Editorial

Dry spells during the wet season have made it difficult to establish new pastures.

The February and the 3 months Aussie Grass Pasture Growth maps show extremely low or well below average growth over most of the Top End.

The flip side of these dry spells is that it has allowed producers in the Top End and Katherine the opportunity to harvest good quantities of Jarra grass seed for their own use, and for sale

Cheers from the Editor

Arthur Cameron

April 2012

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A new comprehensive Best Practice Manual (BPM) titled “Cattle and land management best practices in the Top End region” was released on the 20th of March. The manual updates and expands on information provided in the Katherine Best Practice Manual released in 2009. The manual was produced with funding support from Meat & Livestock Australia (MLA).

The manual is a comprehensive snapshot of how to manage properties and run cattle in the Top End. There are Chapters on Infrastructure and Station Development, Land management, Cattle Breeding, Cattle Management, Cattle Nutrition, Animal Health, and other topics of interest including Floodplain Production.

The BPM is available in three formats, a hard cover book, online (on the DoR and MLA web sites) and as a CD. Most of the hard cover books have already been allocated, however CDs are still available. Books will be sent to or delivered to Top End producers by Extension Officers. Copies of the book will also be available in Departmental and Community Libraries.
A guide to heifer management in northern Australia is now available. This practical guide to managing heifers has been developed using results of recent research and existing knowledge of best practice heifer management. It provides practical information on management practices and the biology of heifers to help cattle producers to make informed management decisions.

This publication is an outcome of MLA-funded projects conducted in northern Australia. Although the publication has focused primarily on heifer management in extensive beef herds, the principles have equal application to all beef herds across northern Australia despite any differences in scale of operations, breeds, climatic conditions or pastures types. It is a short, readable guide to best practice management written for graziers, station managers, head and other stockmen and for students of animal husbandry.

- Hard copies can be ordered by calling the MLA membership services hotline on 1800 675 717 or email publications@mla.com.au

Or from the Department of Resources - Email: technical.publications@nt.gov.au
Key messages for heifer management
Improving re-conception rates in first-calf heifers can significantly improve herd profitability.

General principles that can be applied to the management of replacement heifers include:

- Body condition at mating has the greatest effect on heifer fertility.
- Conservative stocking and good pasture in heifer paddocks are the cheapest ways to achieve good body condition. Supplements may be cost effective.
- Heifers should be segregated from the breeder herd, grazed on the best paddocks and may need supplements over the post-weaning dry season to reach critical mating weight.
- The majority of heifers should be at or above the critical mating weight (CMW) at the start of joining. The CMW for *Bos indicus* heifers is 320–340kg.
- *Bos indicus* heifers tend to reach puberty at heavier weights and at a later age than *Bos taurus* heifers.
- The heifer needs to have a body condition score (BCS) of 3.5 (on BCS scale of 1–5) or higher at calving to maximise the chance of getting pregnant again while rearing her calf.
- If heifers are selected before joining, this should be based on growth over the post-weaning year, and not on weight at weaning, which largely depends on age.
- Mate more heifers than are needed for replacements using young bulls evaluated for breeding soundness, ‘calving ease’ and ‘low birth weight’.
- Select replacement heifers from those that get pregnant early in the joining period—and on temperament.
- Ideally, heifers should be mated for only three cycles (63 days). On extensive properties, pregnancy diagnosis can be used to identify heifers that conceived early in the mating period.
- Yearling mating will give good results only if heifers are heavy enough (on good country) and are of early-maturing breed types.
- The best type of heifer will be that suited to the environment and target market.
- Genetic improvement is faster through crossbreeding than through selection.
- Bull selection will have a much greater impact on herd improvement than selecting heifers or cows.
- Calf losses in first-calf heifers are often high (>20%) and mostly occur around the time of birth.
- Muster and wean first-calf heifers before the main breeder herd.
- Wean calves early, down to 100kg (3 months), or even earlier if heifer survival is at risk.
- Vaccinate all heifers against botulism and against any other diseases that could have significant economic impact.
- Maiden heifers are a good group to use if an artificial insemination program is planned.
Fertilisers for pastures - part 1

Arthur Cameron, Pastoral Production, Darwin

Why fertilise?

Soils in the Darwin region are generally infertile, and have low levels of the nutrients required for optimum plant growth. The exceptions to this are the black clay floodplain soils which have better nutrient availability.

