago I suggested that genetics was a field where the NT had not progressed as well as other jurisdictions. I was taken to task for not having data to back up that opinion. I still don't have much evidence singling out the NT, but Rob Banks from MLA has provided some data showing that genetic progress in North Australian herds over the last 30 years has been only a third of that in the south. In Figure 1, the bottom line is the north and top line the south. On average southern cows have gained almost \$30 in value since 1980 from genetic improvement alone, while northern cows have gained just less than \$10.

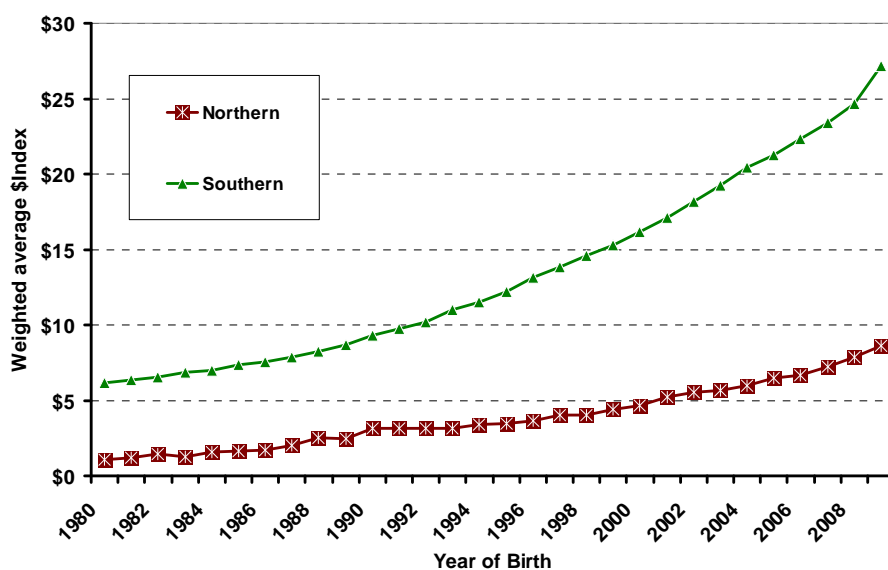


Figure 1: Genetic improvement in Northern and Southern Breeds

The reason for stating this difference is not to criticise or beat ourselves up, but to show what a great opportunity we have ahead of us.

For the whole of the Australian Beef Industry, the rate of genetic improvement is increasing. In 2009 the rate of gain has been calculated at \$1.95 per cow joined per year, about double the rate in 1999. That sounds good, but it is really only about the same as the rest of the world.

The best herds over this period have recorded rates of genetic gain of about \$7 per head per year, again showing that most of the industry is nowhere near its potential.

There are obvious reasons why the south is further ahead than the north:

- In the tropics we have to select for hardiness which makes selection for productive traits a slower process
- We are dealing with bigger herds. Up to now we have not concentrated to the same extent on individual animals.
- We have a shorter time to develop our production systems. Its only about 20 years since BTEC finished and all cattle came under control and we have spent much of that time concentrating on increasing the *Bos indicus* content of our herds.
- Up to now meat quality has not been a major profit driver for many parts of the north
- Some southern breeds have made extensive use of AI to make full use of superior imported genetics.
- The southern figures are enhanced by the tremendous progress made by the Angus breed. They have made the most of some well-chosen imported genetics from a few years ago.

There are some shining examples in the NT of operations that have made big genetics gains. For example the pioneering work on tropical composite breeds by some of the big companies on the Barkly stands out.

Departmental herds have had very little objective selection and would not be genetically superior to most commercial stations. However, the Brahman herd which Gehan Jayawardhana selected on fertility traits for many years still continues today. As Figure 2 shows, this herd has reduced its average days to calving by 5 days and increased its average scrotal size by 2 cm over the last 25 years while the breed average has hardly moved.

There is new evidence that reproduction in the Brahman breed is much more heritable than originally thought, and this herd is attracting a lot of attention as one of the best examples of that.

