SHOW ME THE MONEY!
Dionne Walsh & Casey Collier, Pastoral Production, DoR.

A project to assess the economic and land condition performance of wet season spelling, stocking rate management and infrastructure development commenced late last year on Alexandria station.

The demonstration is part of the Northern Grazing Systems (NGS) initiative, which is a large project being rolled out across the NT, Queensland and WA. Funds for on-ground demonstrations in the Barkly are being provided by Meat and Livestock Australia, the State and Territory Governments and the Australian Government.

Article continued on page 2
The demonstration is monitoring the pastures at three bores of different ages over time to determine how Alexandria’s spelling and stocking rate management influence the condition of Mitchell grass pastures. Ross Peatling is particularly interested in documenting improvements in pastures close to old bores and seeing whether wet season spelling can prevent the development of sacrifice areas around new bores.

<table>
<thead>
<tr>
<th>Stocking rate and spelling scenarios</th>
<th>Average live-weight gain (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7AE/km² (no spelling)</td>
<td>5</td>
</tr>
<tr>
<td>9AE/km² (no spelling)</td>
<td>3</td>
</tr>
<tr>
<td>9AE/km² + 6 month wet season spell every four years</td>
<td>7</td>
</tr>
<tr>
<td>12AE/km² (no spelling)</td>
<td>-8</td>
</tr>
<tr>
<td>12AE/km² + 6 month wet season spell every four years</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 1.
GRASP model simulation results of average live-weight gain per hectare for various stocking rate and spelling scenarios (1970-1998) for a grey cracking clay on the central Barkly.

Preliminary biological and economic modelling in the Barkly indicates that wet season spelling (in conjunction with appropriate stocking rates) has the potential to improve animal production, land condition and economic performance (Table 1 and Figure 1).

Figure 1.
Example GRASP model analysis of wet season spelling and stocking rate management for a grey cracking clay on the central Barkly. Percentage of perennials in the pasture is used as an indicator of land condition, with a level of 50% indicative of the boundary between C and B land condition. AE refers to adult equivalents (where one AE is equivalent to a 450kg dry animal). In the graph below, spelling for 6 months every four years at higher (but still safe) stocking rates produced the fastest improvements in land condition and achieved the best live-weight gains per hectare. At high stocking rates with no spelling, land condition never improved. Note that the starting year can have a large impact on the results – in this case the early 1970s were good seasons which helped to improve land condition very quickly in some scenarios.
Many producers in the Barkly have told us that they are interested in wet season spelling and spreading grazing pressure more evenly across paddocks, but they have also said “show me the money!” Having adequate infrastructure to implement these management practices is essential, so a cost benefit analysis of water point development will also be done as part of the demonstration to allow producers to make up their own minds.

It is envisaged that a field day will be held at Alexandria later this year, so stay tuned to Barkly Beef for details.

For more information on the Alexandria demonstration or the Northern Grazing Systems initiative, please contact Casey Collier (Tennant Creek) on (08) 8962 4493 or Dionne Walsh (Darwin) on (08) 8999 2178.

MESSAGE FROM THE PASTORAL PRODUCTION MANAGER

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

Dear Barkly Producers

The Tennant Creek office has been a hive of activity during the past few weeks with the Beef Up Forum, Show and Beef Dinner all happening in the space of a few days. I used the opportunity to meet a number of producers from the Barkly during these events and really enjoyed the discussions. The Department of Resources’ Management Board scheduled a meeting to coincide with the forum and Show, which provided the opportunity for producers to meet with Richard Galton, Chief Executive, as well as other senior management of the department.

On 18 and 19 July, I visited the Tennant Office to do planning with the Pastoral Production staff and by the looks of things, the second part of the year is going to be just as busy with the Alexandria Producer Demonstration Field Day (Tues 23 Aug) and Barkly Herd Management Forum (Wed/Thurs 24/25 Aug). And let’s not forget the Pastoral Industry Survey that is already under way.

In fact, I want to take this opportunity to thank you for the cooperation shown with the industry survey so far. There is still a lot to be done and I ask producers to assist our two Pastoral Technical Officers, Casey and Jillian, who are undertaking this enormous task. The survey will provide a valuable platform for current and future discussion and decision making on how DoR can contribute to pastoral production in the region.

Driving from Tennant Creek to Alice Springs I saw numerous small bush fires, which reminds me of the high risk season that is fast approaching. Producers are encouraged to make a concerted effort to take precautions against runaway fires. NT Bushfires can be contacted to assist with a fire management plan. See the article on page 17 in this edition of Barkly Beef for contact details.

Please feel free to contact me if there are suggestions or feedback regarding the services provided by the Department of Resources. I will be happy to meet with you on my next visit to Tennant Creek or at your property.

Kind regards,

Pieter Conradie
Pastoral Production Manager
Tennant Creek and Alice Springs
Tel: 08 89518101
Mob: 043 8848 023
Email: pieter.conradie@nt.gov.au
Now is the time to start developing a weed management strategy or updating your existing plan as weeds will be flourishing in the Barkly due to high seasonal rainfall. Natural Resources, Environment, the Arts and Sport (NRETAS) Weed Management Officer Michelle Kassman is available to assist properties in developing effective weed management plans.

**Public comment sought on draft plans for prickly acacia and mesquite**

The draft Weed Management Plans for Mesquite and Prickly Acacia have been released for public comment until **9 September 2011**. These high priority species are declared Class A (to be eradicated) and Class C (not to be introduced to the NT) weeds in accordance with the *Weeds Management Act 2001*. Your input during this consultation period is encouraged.

Once approved, affected properties will be required to have a management program in place that is consistent with the requirements of these Plans. The Weed Management Branch is able to assist land managers to develop programs that align with these Plans.

**Renewed Athel pine focus**

Under the Territory 2030 Strategic Plan the Territory Government is aiming to eradicate athel pine from the NT. The Weed Management Branch is calling for cooperation from land managers to help achieve this goal. If you have unreported athel pine present on your property or you have recently conducted control works on this species please let the Tennant Creek Weed Officers know about it. Active management of this species must to be incorporated into property weed management plans.

Michelle will be out and about throughout the Barkly this year conducting weed survey and property inspections. If you have any weed issues you would like to discuss contact her on 8962 4495 or email at michelle.kassman@nt.gov.au.

**HAVE A LAUGH!**

Send your jokes to barklybeef.dor@nt.gov.au

A farmer was at a diner one day having lunch when he noticed an old friend. What really caught his attention was that this friend was wearing an earring.

The farmer knew his old buddy to be a fairly conservative fellow, and was curious about his sudden change in "fashion sense."

The farmer walked up to him and said, "I didn't know you were into earrings."

"Don't make such a big deal, it's only an earring," the fellow replied sheepishly.

The farmer was silent for a few minutes, but then his curiosity got the best of him and he asked "So, how long have you been wearing one?"

"Ever since my wife found it in my truck," the man replied.
UNDERSTANDING EBVs AND ACCURACY

EBVs
are an animal's breeding value or its genetic merit,
half of which will be passed on to its progeny.
While we will never know the exact breeding value,
for performance traits it is possible to make good estimates.