What pastures to fertilise?

The obvious pastures to fertilise are the introduced improved pastures which are responsive to fertiliser applications.

Native pastures (Kangaroo grass, Perennial sorghum) have evolved in a low fertility environment, and do not respond well to applied fertilisers. They have also evolved in a low intensity grazing environment and can be quickly degraded and become unproductive if overgrazed. Native pastures are not able to sustain the grazing intensities which would be required to get an economic return from the cost of applying fertilisers.

What fertilisers are needed?

What nutrients are required depends on the type of pasture plants being grown and the way the pasture is used. Pasture grasses may need different fertiliser applications than pasture legumes. Hay paddocks will generally need different fertiliser applications than grazed paddocks because of high removal of nutrients in hay.

All improved pastures need to be fertilised with phosphorus and sulphur in about equal amounts. The phosphorus (P) is the primary requirement, and the pastures will respond to sulphur (S) applications only if phosphorus is also applied.

All pastures also need nitrogen. Legumes (Cavalcade, Verano, Seca), if they are supplied with the other nutrients (P, S) fix all of the nitrogen they need from the atmosphere using nodules on their roots. Grasses (Buffel, Jarra, Sabi, Strickland) do not have these nodules and must depend on nitrogen from the soil. This soil nitrogen can be from applied fertilisers or from legumes growing with the grass.

Other fertiliser nutrients may be required on specific soils or for specific end uses. Legumes require molybdenum to form the nodules to fix nitrogen. Molybdenum applications are generally only required on sandy soils. Zinc applications are sometimes required, again generally on sandy soils.

Potassium applications are often required in hay paddocks. Large quantities of potassium are removed in hay. On many soils with continuous hay cropping, the potassium level will fall to a level which greatly reduces hay yields.
Fertilisers for pastures - part 2

Arthur Cameron, Pastoral Production, Darwin

How much fertiliser is needed?

The amount of fertiliser to be applied depends on what the pasture is used for and the intensity of use.

Pastures can be used for revegetation and erosion control, grazing of various intensities or for high intensity hay production.

For revegetation or erosion control, if pastures are not grazed, fertiliser applications may be necessary only in the first year to ensure establishment and growth to provide ground cover as nutrients in plant material are not been removed.

The level to which the nutrients are removed from the system is generally low with grazed pastures, as grazing animals recycle the majority of nutrients back onto the pasture through faeces and urine.

Nutrient removal in hay is significantly greater. The levels of nitrogen (N), phosphorus (P), potassium (K) and sulphur (S) removed in a good grass (Jarra) hay crop at (10 tonnes hay/ha) and a good legume (Cavalcade) hay crop at (6 tonnes hay/ha) are presented in Table 1.

Table 1: Nutrient removal in hay (kg/ha)

<table>
<thead>
<tr>
<th>Hay crop</th>
<th>Nutrient</th>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>P</td>
<td>K</td>
<td>S</td>
</tr>
<tr>
<td>Grass (10t/ha)</td>
<td>100</td>
<td>10</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>Legume (6 t/ha)</td>
<td>120</td>
<td>9</td>
<td>90</td>
<td>10</td>
</tr>
</tbody>
</table>

With this level of nutrient removal, it does not take many years of producing hay to deplete the soil of nutrients and lead to deficiencies and poor growth and yields. Nitrogen is fixed by legumes, so the removal of N is only really a problem in pure grass crops.

The amount of each nutrient which needs to be applied to keep pastures productive is presented in Table 2.

Table 2: Nutrient required to keep pastures productive (kg/ha)

<table>
<thead>
<tr>
<th>Use</th>
<th>Nutrient</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>P</td>
<td>K</td>
<td>S</td>
</tr>
<tr>
<td>Grass grazing</td>
<td>20 - 30</td>
<td>5</td>
<td>0 - 25</td>
<td>5</td>
</tr>
<tr>
<td>Grass hay</td>
<td>50 - 100</td>
<td>10</td>
<td>25 - 50</td>
<td>10</td>
</tr>
<tr>
<td>Legume grazing</td>
<td>0</td>
<td>5</td>
<td>0 - 25</td>
<td>5</td>
</tr>
<tr>
<td>Legume hay</td>
<td>0</td>
<td>10 - 15</td>
<td>25 - 50</td>
<td>10 - 15</td>
</tr>
<tr>
<td>Mixed pasture grazing</td>
<td>0</td>
<td>5</td>
<td>0 - 25</td>
<td>5</td>
</tr>
</tbody>
</table>