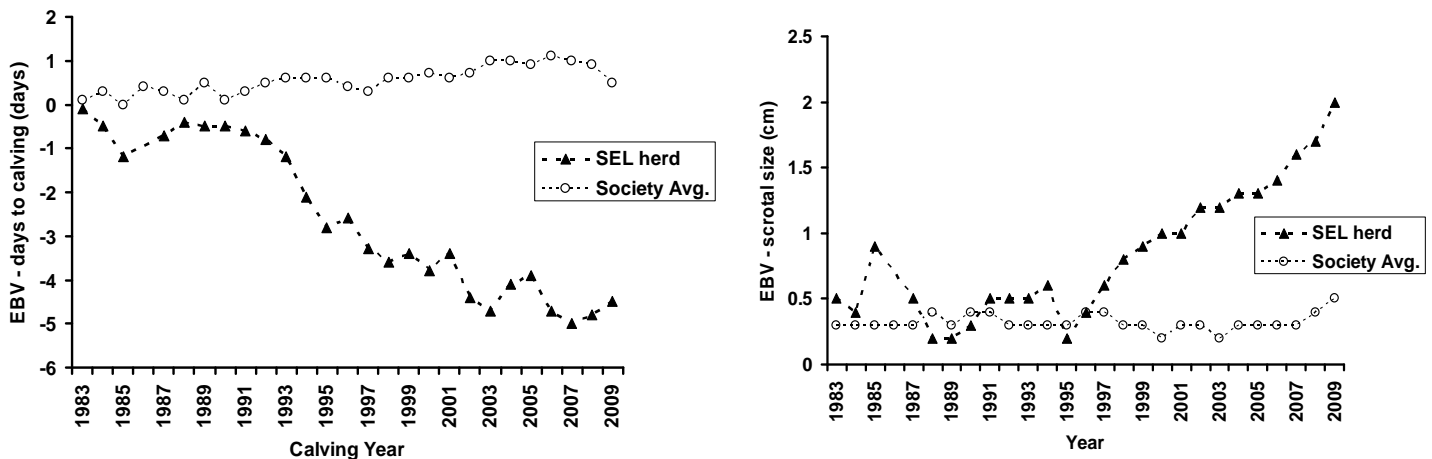


Figure 2: Changes in two reproductive traits (DoR improved Brahmans v breed average)

The NT and WA currently represent only 4% of the calves registered with Breedplan. Without objective measurement our cattle will continue to look good but are unlikely to make much improvement in production. Producers sometimes tell us that they cannot get EBVs from their bull suppliers, but the studs tell us that they do not collect the information because there is no demand from the purchasers. Clearly this is a problem worth investigating.

Since it is getting harder and harder to find ways to improve cattle performance, it is time to look harder at genetics, a great opportunity largely untapped. For more information, contact Neil MacDonald on (08) 8973 9746

The screenshot shows the website for the CRC for Beef Genetic Technologies. It features a blue header with the CRC logo and navigation tabs: About Us, Research Overview, Products, Media & Publications, Industry Education, Subscribe, and Contact. A search bar is located in the top right. The main content area includes a large banner with the text 'World class science creating first class beef' and a photo of a herd of cattle. Below this are several content blocks: 'Beef CRC Activities' with a 'MORE' button, a 'Polled gene test' link, a 'Beef specs calculator' link, a 'DNA markers' link, a 'Reproductive performance' link, a 'Livestock library' link, and a 'Latest News' section with a 'Beef news' link. At the bottom, there are links for 'Livestock Genomics Conference', 'Beef Profit Partnerships (BPPs)', and 'Beef Bulletin'.

Visit CRC
www.beefcrc.com.au

The CRC for Beef Genetic Technologies (Beef CRC) is using the human, mouse and bovine genomes to improve the profitability and productivity of Australian and global beef businesses.

It is one of 49 Cooperative Research Centres (CRCs) funded by the Commonwealth Government.

The Beef CRC brings together some of the best scientific minds and beef businesses to maximise the benefits of research through an enhanced process of utilisation, commercialisation and technology transfer.

Heifers from OMP Research Station – Growth in 2009

Jocelyn Coventry, Pastoral Production, Alice Springs

Background

One of the roles of the Old Man Plains Research Station (OMP) is to breed and prepare weaners for use as sentinel cattle in Berrimah and Alice Springs. Weaners from OMP are ideally suited as sentinels, because they have not been exposed to many of the insect borne diseases found in the top end. In 2009 the performance of the two Droughtmaster sentinel heifer consignments were followed at the Berrimah Research Farm (Berrimah) and the Arid Zone Research Institute (AZRI - Alice Springs) to monitor the effect of translocation and subsequent animal performance in two very different climatic zones.