In the calculation of EBVs, the performance of individual animals within a contemporary group is
directly compared to the average of other animals in that group. A contemporary group consists of
animals of the same sex and age class within a herd, run under the same management conditions
and treated equally. Indirect comparisons are made between animals reared in different
contemporary groups, through the use of pedigree links between the groups.

EBVs are expressed in the units of measurement for each particular trait. They are shown as +ive
or -ive differences between an individual animal's genetics difference and the genetic base to
which the animal is compared.

For example, a bull with an EBV of +50 kg for 600-Day Weight is estimated to have genetic merit
50 kg above the breed base of 0 kg.

Since the breed base is set to an historical benchmark, the average EBVs of animals in each year
drop has changed over time as a result of genetic progress within the breed.

The absolute value of any EBV is not critical, but rather the differences in EBVs between animals.
Particular animals should be viewed as being "above or below breed average" for a particular trait.

Whilst EBVs provide the best basis for the comparison of the genetic merit of animals reared in
different environments and management conditions, they can only be used to compare animals
analysed within the same analysis. Consequently, Brahman BREEDPLAN EBVs cannot be validly
compared with EBVs for any other breed.

Although EBVs provide an estimate of an animal's genetic merit for a range of production traits,
they do not provide information for all of the traits that must be considered during selection of
functional animals. In all situations, EBVs should be used in conjunction with visual assessment
for other traits of importance (structural soundness, temperament, fertility etc).

A recommended practice is to firstly select breeding stock based on EBVs and to then select
from this group to ensure that the final selections are visually acceptable.

When using EBVs to assist in selection decisions it is important to achieve a balance between the
different groups of traits and to place emphasis on those traits that are important to the particular
herd, markets and environment.

One of the advantages of having a comprehensive range of EBVs is that it is possible to avoid
extremes in particular traits and select for animals with balanced overall performance.

EBVs are published for a range of traits covering fertility, milking ability, growth, and carcase merit.

Birth Weight EBV (kg) is based on the measured birth weight of progeny, adjusted for dam age.
The lower the value, the lighter the calf at birth, and the lower the likelihood of a difficult birth. This
is particularly important when selecting sires for use over heifers.
200-Day Growth EBV (kg) is calculated from the weight of progeny taken between 80 and 300 days of age. Values are adjusted to 200 days and for age of dam. This EBV is the best single estimate of an animal’s genetic merit for growth to early ages.

400-Day Weight EBV (kg) is calculated from the weight of progeny taken between 301 and 500 days of age, adjusted to 400 days and for age of dam. This EBV is the best single estimate of an animal’s genetic merit for yearling weight.

600-Day Weight EBV (kg) is calculated from the weight of progeny taken between 501 and 900 days of age, adjusted to 600 days and for age of dam. This EBV is the best single estimate of an animal’s genetic merit for growth beyond yearling age.

Mature Cow Weight EBV (kg) is based on the cow weight when the calf is weighed for weaning, adjusted to 5 years of age. This EBV is an estimate of the genetic difference in cow weight at 5 years of age and is an indicator of growth at later ages and potential feed maintenance requirements of the females in the breeding herd. Steer breeders wishing to grow animals out to a larger weight may also use the Mature Cow Weight EBV.

Milk EBV (kg) is an estimate of an animal’s milking ability. For sires, this EBV indicates the effect of the daughter’s milking ability, inherited from the sire, on the 200-day weights of her calves. For dams, it indicates her milking ability.

Scrotal Size EBV (cm) is calculated from the circumference of the scrotum taken between 300 and 700 days of age and adjusted to 400 days of age. This EBV is an estimate of an animal’s genetic merit for scrotal size. There is also a small negative correlation with age of puberty in female progeny and therefore selection for increased scrotal size will result in reduced age at calving of female progeny.

Days to Calving EBV (days) indicates the genetic differences in fertility of the daughters of the sire. It is the time interval between the date when the female is first exposed to a bull in a paddock mating to the day when she subsequently calves. Relatively lower EBVs for days to calving indicate shorter interval from bull-in date to calving and therefore higher fertility.

Carcass Weight EBV (kg) is based on abattoir carcase records and is an indicator of the genetic differences in carcase weight at the standard age of 650 days.

Eye Muscle Area EBV (sq cm) is calculated from measurements from live animal ultrasound scans and from abattoir carcase data, adjusted to a standard 300 kg carcase. This EBV estimates genetic differences in eye muscle area at the 12/13th rib site of a 300 kg dressed carcase. More positive EBVs indicate better muscling on animals. Animals with relatively higher EMA EBVs are expected to produce better muscled and higher percentage yielding progeny at the same carcase weight than will animals with lower EMA EBVs.

Rib Fat and Rump Fat EBVs (mm) are calculated from measurements of subcutaneous fat depth at the 12/13-rib site and the P8 rump site (from live animal ultrasound scans and from abattoir carcasses) and are adjusted to a standard 300 kg carcase. These EBVs are indicators of the genetic differences in fat distribution on a standard 300 kg carcase. Animals with relatively lower fat EBVs are expected to produce leaner progeny at any particular carcase weight than will animals with higher EBVs.

Retail Beef Yield EBV (%) indicates genetic differences between animals for retail yield percentage in a standard 300 kg carcase. Animals with larger EBVs are expected to produce progeny with higher yielding carcases.

Flight Time (Trial) EBV (secs) indicates genetic differences between animals in temperament. Trial Flight Time EBVs are expressed as differences in the number of seconds taken for an animal to travel approximately 2.0 metres after leaving the crush. Higher (ie longer) EBVs are more favourable, indicating relatively longer time taken to exit the crush and hence relatively better temperament.
Shear Force (Trial) EBV (kgs) indicates genetic differences between animals in meat tenderness. Trial Shear Force EBVs are expressed as kilograms of shear force that are required to pull a mechanical blade through a piece of cooked meat. Lower, more negative, EBVs are more favourable, indicating that relatively less shear force is required, and hence that the meat is more tender.

<table>
<thead>
<tr>
<th>Accuracy (%)</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 50%</td>
<td>Low accuracy. EBVs are preliminary and could change substantially as more performance information becomes available.</td>
</tr>
<tr>
<td>50-74%</td>
<td>Medium accuracy, usually based on the animal's own records and pedigree.</td>
</tr>
<tr>
<td>75-90%</td>
<td>Medium-high accuracy. Some progeny information included. EBVs may change with addition of more progeny data.</td>
</tr>
<tr>
<td>more than 90%</td>
<td>High accuracy estimate of the animal's true breeding value.</td>
</tr>
</tbody>
</table>

The higher the accuracy value the lower the likelihood of change in the animal's EBV as more information is analysed for that animal or its relatives.

Even though an EBV with a low accuracy may change in the future, it is still the best estimate of an animal's genetic merit for that trait.

As more information becomes available, an EBV is just as likely to increase in value, as it is to decrease.