In a mixed pasture, the legume is expected to fix nitrogen that will be of benefit to the grasses and the pasture. However, this process is not instant as there is little direct transfer of nitrogen.
from legume to grass. The process usually takes a season to occur as N is returned to the soil for use by grass as leaf litter, dead roots, dung and urine. Dung, leaf litter and dead roots can take a long time to break down.

If a lower level of production is accepted, the fertiliser rates can be reduced.

An application of phosphorus and sulphur will provide some residual production for two years. The minimum application time for phosphorus and sulphur should be once every 3 years.

There is generally little residual effect from applied nitrogen in subsequent wet seasons. In grazed mixed pastures following a year with a good legume yield or in grass pastures following a legume pasture or fodder crop, there is some residual productivity from the nitrogen in the soil for about 5 years.

The soil generally supplies about half of the potassium required by pastures. During the wet season when the soil is wet, potassium comes out of the clay in the soil. There is little or no residual from applied potassium. As there is high removal of potassium in hay crops, soil levels can run down quickly. This is often first noticed in dry years when the soil is unable to supply potassium to the pastures.

Where zinc (Zn) is required, an application of 5 kg per hectare lasts 5 to 10 years. An application of 200 – 400 g molybdenum (Mo) also lasts for 5 to 10 years.
Looking for your Mad Cows ……..

Bovine Spongiform Encephalopathy (BSE), commonly known as Mad-Cow Disease, is a fatal neurodegenerative disease in cattle that causes a spongy degeneration in the brain and spinal cord. BSE has a long incubation period with symptoms showing when cattle are adults. All breeds of cattle are equally at risk of the disease. The disease has not been reported in Australia to date.

BSE belongs to a group of fatal disorders called Transmissible Spongiform Encephalopathy’s (TSE’s) that occur in both humans and animals. It is believed that prion proteins produce holes in the brain causing it to appear like a sponge, hence the name ‘spongiform’.

It is believed that BSE is caused by cattle consuming the remains of other cattle in the form of rendered meat and bone meal (MBM). Fortunately Australia prohibited the importation of MBM from all overseas countries except NZ in 1966, imposed a voluntary ban on feeding ruminant material in 1996 and prohibited feeding in 1997. The prohibited feed is now known as Restricted Animal Material (RAM).

RAM is meat, meat and bone meal, blood meal, poultry meal, feather meal, fish meal and compounded feeds made from these products. RAM does not include milk and milk products, tallow and gelatine or oils extracted from poultry and fish.

RAM audits are carried out on stations feeding supplement, feed suppliers and feed manufacturers each year to ensure that the products being feed to cattle do not contain RAM. This is a measure to reduce the risk of cattle developing BSE.

The National Transmissible Spongiform Encephalopathy Surveillance Program (NTSESP) was initiated in Australia in 1998. NT producers actively support the program with 12 submissions in 2011. We encourage all producers to report cattle eligible for the program. Eligible cattle must be between 3-8 years of age showing changes in behavior such as nervous signs or inco-ordination. Producers receive a payment of $300 for eligible cattle.

This is an important program which is safeguarding our export markets and maintaining our reputation as a supplier of high quality livestock and beef products to the rest of the world.

For further details on BSE or to report an animal with nervous signs please contact:

Dick Morton 8999 2035
Ian Doddrell 8999 2030
Rob Wait 8999 2034

Recent change to cattle tick Infected Zone

The boundary of the cattle tick infected zone was recently changed to include Dungowan and Murranji stations. The change means that livestock can travel across the Buchanan Highway within the infected zone without clean inspection and supervised treatment. However, livestock travelling into or through the control zone and into the free zone must still meet the movement conditions. Cattle tick distribution across the control zone in 2011 has been similar to 2010, with surveillance on some properties showing limited spread to adjacent paddocks. Property management plans have been used to monitor the distribution and apply appropriate movement restrictions.