What Happened

The heifers that were sent up to Berrimah had to overcome challenges, such as acclimatisation after transport (June 2009), 'three day sickness' (bovine ephemeral fever) (October 2009), and external parasites. These combined factors significantly affected performance and the growth of animals transported to Berrimah Farm was poorer than the heifers that remained at AZRI. Figure 1 shows the difference in growth over six months for those heifers in the two consignments that could be matched by sire and paddock-of-origin on OMP.

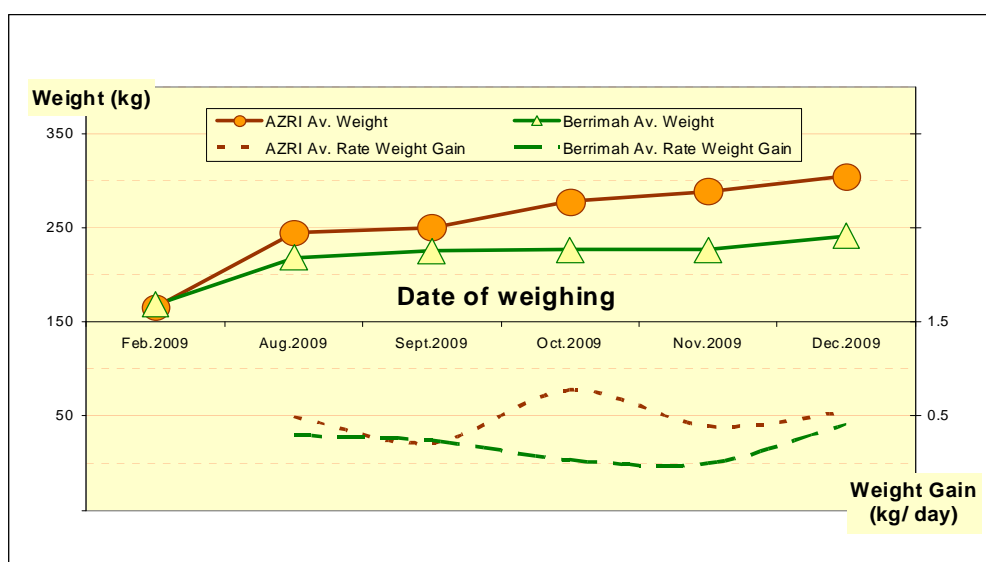


Figure 1. Growth comparison for heifers in 2009 - AZRI vs. Berrimah Farm

The growth of the AZRI sentinel heifers was so much better (range: 0.01–1.58 kg/day) that, based on their body weight, it was decided in November 2009 to control-mate them with a yearling bull for four months. At the beginning of mating they averaged 13 months old and liveweight ranged from 238 to 325 kg. At the end of mating (March 2010) the lightest heifer weighed 280 kg, which compares favourably with a recommended maiden heifer conception weight for *Bos indicus* cattle (280–320 kg). Three months later in June 2010, 76% of the AZRI sentinel heifer group were pregnancy tested 'in-calf' which was in line with trial groups in other years.

Discussion

The collection of liveweights from the cohort group at AZRI proved the capacity of yearling heifers to meet critical mating weights from 12 to 14 months of age on a buffel grass pasture in an average year.

The comparison of liveweights from 2009 branded heifers at Berrimah and AZRI indicated that management strategies can be developed that better prepare cattle groups for movement to the Top End environment.

Acknowledgements: The 2009 heifer weight data was provided by the DoR Biosecurity staff in Berrimah and Alice Springs, NT. For more information about the performance of cattle from OMP, please contact J. Coventry (08 89518142) or B. Gill (08 89518127).

Media Release:

25.10.10

Seasonal conditions leads to more weeds in Central Australia

Exceptional rainfall in Central Australia throughout 2010 has seen an expansion in the range of many emerging and declared weeds throughout the region, with Mexican poppy weed particularly visible.

Department of Natural Resources, Environment, The Arts and Sport (NRETAS) Principal Weeds Officer Steve Wingrave said in addition to the Mexican poppy, weeds including kapok, Mossman river grass, ruby dock and noogoora burr have flourished in the unusual weather conditions of the past 10 months.