The following guide is given for interpreting accuracy:

A man owned a small station. The Department responsible for wages claimed he was not paying proper wages to his staff and sent a representative out to interview him.

"I need a list of your employees and how much you pay them" demanded the rep.

"Well" replied the owner, "there's my ringer who's been with me for 3 years. I pay him $350 a week plus free room and board"

"The cook has been here for 18 months, and I pay her $250 per week plus free room and board"

"Then there's the half-wit. He works about 18 hours every day and does about 90% of all the work around here. He makes about $10 per week, pays his own room and board, and I buy him a bottle of rum every Saturday night. He also sleeps with my wife occasionally"

"That's the person I want to talk to...the half-wit" says the official.

"That would be me" replied the owner.
In partnership with the respective primary industry and fisheries sectors in the NT, the Department of Resources collects production and value data on their various sectors.

The Economic Services Branch within the Policy and Services Group is responsible for the collation and publication of two annual data collections.

The two significant publications delivered each year (based on this data) are the annual Economic Outlook and the Primary Industry and Fisheries Overview and Outlook publications. The data is also used by other agencies such as NT Treasury, the Department of Business and Employment and the Australian Bureau of Statistics.

These publications provide a range of historical, current and future data and information relating to primary industry and fisheries sectors, commodities, trade, exchange rates, growth rates for the NT and its trading partners, employment numbers, number and type of businesses, industry multipliers to the NT economy, contribution to Gross state Product, other facts and figures relating to the NT and much more. The 2010 editions of these publications are available for 2010 on the DoR Primary Industry Internet site: www.nt.gov.au/d/Primary_Industry/.

In 2009-10, the total value of rural industries and fisheries production in the NT is estimated at $524.6 million, a decrease of 10.5% over the previous year.

This result is on the back of the lingering affects of the Global Financial Crisis (GFC).

(Lower production values in these sectors below were offset by an 18.5% increase in the value of horticulture production to $117.7 million.)

This decrease is primarily due to:

- a fall in the value of production for fisheries (mainly the Northern Prawn Fleet) decreased by 34.4% to $124.3 million,
- a 13.2% decrease in other livestock production (mainly crocodile production) to $14.8 million, the production value of mixed farming decreased 8.3% to $16.7 million and
- to lesser extent the production value of cattle decreased by 4.1% to $251.1 million.

Years in Review

- Since 2002-03 the Territory cattle industry has on average turned off 500,000 head per year with an average value of over $250 million.
- A record year in 2007-08 saw over 675,000 head moved interstate or exported live with an estimated production value of $330 million.
- In 2008-09 turn-off reduced by 24.7% driven by the GFC and the bumper turn-off the previous year.
- In 2009-10 the cattle industry displayed resilience to the GFC with only a 4.1% reduction in the turn-off.
- In early 2010, the Indonesian Government announced it would be enforcing weight limits on imported cattle and a reduction in new import permits.
- These policy changes and the recent suspension of live export trade to Indonesia are expected to impact on 2010-11 turn-off figures for live export.

If you have any questions regarding these documents or DoR data collections, please contact Michael Jean, DoR Senior Economist (8999 2242) or michael.jean@nt.gov.au
**2011 TENNANT CREEK SHOW RESULTS**

2011 Tennant Creek Show Cattle Judge, Henry Townsend from Katherine, congratulated the two stations exhibiting cattle and competition winners who shared in over $5000 sponsorship supporting this year’s Cattle Section. Organisers hope to grow this into a larger event next year and encourage other stations to “back their beef”.

Onlookers had fun testing their knowledge in the various competitions with Bryan Gill and Neil Macdonald winning NTCA leather station diary covers for the Closest to the Judge and Guess the Weight competitions respectively. The young quiet tempered Droughtmaster bull on display by the Old Man Plains Research Station team from Alice Springs weighed in at 288 kgs.

Sally Sims guessed the correct number of red ear tags to win herself a great product pack from Santa Gertrudis Australia. Winning the highly contested $350 Ariat Boot Voucher for the Guess the Breed – Cattlemans’s Competition was Natasha Paul from Brunchilly. The accompanying City Slicker’s Competition for Guess the Breed was a draw as a number of entries were correct (Ed. - we will make it harder next year!). So our fearless judge drew the winner! Himself! After some red faces, the competition was redrawn and out of the hat came Nathan Collier’s name who won himself some great Didgeridoona oile skin products.

This year the Queensland Country Life Highest Aggregate Points was won by Brunette Downs and the Virbac President’s Cup – Supreme Cattle Exhibit was also awarded to Brunette Downs for their Pen of 3 Mature Breeding Cows with Calves (pictured left with Judge Henry Townsend from Katherine).

GREAT STEAK!
Food and refreshments for the Pastoral Industry BBQ was sponsored by T&R Pastoral, the ‘great steak’ supplied by Barkly Quality Butchers, and cooked by Pieter Conradie.
And the winners were...

<table>
<thead>
<tr>
<th>Class</th>
<th>1st Place</th>
<th>2nd Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRT Pen of 2 Bulls</td>
<td>Brunchilly - SK</td>
<td></td>
</tr>
<tr>
<td>Barkly Shire Council Single Local Bull</td>
<td>Brunette Downs - AACo</td>
<td>Brunchilly - SK</td>
</tr>
<tr>
<td>Midfield Meats Pen of 3 Mature Breeder Cows</td>
<td>Brunette Downs - AACo</td>
<td>Brunchilly - SK</td>
</tr>
<tr>
<td>CRT Pen of 3 Heifers 250-350kg</td>
<td>Brunchilly - SK</td>
<td>Brunette Downs - AACo</td>
</tr>
<tr>
<td>CRT Pen of 3 Heifers 350-450kg</td>
<td>Brunchilly - SK</td>
<td>Brunette Downs - AACo</td>
</tr>
<tr>
<td>T&amp;R Pastoral Pen of 3 Steers 250-350kg</td>
<td>Brunette Downs - AACo</td>
<td></td>
</tr>
<tr>
<td>Territory Communications Pen of 3 Steers 350-450kg</td>
<td>Brunette Downs - AACo</td>
<td></td>
</tr>
</tbody>
</table>

GETTING ADVICE:

Charlie McGlynn, Brunchilly, discussing the finer points of cattle judging with his dad, Ben, and uncle Jimmy, who were contemplating their entries in the Closest to the Judge Competition.

LIVELY DEBATE:

intense discussions surrounding the Guess the Breed - Cattlemans Competition. Winning the highly contested $350 Ariat Boots Voucher was Natasha Paul from Brunchilly.