Parkhurst Surveillance

The Parkhurst area in the cattle tick infected zone was introduced in May 2011 to try and limit the spread of Parkhurst cattle tick which are, resistant to Bayticol, from the Darwin area north of Pine Creek. One infected property was quarantined in the Katherine region outside the Parkhurst area. Surveillance undertaken on properties neighbouring the infected Katherine property and properties which imported cattle from the infected property have all returned negative results in 2011. These properties will continue to be monitored in 2012. There have been no reports of poor tick kill on properties in the Katherine and Barkly regions using Bayticol in plunge dips.

Katherine and Barkly producers should continue to maintain effective biosecurity measures to prevent the spread of Parkhurst tick:

- Producers planning to introduce stock from the Parkhurst infected area must comply with the movement restrictions
• Ensure all introduced stock onto their property are tick free
• Monitor the effectiveness of Bayticol plunge dips and immediately report any suspected resistance in ticks to your Stock Inspector
• Check and maintain boundary fences regularly
• Maintain accurate records of movements (Waybills, Health Certificates and NLIS transfers)

**Territory Bluetongue virus Surveillance Report 2010/2011**

**2010/11 NAMP SAMPLING SITES**

Bluetongue virus (BTV) activity was widespread in the north, being detected at Beatrice Hill in November 2010 and Katherine and Victoria River in October 2010 and in all northern sentinel herds between January and June 2011. BTV1, BTV2 and BTV20 were identified by virus isolation at Beatrice Hill and BTV1 by serology at all other sentinel sites. The detection of BTV1 activity in a serosurvey herd in the southern Victoria River District resulted in an extension of the BTV zone further south.

Bovine ephemeral fever (BEF) virus activity was widespread, with activity in the northern herds from February to May 2011 and also on the Barkly Tablelands in May. Clinical disease was reported from several locations in the north.

Akabane activity was found in all of the northern sentinel herds. Apart from Beatrice Hill, where activity was in January and February, most activity occurred in April 2011.

The National Arbovirus Monitoring Program (NAMP) is an industry and government funded program which monitors the distribution of three important insect-borne viruses (arboviruses) of livestock: Bluetongue virus, Akabane virus, and (BEF) or 3 day sickness. NAMP information is used to:

**Support trade**

NAMP information is used during export protocol negotiations and to assist exporters in meeting export certification requirements.

**Provide an early warning to producers**

Surveillance detects new incursions and warns producers of arbovirus spread into new areas where cattle not previously exposed may suffer severe symptoms.
Manage risk

Exporters can identify areas free from arbovirus activity to source live export cattle for arbovirus sensitive markets.

Monitoring is achieved by using sentinel herds at various sites around the Northern Territory. These are bled at regular intervals and tested for antibodies to a number of viruses. Serosurveillance is also conducted at a number of different sites (see map) around the BTV surveillance zone. Further details can be found at:


IMPORTANT NOTICE FOR PRODUCERS USING BAYTICOL POUR-ON

Risks associated with the use of Bayticol Pour-on need to be managed by cattle producers to prevent treated cattle entering the meat export supply chain. Producer awareness is key to managing these risks.

Bayticol Pour-on Cattle Tickicide is only registered for use as a Live Export Clearing Tickicide prior to IMMEDIATE export.

The registration of Bayticol Pour-on for use as a general tickicide was cancelled in 2002. As a result, Bayticol Pour-on cannot be used for routine tick control on property or for pre-treatment of cattle tick prior to inspection and supervised treatment in a plunge dip for movement to tick free areas.

The Australian Pesticide and Veterinary Medicine Authority (APVMA) began a review of the product in December 2001 following concerns that the use of the product according to label instructions could result in beef fat residues that exceeded the Maximum Residue Limit (MRL) which could pose a potential risk to Australia’s international trade. Flumethrin - the active ingredient of Bayticol pour-on is not registered in some overseas countries. The US has a zero tolerance to flumethrin residues. Detection of flumethrin residues in Australian meat could have a significant impact on access to these markets.

In February 2002, Bayer voluntarily requested that the APVMA cancel the registration of Bayticol Pour-on Cattle Tickicide. The APVMA cancelled the registration of Bayticol Pour-on Cattle Tickicide on 31 March 2002.

The product label clearly outlines conditions for use.