"Mexican poppy is a Class B (growth and spread to be controlled) and Class C (not to be introduced) weed under the *Weeds Management Act*, recognising that it has been widespread in the Alice Springs region for more than 20 years, especially in the waterways of Central Australia.

"Strategic control efforts within Northern Territory Parks and Wildlife managed parks and reserves are focussed on preventing the spread of the weed to areas with high biodiversity conservation value.

Parks and Wildlife rangers at Finke Gorge National Park recently worked with students from Ntaria (Hermannsburg) School to remove plants adjacent to the vehicle track to prevent vehicles spreading the weed into Palm Valley and the Tjuwanpa Ranger group also undertake regular weed control at Hermannsburg aimed at isolated infestations of the weed.

Mexican poppy has been assessed under the Northern Territory Weed Risk Management System as being of medium risk, with weeds that have more serious consequences such as athel pine, parkinsonia and rubber bush considered high priority weeds to control.

Like Mexican poppy, noogoora burr is also difficult to eradicate and spreads rapidly once established.

Mr Wingrave said this weed is not currently found in many major river systems in Central Australia and encourages all landholders to be vigilant in removing weeds on their properties.

"Landholders are required to manage the weeds on their land and the Weed Management Branch is available to provide advice on property weed planning, or best practice management and technical advice to manage emerging weed species," Mr Wingrave said.

For more information on managing weeds contact the Weed Management Branch on 8999 4567 or go to www.nt.gov.au/weeds

Ends

**Media Note – for more information contact Steve Wingrave on 8999 4482
Images of Mexican poppy weed.**

Issued: 1.45pm Monday, 25 October 2010.

For more information on managing weeds contact the Weed Management Branch on 8999 4482 or go to www.nt.gov.au/weeds



PHOTOS: Mexican Poppy weed in flower.



**From all the staff at AZRI
we wish you a safe and
happy Christmas and a
wonderful New Year.**



Mongolian government officials visit Alice Springs

Pieter Conradie, Regional Manager – Pastoral Production, DoR, Alice Springs

A group of eight senior government officials from Mongolia recently visited the Desert Knowledge Precinct and Arid Zone Research Institute as part of a World Bank funded Sustainable Livelihoods project. This project organises study visits to New Zealand and Australia as they have extensive experience in sustainable land management and invest considerable resources in research of sustainable pasture and livestock management systems.

In these two countries sustainable land management plays an important role in livelihood security for different farming communities for Indigenous and European farmers. The Mongolian government is looking into developing similar systems for their pastoralists.

The visitors were treated to a full two day program, with a number of presentations given at the Desert Knowledge Business and Innovation Centre as well as at AZRI. Although the much anticipated visit to Old Man Plains research station had to be cancelled due to wet weather, Chris Materne and Pieter Conradie from AZRI and Andy Bubb showed the visitors different vegetation types around the Alice Springs and Simpson's Gap area. A closer look at a road train was also a highlight. The unexpected cold weather did not deter the visitors from a good look around as temperatures in Mongolia vary between -40 and +40 degrees Celsius.



ABOVE: Enjoying the view from Anzac hill



RIGHT: Chris Materne, Senior Rangeland Scientist, discussing the value of quality grass.




Pastoral Market Update

OTHER LIVESTOCK EXPORTS VIA DARWIN PORT (includes NT and Interstate Stock)

Destination	Buffalo			Camels			Goats			Horses			Sheep			Pigs		
	2009	2010	1-30 NOV	2009	2010	1-30 NOV	2009	2010	1-30 NOV	2009	2010	1-30 NOV	2009	2010	1-30 NOV	2009	2010	1-30 NOV
BRUNEI	327	312		0	0	0	397	1605	0	0	0	0	0	0	0	0	0	0
INDONESIA	3,274	2126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHILIPPINES	0	0	0	0	0	0	0	0	0	0	0	0	531	0	0	0	0	0
W-MALAYSIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SABAH	176	103	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SARAWAK	0	0	0	0	0	0	0	280	0	0	0	0	0	0	0	0	0	0
TOTAL	3,777	2541	27	0	0	0	397	1885	0	0	0	0	531	0	0	0	0	0