WINNERS:

CRT Pen of 3 Heifers 250-350kg class, exhibited by Brunchilly.
WHAT IS GOING ON IN YOUR HERD?  VIBRIOSIS in the NT

G. Jayawardhana* and J. Eccles, Senior Field Veterinary Officer, Katherine * Formerly DoR
Agnote - No: K43 - February 2011 - © Northern Territory Government

**Vibriosis (Campylobacteriosis)**

*is a venereal disease of cattle transmitted during mating and is a major cause of infertility in cattle herds.*
*Cows infected at mating are likely to become infertile or may abort.*
*This is reflected in poor conception rates, sometimes below 50%.*
*There are increased numbers of cows returning to service, resulting in reduced calving rates and delayed conception patterns (more calves are born later and hence have lower average weaning rates).*

**DISTRIBUTION**

Vibriosis is widespread in the NT and has been found in every region. It has been recorded in 88% of herds in the Victoria River District and there is evidence to suggest that it is present both in the Barkly Tableland and the Gulf districts. The prevalence of vibriosis in the Alice Springs district is possibly higher than was previously thought.

**MODE OF INFECTION AND SPREAD**

Vibriosis is a sexually transmitted disease and all sexually active animals are susceptible to infection, unless they are already immune.

The bacterium is a particularly persistent organism that localises in the reproductive tract of cows. In bulls, it may be present indefinitely in the prepuce, penis and in semen, unless treated. It will not survive outside the animal.

Vibriosis is not thought to spread from one female to another. However, it is possible for it to spread between bulls running together; bulls which have never been used for natural service have been shown to carry the organism.

The most common way in which a herd can become infected is through the introduction of infected bulls or cows. Once present in a herd, vibriosis is spread to susceptible animals at mating. When a cow is infected, the organism passes through the cervix and establishes in the uterus.

This leads to inflammation of the lining of the uterus (endometritis) and of the fallopian tubes or oviducts (salpingitis). It is not until this inflammation subsides that further conceptions can occur, by which time the organism has been expelled from the reproductive organs. It is possible, however, that the organism may persist for some months in the vagina.

**SIGNS AND SYMPTOMS**

There are no obvious symptoms in bulls.

If a cow is infected at mating, she is unlikely to sustain a pregnancy due to the early death of the embryo. The infection that occurs due to the presence of the bacteria can prevent fertilisation from occurring or may cause early abortion.

Over 10% of infected females become permanently infertile due to fallopian tube obstruction, resulting in fat, barren cows. In herds with endemic infection, the main impact on conception rate is most evident in maiden heifers as they are susceptible.

Animals that have overcome infection usually develop a sound immunity. Although difficult to detect in the paddock, the most common signs of vibriosis are cows returning to service to the bull and the presence of aborted foetuses of between three to seven months of age. Some cows will eventually recover from the infection and get into calf.
This results in a delayed conception pattern and a prolonged calving period, which may cause management problems. An increased percentage of `second round` calves, that are weak and or premature, is common in herds affected by vibriosis.

**DIAGNOSIS**

Identifying vibriosis is difficult because of the absence of clinical signs. The disease is insidious and can often remain unrecognised in herds, causing ongoing production losses.

**Confirmation of the disease can be obtained in two ways:**

- Testing vaginal mucus from cows and heifers that have been exposed to infected bulls. The test detects antibodies to the vibrio organism. The test should be done on a representative sample of both empty and pregnant cows and heifers from a herd.

- Testing preputial washings from at least 10, preferably from all, the bulls in a herd. Samples can be collected when bulls are tested for semen. Positive results from any bull should be considered as evidence of herd infection.

A blood test is also available, but is not very reliable. It is of value to determine whether infection is present in a herd; however, it is not accurate on an individual basis. Care must be taken before declaring a herd free of vibriosis based on the results of such tests as none of these diagnostic methods is 100% reliable.

**CONTROL**

In the Top End of the NT, the most effective way to control vibriosis is through a planned pregnancy testing and vaccination program.

Removal of all empty dry cows from a herd at first round weaning musters should greatly reduce the level of herd infection; however this may not be appropriate for the arid zone. At second round musters, many of the empty dry cows will have had their calf weaned at the first round but have not re-conceived yet as they require a couple of months on green feed for their condition to improve to resume cycling.

Cows develop immunity by themselves three to six months after exposure and herd tolerance may occur naturally over two to three years. However, there is the possibility that some cows will remain carriers.

The use of virgin vaccinated bulls on previously unmated vaccinated heifers is the preferred option. As a bull ages, its lining of the sheath develops folds, which can effectively harbour the vibrio organism. As older bulls are more likely to harbour the organism and carry it between cows, they should be culled when they are over eight years old.

**VACCINATION**

The prevention of the disease by strategic vaccination is the cheapest and most effective way of controlling vibriosis. There are five possible vaccination options:

1. Do not vaccinate
2. Vaccinate all bulls
3. Vaccinate all heifers
4. Vaccinate all bulls and heifers
5. Vaccinate all bulls, heifers and cows.

In the past, the preferred program has been to vaccinate bulls only; many producers still choose to do this. However, with the increasing value of cattle, producers should now consider vaccinating both heifers and bulls.

A bivalent vaccine is recommended for use in all animals at least four weeks prior to joining. Vaccination programs must be ongoing to be effective because animals will lose immunity. Bull control is also critical to the success of the vaccination program. It is recommended that initially two 5 mL doses be given four to six weeks apart. Where this is not possible, the second dose should be given at the next earliest possible opportunity, for example at the second round of mustering, or the first round of mustering the following year.
When heifers are more than 18 months old, they only require one initial vaccination. Most heifers in the NT are mated for the first time at more than 18 months old, so one vaccination prior to mating is adequate; a further vaccination the following year is recommended. Vaccinating maiden heifers and bulls, or bulls only may be economic.

All new bulls introduced to the property should be vaccinated twice, four to six weeks apart. It should be stressed that where two vaccinations are required, full immunity will only develop after the second vaccination. Females more than 18 months old only require one dose followed by a booster dose annually. Bulls only require one booster dose annually after the initial two doses.

In many instances (where bull control is good) vaccinating and treating only the bulls can break the transmission cycle, with the disease gradually dying out in the herd. For this reason preventive vaccination of bulls should be adopted as a routine practice.

Bulls Initially, bulls require two 5 mL doses, four to six weeks apart with an annual 5 mL booster shot. New bulls to the property should also receive the two initial 5 mL doses. Two vaccinations will also clear the disease from most but not all infected bulls. Cows and heifers more than 18 months old require single 5ml dose before joining will provide protection, followed by a 2 mL booster annually or every two years. Heifers less than 18 months old they require two 5 mL doses four to six weeks apart and then a 2 mL booster annually or every two years.

**WARNING**

Vaccination programs must be ongoing to be effective, otherwise animals will lose immunity and become susceptible to infection. In susceptible herds vibriosis can cause a sudden, severe reduction in reproductive performance across the whole herd. In a vibriosis-free herd, the introduction of the disease can cause a "crash" in the weaning rate.

The primary focus must be to prevent the introduction of infected bulls as they have the potential to spread the disease throughout the herd. An infected bull will only infect unprotected cows with which it mates. However, if the problem is severe or bull control is difficult, then vaccination of the breeder herd is also recommended.