Territory visit by FSANZ for new Australian Meat Processing Standards

During October 2011, Canberra-based officers from Food Standards Australia and New Zealand (FSANZ) visited the Territory to meet with members of the Biosecurity and Product Integrity Group and industry stakeholders. The delegation is currently on a fact finding visit to all jurisdictions prior to development of a new Australian Standard for meat processing. The information gathered will be presented for adoption by the Australian and New Zealand Ministerial Council during 2014.

While in the NT, the group visited two crocodile abattoirs to view their slaughtering and processing procedures which the group had no previous exposure to. The delegation also visited Berrimah Veterinary Laboratories to view diagnostic testing procedures, some of which may be incorporated into the new Australian Standard. The visit was completed with travelling to the
Gunbalanya abattoir in Arnhem Land. The Gunbalanya facility processes cattle from Indigenous Land Corporation properties as well as wild caught buffalo. The Gunbalanya facility employs 25 people in the abattoir and pastoral production, providing an increased skill base for Indigenous people in the Gunbalanya community. The meat is currently being sold into the Darwin and Sydney markets with favourable reviews. During the last two years, David Frost, Senior Meat Industries Officer has assisted the team at Gunbalanya to obtain a higher level of compliance against the Australian Standards.

**Disease Investigations and Information**

**Hendra virus awareness**

In November 2011, Department of Resources staff undertook Hendra virus response training with participation from the Department of Health and Department of Natural Resources, Environment, the Arts and Sports (NRETAS) to ensure a co-ordinated and rapid response would be mounted if a Hendra virus incident was to occur in the Territory.

Hendra virus is spread by flying foxes (fruit bats) which act as natural hosts. Scientists believe the virus is spread between flying foxes through urine, faeces and saliva, and then only occasionally transmitted to horses when they ingest contaminated material such as partially eaten fruit or contaminated grass. Infected horses can then transmit the virus on very rare occasions to humans and other horses through very close contact with bodily secretions. In an infected horse, the virus attacks the endothelial cells lining the blood vessels causing the horse to display a variety of clinical signs. Horses infected with Hendra virus have traditionally presented with respiratory and/or nervous signs, but the many cases in 2011 in Qld and NSW have shown that there are no specific signs characteristic of infection with Hendra virus.

Common clinical signs include:

- Sudden onset of illness
- Increased heart rate and/or temperature
- Depression
- Discomfort/weight shifting
- Difficulty breathing
- Weakness, wobbly when moving
- Apparent loss of vision
- Urinary incontinence
- Muscle twitching
- Inability to get up after lying down
- Clear, white or bloody frothy discharge from the nose
- Rapid deterioration

Most infected horses die within two days of displaying signs of illness. Although there have been no known cases of Hendra virus in the Northern Territory, since the first isolation of Hendra virus in 1994, Hendra virus has resulted in the death of four people, 66 horses, and one dog was recently euthanased because it tested positive to Hendra Virus. Animals which have been infected with Hendra virus must be humanely euthanased under national policy as recovered animals can become infective after a period of time has lapsed resulting in further risk of infection to people and other animals. Hendra virus has a 70% fatality rate in horses and nearly 50% in humans.

To protect your horse/s from Hendra virus infection, there are a number of things you can do to minimise the risk, such as:
- Remove feed and water containers from under trees where flying foxes are known to roost.
- Avoid leaving fruit, vegetables, etc. in feed containers.
- Remove fruit and flowers from trees in horse paddocks or alternatively remove horses from paddocks during flowering and fruiting.
- Clean and disinfect equipment that has come into contact with the horses’ bodily fluids such as bridles, halters, ropes, etc., before using it on another horse.
- Use good quarantine measures such as isolating sick horses, animals and people and seeking veterinary advice.

**Take home message:**
If your horse/s display signs suggestive of Hendra virus and are located in an area with known flying fox activity, isolate the horse, call a vet, and maintain high biosecurity standards, i.e. clean and disinfect yourself with soap and water and wait for the results of the veterinary inspection before handling the sick horse.