NATIONAL CATTLE PRICES - W/E 26/11/2010

JAPAN OX									MEDIUM STEER										
Estimated dressed weight price (cents/kg)									Estimated dressed weight price (cents/kg)										
SALEYARDS				O.T.HOOKS					SALEYARDS				O.T.HOOKS						
NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)
This week	331	329	320	329	315	321	Nq	319	This week	334	342	332	339	310	309	Nq	314		
Last week	328	329	325	327	315	321	Nq	317	Last week	334	324	336	328	310	309	Nq	314		
Year ago	276	295	264	282	283	289	nq	277	Year ago	279	303	269	282	270	265	Nq	283		
MEDIUM COW									TRADE STEER										
Estimated dressed weight price (cents/kg)									Estimated dressed weight price (cents/kg)										
SALEYARDS				O.T.HOOKS					SALEYARDS				O.T.HOOKS						
NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)	NSW	QLD	SA	AV (Aust)
This week	295	280	263	288	274	291	270	278	This week	375	381	339	366	319	309	310	315		
Last week	294	285	272	290	274	291	263	276	Last week	372	376	336	367	319	309	305	304		
Year ago	240	247	245	241	239	245	225	236	Year ago	292	293	273	293	285	283	nq	303		
LIVE EXPORT QUOTES									<p>Prices courtesy of Meat & Livestock Australia</p>  <p>www.mla.com.au</p>										
Estimated live weight price (cents/kg)																			
LIGHT STEERS (280-400 kg)				HEAVY STEERS (400+ kg)															
Darwin		Fremantle		Darwin		Fremantle													
This week	nq	nq	nq	nq	nq	nq	nq	nq											
Last week	nq	nq	nq	nq	nq	nq	nq	nq											
Year ago	185	nq	185	nq	nq	nq	nq	nq											

CURRENCY EXCHANGE RATES

Key Currencies 1AUD =	Current 1.12.2010	Previous month 1.11.2010	3 months ago 1.9.2010	1 Year ago 1.12.2009	Pre-devaluation 01.07.1997
Brunei Dollar	1.29046	1.30096	1.22403	1.25071	1.076
Indonesian Rupiah	8,786.47	8,806.67	8,028.49	8,563.67	1830
Philippine Peso	42.50028	42.58700	40.48799	42.9432	19.84
Malaysian Ringgit	3.04598	3.07940	2.80637	3.09301	1.9
Euro	0.73583	0.71335	0.70196	0.60863	N/A
US Dollar	0.96124	0.99614	0.89008	0.91463	0.752

PREVIOUS 8 YEARS															
Total Cattle, Port of Darwin							NT Cattle, Port of Darwin								
2002	2003	2004	2005	2006	2007	2008	2009	2002	2003	2004	2005	2006	2007	2008	2009
322,602	280,618	211,042	212,616	229,654	283,046	364,944	347,314	229,798	212,520	205,204	210,558	225,413	247,281	295,539	304,818

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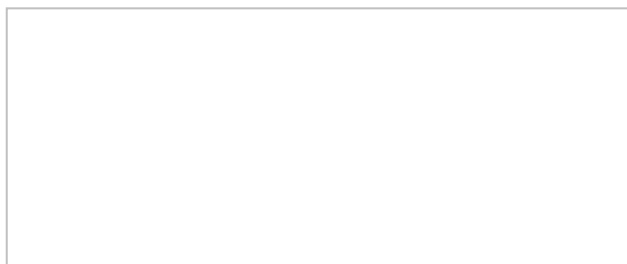
Arid Zone Research Institute

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Alice Springs Rural Review

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GLOSSARY

ASPIAC:	Alice Springs Pastoral Industry Advisory Committee	DoR:	Department of Resources
CAGLM:	Central Australian Grazing Land Management	GRASSp:	Pasture Growth Model
CLMA:	Central 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
DET:	Department of Education & Training	NLP:	National Landcare Program
DK-CRC:	Desert Knowledge Cooperative Research Centre	NTCA:	Northern Territory Cattlemen's Association
DNRETAS:	Department of Natural Resources, Environment, the Arts and Sport	PIC:	Property Identification Code
		RFID:	Radio Frequency Identification Device
		VRD:	Victoria River District