- Use a bivalent vaccine in the vaccination program.
- All new bulls should be vaccinated twice, six weeks apart before coming into contact with females. Two vaccinations will clear the disease from most infected bulls. All bulls should be given an annual booster vaccination.
- Vaccinate all heifers prior to joining. If heifers are less than 18 months old at joining, they will require two doses four to six weeks apart. Older heifers only require one dose, although a follow-up dose the following year will be beneficial.
- Full immunity will only develop after the second vaccination if heifers are less than 18 months old.
- If a herd is free of vibriosis but the exclusion of infected bulls cannot be guaranteed, then vaccination of the whole herd should be considered.
- Bulls more than eight years old are likely to be carriers of vibriosis and should be culled.
EVENTS TO START SAVING YOUR PENNIES FOR!

BEEF AUSTRALIA 2012
7-12 MAY 2012
ROCKHAMPTON

INNOVATION • COLLABORATION • INSPIRATION • CELEBRATION

EVERYONE YOU NEED TO SEE
IN ONE PLACE, AT ONE TIME AT BEEF AUSTRALIA 2012.

Every three years the Australian beef industry and their international counterparts meet in Rockhampton, Queensland for a week of innovation, collaboration, inspiration and celebration. Beef Australia 2012, Australia’s national beef exposition features national stud, carcase and commercial competitions, several thousand live cattle from over thirty breeds, hundreds of trade displays, dozens of seminars and tours and hospitality second to none.

INNOVATION will be showcased at the International Genetics Marketplace which features live cattle, the latest genetics research and developments, a Business Lounge, and technical displays and seminars hosted by Australian and international experts. The Marketplace is designed to put you in touch with the best Australia has to offer from her tropical and temperate adapted beef herds.

COLLABORATION and networking opportunities are led by a free Business Matching Program called Handshakes provided by the Queensland Government in partnership with the Australian Trade Commission. The program provides an ideal opportunity for Australian enterprises and specialists in the livestock industry to explore business prospects and meet face-to-face with international agribusiness companies seeking to do business in Australia. Meeting facilities are available at the Expo along with interpreter services.

If you’re aged between 18 to 35 there’s a program just for you too – an International Exchange called Generation Next between Australia and beef producing countries including Canada, Brazil and the USA.

INSPIRATION from the best minds in the beef industry – both nationally and internationally – can be found at the new International Beef Genetics Conference and in the 4 day seminar program. Practical inspiration via a first hand look at the operations of central Queensland’s most innovative stud and commercial producers is also available by joining a full or half day property tour while you’re at the Expo. And then enjoy the end product in one of the premium beef restaurants – we promise you won’t be disappointed!

CELEBRATION opportunities include the new Beef Australia Big BBQ where chefs from around the world will be showing their flair at the grill. Kick up your heels at the end of the week at the community concert, another new initiative for 2012 where the local community and Expo goers can come together to celebrate the week that was. We make you a promise – be it around the bar, at our Gala Ball or at one of our fabulous functions we’ll guarantee you a ticket to a good time.

www.beefaustralia.com.au
celebrating diversity: people, places, purpose

Australian Rangeland Society
17th Biennial Conference
Kununurra, Western Australia, 23-27 September 2012

Are you ready for Australia’s Kimberley region to inspire you?
Are you a rangelands manager, user or researcher?
Then this is the conference for you!

Proposed topics for discussion include:
• strategic land and water use planning in northern Australia
• balancing pastoral, tourism, mining and conservation uses in the rangelands
• Indigenous land use and management
• latest techniques in grazing, biodiversity, fire and carbon management
• new science for rangeland management in a multiple use framework
• case studies in land restoration and land use change

If you are interested in finding out more contact Paul Novelly, Australian Rangelands Committee 2012 at paul.novelly@agric.wa.gov.au
Information about the Australian Rangeland Society can be found at www.austrangesoc.com.au
Live Cattle Exports via Darwin Port – JULY 2011

- 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.

<table>
<thead>
<tr>
<th>Destination</th>
<th>2009</th>
<th>2010</th>
<th>Last year</th>
<th>YTD</th>
<th>1-31 JUL</th>
<th>Previous Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRUNEI</td>
<td>3,131</td>
<td>2,853</td>
<td>948</td>
<td>2,517</td>
<td>682</td>
<td>0</td>
</tr>
<tr>
<td>INDONESIA</td>
<td>336,433</td>
<td>273,396</td>
<td>158,009</td>
<td>158,396</td>
<td>0</td>
<td>2,713</td>
</tr>
<tr>
<td>PHILIPPINES</td>
<td>10,422</td>
<td>12,744</td>
<td>4,877</td>
<td>3,363</td>
<td>1,113</td>
<td>2,346</td>
</tr>
<tr>
<td>SABAH</td>
<td>1,410</td>
<td>982</td>
<td>690</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SARAWAK</td>
<td>0</td>
<td>1,615</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>W-MALAYSIA</td>
<td>1,918</td>
<td>3,975</td>
<td>0</td>
<td>920</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>EAST TIMOR</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>347,314</td>
<td>266,665</td>
<td>165,426</td>
<td>135,388</td>
<td>0</td>
<td>2,005</td>
</tr>
</tbody>
</table>

- July at a glance
  - 2,005 head of cattle through the Port of Darwin during July, 2,948 less than June and 25,992 less than July last year.
  - 2011 total cattle figures indicate 40,138 head less than last year. NT cattle 26,836 less than last year.

<table>
<thead>
<tr>
<th>NATIONAL CATTLE PRICES - W/E 22/7/2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEAVY STEER</td>
</tr>
<tr>
<td>SALEYARDS</td>
</tr>
<tr>
<td>NSW</td>
</tr>
<tr>
<td>NSW</td>
</tr>
<tr>
<td>This week</td>
</tr>
<tr>
<td>Last week</td>
</tr>
<tr>
<td>Year ago</td>
</tr>
<tr>
<td>MEDIUM COW</td>
</tr>
<tr>
<td>SALEYARDS</td>
</tr>
<tr>
<td>NSW</td>
</tr>
<tr>
<td>NSW</td>
</tr>
<tr>
<td>This week</td>
</tr>
<tr>
<td>Last week</td>
</tr>
<tr>
<td>Year ago</td>
</tr>
<tr>
<td>TRADE STEER</td>
</tr>
<tr>
<td>SALEYARDS</td>
</tr>
<tr>
<td>NSW</td>
</tr>
<tr>
<td>NSW</td>
</tr>
<tr>
<td>This week</td>
</tr>
<tr>
<td>Last week</td>
</tr>
<tr>
<td>Year ago</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIVE EXPORT QUOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>DARIEN</td>
</tr>
<tr>
<td>DARIEN</td>
</tr>
<tr>
<td>This week</td>
</tr>
<tr>
<td>Last week</td>
</tr>
<tr>
<td>Year ago</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CURRENCY EXCHANGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Currencies 1 AUD =</td>
</tr>
<tr>
<td>Current</td>
</tr>
<tr>
<td>Brunei Dollar</td>
</tr>
<tr>
<td>Indonesian Rupiah</td>
</tr>
<tr>
<td>Philippine Peso</td>
</tr>
<tr>
<td>Malaysian Ringgit</td>
</tr>
<tr>
<td>Euro</td>
</tr>
<tr>
<td>US Dollar</td>
</tr>
</tbody>
</table>

Prices courtesy of Meat & Livestock Australia

DEPARTMENT OF RESOURCES
www.nt.gov.au/dor

BARKLY BEEF 16
LEARN YOUR PLANTS

Source: Purdie, Materne, Bubb, ‘BLCA’s Plants of the Barkly Region’

In this issue of Barkly Beef we will profile one of the region’s plant species. Hopefully this will enable you to more readily identify the pasture plants contributing (or not) to the growth of your cattle.