For more information:
- [www.nt.gov.au/d/Primary_Industry](http://www.nt.gov.au/d/Primary_Industry)

**Reminder to fence off rubbish dumps to prevent lead poisoning**

There were several reports of lead poisoning in cattle in the Darwin region in 2011, and a recent report of blindness and illness in a group of breeding cows in one paddock on a property in the Tennant Creek region. A few animals died, while several others previously showing mild clinical signs of disease recovered. The owner reported cattle were off feed, with a stiff gait and blindness; some were seen pressing their heads against trees and posts. An inspection of the paddock revealed an abandoned rubbish dump containing old car batteries that showed signs of recent disturbance by stock. Lead poisoning was suggested as the most likely cause of the incident. The cattle were moved from the paddock, and no further cases were seen. The owner agreed to clean up and fence off the dump before putting any stock back into the paddock.

**Neurological disease and death in horses across south-eastern Australia**

A yearling colt in Alice Springs developed an upper respiratory tract infection two days after arriving from the Melbourne yearling sale. Blood samples and nasal swabs were collected by the treating private veterinarian. The horse deteriorated rapidly and developed neurological signs, and went down within a day. Clinical signs included depression, hyperextension of both forelimbs with muscle twitching, and unsteadiness in the hindquarters. Blood tests indicated recent exposure to a flavivirus; Hendra virus infection was ruled out at the CSIRO Australian Animal Health Laboratory. When its condition continued to deteriorate, the animal was euthanased and a post mortem was performed. Laboratory testing confirmed exposure to the strain of Kunjin virus circulating in south-eastern Australia. A large proportion of the horse population in the Northern Territory has been exposed to Kunjin virus, but have not shown the severe clinical signs seen in horses in south-eastern states in 2011. Sentinel poultry flocks are bled every month to monitor the distribution of Kunjin virus across the Territory. Horse owners are reminded to report horses showing nervous signs to their local vet or the Department of Resources for investigation. Further information on the outbreaks can be found at:


**Equine Pleuropneumonia – A travel sickness in horses**
Transportation of horses over long distances is a common event in the NT and is the most common factor that predisposes horses to pleuropneumonia, which is also known as 'travel sickness', or 'transport sickness'. Horses normally breathe in small numbers of bacteria, which are expelled rapidly in healthy animals. Respiratory tract disease develops when the number of bacteria entering the lung is greater than normal defence mechanisms can deal with, or the respiratory defences are not working properly. If bacteria are not removed rapidly, they can multiply and the infection may spread from the airways into the lung tissue. These bacteria are not spread from one horse to another, that is, the disease is NOT CONTAGIOUS, but is caused by the horse’s own bacteria which are waiting for an opportunity to cause disease – so called ‘opportunistic pathogens’ which are found in all horses.

**Predisposing factors:**

- **Head restraint** – the single most important factor predisposing to pleuropneumonia associated with transport, is head restraint in an elevated position. It has been shown that this factor ALONE can lead to pleuropneumonia. Severe contamination of the lower airways can occur after as little as six hours of head restraint in an elevated position. Therefore, every effort must be made to restrain horses in a manner which enables them to lower their heads during and after transportation. Cross-tying at race tracks may also have the same adverse effect on the lower respiratory tract and would only exacerate any adverse effects of long distant transportation that may have occurred.

- **Dehydration** – Many horses will not eat adequate amounts of feed during a long distance trip and are even less likely to drink adequate amounts of water. Also, allowing horses to eat during a journey with heads tied up could conceivably increase the risk of aspiration. An ‘average’ 450kg horse in ‘hot conditions’ may increase it’s consumption of water to 60 litres.

- **Air Pollutants** – Inadequate ventilation within transport vehicles, ammonia and the inhalation of exhaust gases and road dust may also impair mucociliary clearance.

**Recommendations to help prevent pleuropneumonia:**

- **Minimise lower respiratory tract contamination:**– it has been shown that periodically lowering the horse’s head by feeding or watering from ground level for 30 minute periods each six hours is insufficient time to remove the accumulated bacteria and secretions from within the airways. Therefore, for long distance transportation, breaking the journey up into 12 hour stages, with 8-12hour breaks between stages is recommended.

- **Feeding horses from ground level** - this is preferable to feeding them from raised feeding containers.

- **Avoid crosstying or transporting horses for long periods immediately following exercise.** A journey of as little as 2-4 hours, immediately after strenuous exercise, could cause problems.

- **Prevent extension of bacterial infection from the airways into the lungs.** This is unavoidable if horses are transported with their heads elevated for periods greater than 12 hours.

Do you keep poultry, pigeons, pigs, goats, horses, sheep, deer, cattle, buffalo, camels, llamas, alpacas? These are classified as livestock.