SILKY BROWNTOP (Eulalia aurea)

Family: Poaceae

Where is it found?
Widespread in a variety of black and red soil habitats, commonly in seasonally wet areas such as creek banks, drainage lines and flood-plains. It is drought resistant.

Red Vs Black:
When growing in red soil it has bright green, narrow leaves and is highly palatable.
In black soil it has wider, blue-green leaves and low palatability, however it is palatable and nutritious when young, or as fresh growth after fire.

<table>
<thead>
<tr>
<th>Perennial or annual?</th>
<th>Perennial.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>Up to 1m tall.</td>
</tr>
<tr>
<td>Leaves</td>
<td>Flat, 3-30 long and 0.2-0.6cm wide and taper to a fine point. Seed heads are 5-11cm long, have 2-4 golden brown spikes; the spikelets are crowded along the spikes, almost concealed by long, silky golden-brown hairs as dare terminated with a twisted, brown awn (bristle).</td>
</tr>
<tr>
<td>Seed Heads</td>
<td>Narrow, cylindrical, straight, brown, 1.5-2.5cm long &amp; 0.2-0.3cm wide. Sticky at maturity.</td>
</tr>
<tr>
<td>Palatability</td>
<td>RED – High BLACK - Low</td>
</tr>
<tr>
<td>Crude Protein</td>
<td>2 - 7.5%</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>0.02 - 0.9%</td>
</tr>
<tr>
<td>Digestibility</td>
<td>27 - 45%</td>
</tr>
<tr>
<td>Energy</td>
<td>2.6 – 6.8MJ/kg</td>
</tr>
</tbody>
</table>

Low palatability on black soil... ...but highly palatable on red soil!
Most pastoralists have a mental plan of how they will respond to the upcoming fire season and expected fires. They know which parts of their property they want to protect from fire, what tracks and fence lines have been cleared to provide access, where it is too difficult to chase fires or areas they are happy to have burnt.

Bushfires NT would like to discuss your strategies and understand your views and preparedness for the anticipated fires. Bushfire staff regularly monitors seasonal conditions, fire hotspots and fire patterns on all the properties in central Australia which provides us with an understanding of the fire landscape. We would like to share your thoughts and perspective on fires, find out where you have established clear lines and fuel breaks and where you have planned to use fire to reduce fuel loads or create more secure containment lines.

Landsat Images provide a record of changing landscape patterns caused by fire, rainfall and other activities. The mulga country is unusually green, reflecting the good rainfall over the past year and associated pasture growth. In contrast, spinifex country never shows the same greenness and fire patterns dominate. The fire patterns change through time, beginning with the red patterns of recent fires when ash is still present then progressing through orange to yellow as the ash is blown away and the areas are pre-dominantly bare soil. As the vegetation recovers the colours darken, with the darkest blue patterns representing the oldest fire ages when spinifex and shrub cover are dense and most flammable.

The Main Road is distinctly visible, and although a source of fire ignition, it is a clear line that can be used to help contain fire spread. The Bore Road is also a visible feature that has been graded and provides opportunities for fire containment. The Tracks and Fence lines are less distinct and although trafficable, probably are not cleared and therefore it may be more difficult to use as a fire containment option, especially during windy conditions. The Flood-out is an area of abundant grass growth. It’s greenness at the time of this image indicates it would be too green to burn, but once cured will represent a linear strip of heavy fuel where fire suppression would be difficult and containment using surrounding areas of different fire ages would be the only option. The areas of Low Fuel are unlikely to carry a fire and linking these areas would provide a good fire containment option.

Please get in touch with us so we can all be better prepared for the upcoming fire season. Drop into our office next time you are in town (in either Alice Springs or Tennant Creek), or give us a call and we can discuss it over the phone or visit your property, or GRANT ALLAN, BUSHFIRES NT, PH: 89523066
WHAT IS GOING ON IN YOUR HERD?  TRICHOMONIASIS in the NT

G. Jayawardhana* and J. Eccles, Senior Field Veterinary Officer, Katherine  * Formerly DoR
Agnote - No: K42 - February 2011 - © Northern Territory Government

Trichomoniasis
is a contagious venereal disease of cattle (transmitted by sexual intercourse), which causes infertility in cows.

DISTRIBUTION:
Trichomoniasis is particularly prevalent in large beef herds under extensive conditions in northern Australia. It has decreased in importance in the smaller beef herds of southern Australia. Artificial insemination, with no cow to bull contact, has largely eliminated it in dairy herds. Trichomoniasis is widespread in the northern half of the Territory. It has been recorded in the Barkly Tablelands, Elsey and Gulf districts, as well as in the VRD and Darwin district. Its incidence in the Alice Springs district is low.

A survey of 1,008 bulls on 41 stations in the VRD district done in the mid eighties found 65.6% of herds were infected with trichomonas. In infected herds the prevalence of disease ranged from 2.9 to 33.3% with an average of 11.7%.

CAUSE:
Trichomoniasis is caused by an organism called Tritrichomonas foetus. This organism can live in the reproductive tract of cows for up to 22 months, but may live for years in the reproductive organs of bulls.

SPREAD:
An infected bull may infect any female it serves. Similarly an infected female may infect any bull that serves it. The disease is purely venereal and can only be passed by sexual contact. Any animal of breeding age is susceptible to infection. The organism lives in the uterus of the cow where it produces an inflammation which either prevents conception or causes an early abortion. Such abortions are common at approximately two to four months. In bulls, the organism lives on the penis and in the surrounding prepuce.

SYMPTOMS:
The best indication of the presence of trichomoniasis is when females keep returning to the bull for four to five months after they have been initially served. Often the incidence for this is higher amongst heifers than mature cows. Aborted foetuses, of three to four months of age may be found in the paddock and a persistent vaginal discharge occurs in affected cows. However, under the extensive management conditions of the NT, these symptoms are usually not observed.

Bulls often show no obvious symptoms of trichomoniasis infection. Occasionally some may be lazy at service or even refuse to serve cows altogether due to pain in the penis.

DIAGNOSIS
Diagnosis can only be done by a veterinarian, by microscopic examination of vaginal discharge in cows or preputial scrapings in bulls. An enrichment medium is available in which trichomonas may be cultured in an incubator to increase the number of organisms in the sample, thus making them easier to detect. Unfortunately this diagnosis does not detect all infected animals.

CONTROL
Because trichomoniasis can only be spread by sexual contact, it can be effectively eradicated by carefully managing a herd. Generally females that have four to six heat periods without mating will rid themselves of the disease. Where heifers are segregated from the rest of the herd, mate only clean young tested bulls with them. By keeping them segregated from the rest of the herd you should be able to clean your herd of any trichomoniasis infection as long as no infected animal gets into the paddock.

The most reliable way to eradicate trichomoniasis from an infected herd is to separate the females and by using semen from bulls that are guaranteed to be free of trichomoniasis and other venereal diseases on cows that have been isolated for four to six heat periods. It pays to ensure that purchased bulls are free of trichomoniasis before you mate them with any cows or heifers. Stray bulls should be immediately removed from your herd.
WHAT, WHEN & WHERE

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 1</td>
<td>Darwin Cup Day</td>
</tr>
</tbody>
</table>
| Aug 6-7 | Katherine ASH Campdraft  
Krista Paterson & Renee Golding |
| Aug 6-7 | Cloncurry Merry Muster Rodeo |
| Aug 6-8 | Derby Outback Rodeo, Gymkhana & Campdraft  
Bianca McGaffin 0484 46 601 |
| Aug 11-12 | 40th Federal ICPA Conference @ Katherine  
Sally Sullivan ntsecretary@icpa.com.au |
| Aug 12-14 | Mt Isa APRA Rodeo  
07 4743 2706 www.isarodeo.com.au |
| Aug 11-14 | Pussycat Campdraft & Murranji Challenge  
08 8975 0762 |
| Aug 19-20 | Darwin Rotary Rodeo  
APRA Rodeo |
| Aug 19-21 | Borroloola Campdraft, Rodeo, Gymkhana  
Rona Robertson rona.robertson@borroloola.com |
| Aug 19-21 | Burke & Wills Campdraft / Rodeo |
| Aug 20 | Pine Creek Turf Club - Pine Creek Cup |
| Aug 23 | Alexandria PDS Field Day  
Casey Collier, DoR Tennant Creek 8962 4493 |
| Aug 24-25 | Barkly Herd Management Forum – Brunette Downs  
Casey Collier, DoR Tennant Creek 8962 4493 |
| Aug 26-28 | Camooweal Drovers Festival  
Liz Flood - 07 4748 2022 |
| Aug 27 | Camooweal Jockey Club Races  
Russell Young - 07 4748 2128 / 0418 198 978 |
| Aug 26-28 | Nixon's Xing Campdraft  
Terry Jones 0427 180 027 |
| Aug 26-28 | Sedan Dip Campdraft  
Heather Smith 0417 789 066 |
| Aug 27-28 | Hughenden Campdraft  
Sharon Johnson 07 47 415 007 |

NEW BOOK: **GRASSES OF THE NT SAVANNAS – A FIELD GUIDE**

Arthur Cameron, Principal Pastures and Extension Agronomist, Pastoral Production, DoR

A new book has been recently released in the NT by Greening Australia. The title is “GRASSES of the Northern Territory Savannas - a field guide”, by Sam Crowder and Boronia Siggers.

It contains excellent images of 66 common native grasses, which will make it easier for producers to identify their pasture plants.

The book also contains plant descriptions, and information on distribution, habitats and forage value.

Copies of the book can be obtained for $30 from Claire Pearce of Greening Australia, Katherine or by phoning Claire on mobile 0434 340 338.
AussieGRASS – June 2011 Update
Chris Materne, Pastoral Production, Alice Springs

Past – Exceptional!
Present – Exceptional!
Future ?

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 http://www.longpaddock.qld.gov.au/.

Past
Pasture Growth Relative to Historical Records since 1957

Figure 1 indicates how good the 2010/11 season has been across the entire NT. Looking back over the past two years (figure 2) shows a similar story with above average to extremely high pasture growth conditions being experienced across the majority of the NT south of Katherine. Average growth around Katherine and Darwin is due to a lack of available nitrogen in the soil and not water.
Total standing dry matter (figure 3) is estimated by incorporating pasture carried over from the previous season (less grazing, fire and detachment) and the current season’s growth. Apart from small areas affected by fire the majority of the NT is still showing pasture loads of over 1000kg/ha. A broad north-western to south-eastern band across the NT and including much of the Alice Springs district is showing greater than 2000kg/ha with large areas greater than 4000kg/ha. With fire only requiring approximately 1200kg/ha to carry, this highlights the potential situation we will be in once this fuel curers and the warm weather returns.

**Future Growth Predications**

Figure 4 and 5 represents the chance of exceeding median pasture growth over the coming three month period based on the SOI index. The model generally indicates the chance of exceeding median pasture growth from winter rain in the Alice Springs is extremely low, apart from the far south eastern corner which is slightly better, but still only a 50-50 chance.

---

**PERSONALISED PROPERTY MAPS - Are you interested in AussieGRASS maps for your property?**

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

FARM READY FUNDING

Pre-approvals for FarmReady Reimbursement Grants re-open on 1 July 2011.

Improve your skills, improve your business! FarmReady funding for training is an option. A part of the Australian Government’s “Australia's Farming Future” initiative, FarmReady is a national program, available to all primary industries.

Eligible participants are able to claim up to $1500 per financial year to attend FarmReady approved courses, with additional funding available for associated reasonable travel, accommodation and childcare expenses. Approved courses will focus on areas designed to equip primary producers with the tools to manage and adapt to the impacts of climate change.

To be eligible for the FarmReady Reimbursement Grant, you need to be either a:
- primary producer (including farmers, fishers and foresters as defined by the Australian Taxation Office)
- immediate family member of a primary producer
- member of the management team of a primary production enterprise (‘management positions’ include, but not limited to, assistant managers, human resource/personnel managers, office managers, head stockmen and farm overseers) or
- Indigenous land manager

There are about 590 courses Australia wide to choose from, including 18 courses conducted in the NT. The table below is a handful of these 590 courses that are available Australia wide to stimulate your curiosity! For more information go to www.farmready.gov.au