Urban or rural blocks that have livestock should also have a Property Identification Code (PIC).

Regardless of the size of the block or parcel of land or property or the number of livestock or even if they are pets, if livestock is being kept then a PIC is required.

A PIC is not required for dogs, cats or wildlife etc.

PIC Registration is free of charge – please complete PIC Registration form [www.nt.gov.au/d/nlis](http://www.nt.gov.au/d/nlis) or contact your Regional Livestock Biosecurity Officer (RLBO) for assistance.

<table>
<thead>
<tr>
<th>Darwin</th>
<th>Katherine</th>
<th>Tennant Creek</th>
<th>Alice Springs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ian Doddrell</td>
<td>Greg Scott</td>
<td>Tom Haines</td>
<td>Greg Crawford</td>
</tr>
<tr>
<td>Ph: 08 8999 2030</td>
<td>Ph: 08 8973 9754</td>
<td>Ph: 08 8962 4458</td>
<td>Ph: 08 8951 8125</td>
</tr>
</tbody>
</table>

[www.nt.gov.au](http://www.nt.gov.au)
National Livestock Identification System (NLIS) and Live Export

NLIS was implemented in the NT in 2007 and is a requirement under the Livestock Regulations. NLIS applies to cattle, buffalo, sheep and goats. Cattle use a radio frequency identification device (RFID) to record the animal's movement on the NLIS database.

Under the Livestock Regulations all cattle require an approved NLIS device attached to the right ear prior to leaving the property. The one and only exemption where an RFID is not required for a movement from a property is when the cattle are leaving their property of birth and going straight to live export via an approved export yard. In this case no RFID is required under the Livestock Regulations. There are no exemptions for applying NLIS tags to buffalo, sheep or goats prior to leaving a property.

If you intend to sell your cattle to live export it would be advised to check with your exporter or agent if an RFID is required as some export markets require a device to be attached to access specific export markets. Although it is not a legal requirement by the NT Government an RFID may need to be attached to the animal if you wish to sell your cattle through that exporter.

A completed NT Waybill is required to accompany the livestock being moved for the following livestock, cattle, buffalo, sheep, goats, pigs, camels and deer. A registered Brand is required for cattle travelling over 8 months of age.

Penalties may apply for not meeting the requirements for moving livestock under the Livestock Regulations in the NT from an infringement notice of $685 or prosecution.

For further information contact your Regional Livestock Biosecurity Officer:

Darwin: 08 8999 2030
Tennant Creek: 08 8962 4458
Katherine: 08 8973 9754
Alice Springs: 08 8951 8125

Or email ntnlis@nt.gov.au

NLIS Helpdesk Ph: 1800 654 743 (between 8am and 6pm EST) or email nlis.support@mla.com.au
February 2012
Pasture Growth
relative to historical records since 1957

Legend
201202m.growth.pcnt.nt.img
Percentile
Red: Extremely Low (0 - 10%)
Orange: Well Below Average (10 - 20%)
Yellow: Below Average (20 - 30%)
Grey: Average (30 - 70%)
Green: Above Average (70 - 80%)
Dark Green: Well Above Average (80 - 90%)
Blue: Extremely High (90 - 100%)

Map produced by
Regional Production, Alice Springs
Department of Environment

Australian data:
www.ESPN/Environment
Collection/data source/ARES
3-Month Pasture Growth relative to historical records since 1957 (01 December 2011 to 29 February 2012)

Legend
Percentile
- Extremely Low (0 - 10%)
- Well Below Average (10 - 20%)
- Below Average (20 - 30%)
- Average (30 - 70%)
- Above Average (70 - 80%)
- Well Above Average (80 - 90%)
- Extremely High (90 - 100%)

Map produced by:
- National Production Atlas Maps
- Department of Resources
- AusResGRASS data: www.csiro.au/grass
- Cadastral data source: NRTA
### Exports via Darwin Port – FEBRUARY 2012