<table>
<thead>
<tr>
<th>Training Course Name</th>
<th>Training Provider Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell GrazingFocus</td>
<td>PrincipleFocus (Aust) Pty Ltd</td>
</tr>
<tr>
<td>Grazing for Profit</td>
<td>Resource Consulting Services Pty Ltd</td>
</tr>
<tr>
<td>KLR Marketing School</td>
<td>KLR Marketing Pty Ltd</td>
</tr>
<tr>
<td>Holistic Management - 9 Day Practitioner Training</td>
<td>Inside Outside Mgt P/L</td>
</tr>
<tr>
<td>Applied Grazing Course</td>
<td>Resource Consulting Services Pty Ltd</td>
</tr>
<tr>
<td>Graduate Link</td>
<td>Resource Consulting Services Pty Ltd</td>
</tr>
<tr>
<td>Better Decisions in the Business of Beef</td>
<td>DEEDI QLD</td>
</tr>
<tr>
<td>Creating Great Farm Employers</td>
<td>Rural Directions Pty Ltd</td>
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<tr>
<td>Stocktake - Pasture Monitoring</td>
<td>DEEDI QLD</td>
</tr>
<tr>
<td>Ruminant Nutrition Workshop</td>
<td>Resource Consulting Services Pty Ltd</td>
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<tr>
<td>EDGEnetwork: Grazing Land Management (GLM) BreedingEDGE,</td>
<td>Meat and Livestock Australia (DEEDI QLD, DoR NT, Ag&amp;Food WA)</td>
</tr>
<tr>
<td>NutritionEDGE, BusinessEDGE</td>
<td></td>
</tr>
<tr>
<td>Company Directors Course</td>
<td>Australian Institute of Company Directors</td>
</tr>
<tr>
<td>GPS / GIS Training</td>
<td>Grazing BestPrac</td>
</tr>
<tr>
<td>Principles of Profitable Farm Leasing - for Livestock Enterprises</td>
<td>Holmes Sackett Pty Ltd</td>
</tr>
<tr>
<td>Google Earth for Land Managers</td>
<td>PRW Agribusiness</td>
</tr>
<tr>
<td>Beef cost of production workshops</td>
<td>Holmes Sackett Pty Ltd</td>
</tr>
<tr>
<td>MYOB - Setting up &amp; Working with MYOB Accounting Software for accurate farm financial record keeping (On-line via Internet)</td>
<td>Capitis Accounting Solutions</td>
</tr>
<tr>
<td>Farm Business Analysis - Masterclass 1</td>
<td>Rural Directions Pty Ltd</td>
</tr>
<tr>
<td>Fertility Management Course</td>
<td>DEEDI QLD</td>
</tr>
<tr>
<td>Pasture to Pocket Workshop</td>
<td>Resource Consulting Services Pty Ltd</td>
</tr>
<tr>
<td>Understanding your Farm Finances</td>
<td>Rural Directions Pty Ltd</td>
</tr>
</tbody>
</table>

As you can see from the list above the suite of MLA EDGEnetwork Workshops – NutritionEDGE, BreedingEDGE, BusinessEDGE and GLM is listed as an eligible course for producers to attend.
**NutritionEDGE**

This workshop gives you a comprehensive look at ruminant nutrition. It will assist you to better match pasture and feed options to your livestock needs.

This **EDGE** network workshop helps you to:
- Determine the nutritional requirements of your livestock
- Estimate the feed value of your pasture and the production of your livestock
- Find the balance between your pasture growth, pasture use and animal production
- Make management decisions that consider different seasonal conditions
- Know what supplements to feed
- Save money on supplementary and drought feeding
- Understand a feed product table and know what questions to ask feed companies

**BusinessEDGE**

Producers who attended the recent MLA Beef-Up Forum in Tennant Creek had a preview of this new two day workshop offered by MLA.

Business**EDGE**, presented by Phil Holmes, is a business course customised for northern beef producers after a damning report. The Northern Beef Situation Analysis commissioned by MLA reported that in the last 6 out of 7 years the average northern beef business has been making a loss. Authors Terry McCosker, Phil Holmes and David McLean concluded that in 2009 the northern beef industry was in the worst state since the beef slump of the 1970s. Phil Holmes himself has been working with a number of producer benchmarking groups across the NT and Australia for many years.

**What is the workshop all about and what will I learn?**

In short, **you will almost certainly go home and do things very differently**, because…

- You will keep more accurate records on the information that really matters.
- You will know why you cannot rely on your tax return to make good business decisions.
- You will know if your business is economically sustainable in the long term or not.
- You will really understand how to interpret the critical numbers in a set of business accounts.
- You will know how to allocate capital effectively for the best result.
- You will know how to tell if your debt is productive or unproductive and how to manage it.
- You will understand the importance of financial provisioning.
- You will be armed with a set of spreadsheet tools to help you all of this
- You will have access to follow-up professional advice after the course if you think you need it.

For more information and to register, contact:  
Janine King JK Connections on 0419 735 542 or email businessedge@jkconnections.com.au

With the current market climate highlighting the imperative need for enterprise flexibility and sound benchmarking and recording, this new workshop has come at a time when worried producers are seeking answers and direction.

Now is the time to look at your business objectively to keep in front of the herd! This can be a sobering activity for all involved but is imperative for your future and your family’s future.
SERVES: 4  PREPARATION TIME: 15 MINUTES  COOKING TIME: 120 MINUTES

Ingredients

<table>
<thead>
<tr>
<th>Beef</th>
<th>Moroccan spice mix</th>
<th>Garlic</th>
<th>Onions</th>
<th>Carrots</th>
<th>Stock</th>
<th>Tomatoes</th>
<th>Tomato paste</th>
<th>Sugar</th>
<th>Zucchini</th>
<th>Chickpeas</th>
<th>Coriander</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kg chuck or boneless shin/gravy beef</td>
<td>2 tbsp</td>
<td>2 cloves</td>
<td>1 large</td>
<td>2 medium</td>
<td>3 cups</td>
<td>400 g</td>
<td>¼ cup</td>
<td>2 tsp</td>
<td>2 medium</td>
<td>400 g</td>
<td>¼ cup</td>
</tr>
<tr>
<td>1 large onion, chopped</td>
<td>Moroccan spice mix</td>
<td>garlic, chopped</td>
<td>chopped</td>
<td>cut into large dice</td>
<td>beef stock</td>
<td>diced tomatoes</td>
<td>cup tomato paste</td>
<td>sugar</td>
<td>zucchini, chopped</td>
<td>chickpeas, drained</td>
<td>chopped coriander</td>
</tr>
</tbody>
</table>

Method

1. Preheat the oven to 180°C. Cut beef into 2.5-3cm cubes, place in a large bowl. Add about 2 tbsp of oil and the Moroccan spice mix, mix well. Heat a large frypan over a medium-high heat. Brown the beef in 2 or 3 batches. Remove each batch and place in a casserole dish.
2. Reduce heat in the pan and add a little extra oil, add the garlic, onion and carrot, cook for 1-2 minutes, stir occasionally.
3. Gradually pour in the stock and the tomatoes, stirring well. Add the tomato paste and sugar. Stir until the mixture boils. Pour over the beef in the casserole dish and stir to combine.
4. Cover the casserole dish, place in oven, and cook until the beef is very tender. Stir every 40 minutes or so, add water if needed to keep the ingredients just covered. Towards the end of the cooking time, add the zucchini and the chickpeas. Cook until the zucchini is tender, and then stir in the coriander. Serve with couscous.

Tips

Best beef cuts for casseroling or braising: chuck or boneless shin/gravy beef cuts take 2-2½ hours to cook. Topside, round and blade take 1-1½ hours to cook.
Don’t rush the initial stage of browning the meat. This will help make the dish rich in colour and flavour.
Simmer the casserole gently and taste it to see if it’s ready. Stir occasionally and adjust the heat as it cooks if needed.
When it’s done the meat should be tender enough to fall apart easily with a fork.
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2011 Tennant Creek Show—Cattle Section

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