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>TOTAL CATTLE (including interstate)</th>
<th>NT CATTLE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
<td>2011</td>
</tr>
<tr>
<td>BRUNEI</td>
<td>2,853</td>
<td>4,163</td>
</tr>
<tr>
<td>INDONESIA</td>
<td>273,396</td>
<td>239,346</td>
</tr>
<tr>
<td>PHILIPPINES</td>
<td>12,784</td>
<td>16,068</td>
</tr>
<tr>
<td>SABAH</td>
<td>982</td>
<td>0</td>
</tr>
<tr>
<td>SARAWAK</td>
<td>1,615</td>
<td>1,197</td>
</tr>
<tr>
<td>W-MALAYSIA</td>
<td>3,975</td>
<td>2,535</td>
</tr>
<tr>
<td>VIETNAM</td>
<td>0</td>
<td>945</td>
</tr>
<tr>
<td>EGYPT</td>
<td>0</td>
<td>5,363</td>
</tr>
<tr>
<td>TOTAL</td>
<td>295,605</td>
<td>269,617</td>
</tr>
</tbody>
</table>

FEBRUARY at a glance

- 26,693 head of cattle through the Port of Darwin during February, 3,865 more than January and 7,148 more than February last year.
- 2012 total cattle figures indicate 3,279 head more than last year. NT cattle 1,431 less than last year.
### OTHER LIVESTOCK EXPORTS VIA DARWIN PORT (includes NT and Interstate Stock)

<table>
<thead>
<tr>
<th>Destination</th>
<th>Buffalo</th>
<th>Camels</th>
<th>Goats</th>
<th>Horses</th>
<th>Sheep</th>
<th>Pigs</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRUNEI</td>
<td>470</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>610</td>
</tr>
<tr>
<td>INDONESIA</td>
<td>1,371</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PHILIPPINES</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>W-MALAYSIA</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SABAH</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SARAWAK</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,841</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>610</td>
</tr>
</tbody>
</table>

### NATIONAL CATTLE PRICES - W/E 9/3/2012

<table>
<thead>
<tr>
<th></th>
<th>HEAVY STEER</th>
<th>MEDIUM STEER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SALEYARDS</td>
<td>O.T.HOOKS</td>
</tr>
<tr>
<td>NSW</td>
<td>QLD</td>
<td>SA</td>
</tr>
<tr>
<td>(Aust)</td>
<td>(Aust)</td>
<td>(Aust)</td>
</tr>
<tr>
<td>This week</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Estimated dressed weight price (cents/kg)</td>
<td>Estimated dressed weight price (cents/kg)</td>
</tr>
<tr>
<td></td>
<td>NSW</td>
<td>QLD</td>
</tr>
<tr>
<td></td>
<td>339</td>
<td>344</td>
</tr>
<tr>
<td>Last week</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>343</td>
<td>348</td>
</tr>
<tr>
<td>Year ago</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>367</td>
<td>344</td>
</tr>
<tr>
<td></td>
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</tr>
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<td></td>
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</tbody>
</table>

### CURRENCY EXCHANGE RATES

<table>
<thead>
<tr>
<th>Key Currencies</th>
<th>1AUD</th>
<th>Current 15.3.2012</th>
<th>Previous month 1.2.2012</th>
<th>3 months ago 1.12.2011</th>
<th>1 Year ago 1.3.2011</th>
<th>Pre-devaluation 01.07.1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brunei Dollar</td>
<td>1.34523</td>
<td>1.34604</td>
<td>1.33903</td>
<td>1.31001</td>
<td>1.076</td>
<td></td>
</tr>
<tr>
<td>Indonesian Rupiah</td>
<td>9.656.95</td>
<td>9.542.74</td>
<td>9.346.23</td>
<td>8.985.85</td>
<td>1830</td>
<td></td>
</tr>
<tr>
<td>Philippine Peso</td>
<td>45.08015</td>
<td>45.56410</td>
<td>44.96092</td>
<td>44.39949</td>
<td>19.84</td>
<td></td>
</tr>
<tr>
<td>Malaysian Ringgit</td>
<td>3.19984</td>
<td>3.23262</td>
<td>3.25009</td>
<td>3.10274</td>
<td>1.9</td>
<td></td>
</tr>
<tr>
<td>Euro</td>
<td>0.80410</td>
<td>0.80470</td>
<td>0.76369</td>
<td>0.73731</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>US Dollar</td>
<td>1.04971</td>
<td>1.05829</td>
<td>1.02231</td>
<td>1.01630</td>
<td>0.752</td>
<td></td>
</tr>
</tbody>
</table>

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