Barkly Beef

DEPARTMENT OF PRIMARY INDUSTRY AND RESOURCES

DECEMBER 2019

Inside this issue:

Editorial

Welcome to the last Barkly Beef edition for 2019.

This month we have project updates for the pain relief, biocrust and calf watch trials that are being conducted across the Northern Territory (NT), as well as information on Siam weed.

There is a Young Guns Business EDGE course being run in Alice Springs in the New Year.

And the Biosecurity team has provided information on the change to the cattle tick zones as well as African swine fever.

Fingers crossed that the New Year brings plenty of rain.

Happy reading!

Editor

Jane Douglas

Tennant Creek Christmas Closure

DPIR Barkly House office will be closed from

4:30pm Friday **20 December 2019** to
8:00am Monday **6 January 2020**.

For emergencies during the closed period:

Animal Biosecurity/Stock Movements/Emergencies: 0401 113 445

We wish you all a very happy Christmas, and a safe and prosperous New Year.

www.nt.gov.au
ISSN: 1325-9539

NORTHERN TERRITORY GOVERNMENT

Barkly Beef

DEPARTMENT OF **PRIMARY INDUSTRY AND RESOURCES**

Trialling pain relief during castration and dehorning in the NT

What?

The Department of Primary Industry and Resources (DPIR) has recently started a joint project with Meat Livestock Australia (MLA) to investigate the application of pain relief products during castration and dehorning in the Northern Territory. Production and welfare benefits from managing potential pain after routine husbandry procedures being performed will be investigated.

Why?

The industry is constantly improving animal husbandry practices. With the recent introduction and approval of several pain relief products for use on calves, there have been calls for a large scale trial to compare long-term production benefits to be conducted on 'real world' properties.

Outcomes

Anticipated outcomes from the trial include:

- an assessment of any production benefit from providing pain relief to calves during castrating and dehorning, through monitoring liveweight, infection and any instances of mortality
- an assessment of the impacts of providing pain relief on animal behaviour following the procedures
- participating producers will also be surveyed on their experiences using the pain relief.

What's involved for participating properties?

Participating properties will need approximately 600 calves that are to be castrated and/or dehorned (this may be at the same time as weaning depending on your operation). This will be worked in with your regular mustering time. Prior to castration/dehorning, calves will need to be able to be weighed and tagged with either an NLIS tag or management tag with a unique number, so each individual animal's weight change can be monitored. The DPIR will provide the pain relief products and a member of the DPIR Livestock team will be there on the day to record animal information. Calves will then need to be reweighed three weeks later, this will allow the comparison of the different groups in the time following the procedures, to see if the animals that have received the pain relief products have a better liveweight response than those that did not.

Want to be part of the trial?

If you would like to be part of the trial, or would like some more information, please contact:
Melissa Wooderson, Livestock Industry Development, Katherine
Phone: 8973 8476 | **Email:** melissa.wooderson@nt.gov.au

ISSN: 1325-9539

NORTHERN TERRITORY GOVERNMENT

New Biocrust project - Boosting natural regeneration of the nitrogen capital in grazing lands

The University of Queensland (UQ) has been funded by MLA to research the impacts of fire and grazing on the function of *biocrusts.* The UQ researchers are collaborating with the NT Department of Primary Industry and Resources (DPIR) at the Kidman Springs fire experiment and with the Qld Department of Agriculture and Fisheries at the Wambiana grazing trial in north Queensland.

What are biocrusts?

Biocrusts are the 'living skin' on the surface of the soil. They are composed of lots of different tiny organisms including cyanobacteria, fungi, green algae, bacteria, lichens, liverworts and mosses. They grow when it's wet and become inactive when it's dry, just like plants.

Why do we care about biocrusts?

They stabilise the soil surface - the filaments of the different organisms bind together the soil surface and prevent erosion from wind and water.

They photosynthesize and fix carbon – the algae and cyanobacteria are green and photosynthesize just like plants. The carbon is incorporated into the soil and enhances soil carbon.

They fix nitrogen! – most cyanobacteria fix nitrogen out of the air just like legumes do! The nitrogen is in a form available to plants with excess stored in the outer slime (EPS). When it rains much of the stored plant-available nitrogen is washed from the EPS into the surrounding soil. Additionally, when biocrusts dry out and a proportion will break down (particularly during the early wet season rains) at which time the nutrient-rich biocrust is incorporated into the soil as organic matter. The amount of nitrogen biocrusts fix every year is similar to the amount of nitrogen fixed by native legumes in our grassy tropical savannas.

Soil fertility is a major limitation to pasture growth in tropical savannas, but it doesn't pay to add fertilisers because the extensive scale is prohibitive. We are testing if we can manage grazing and fire to maximise the natural carbon and nitrogen inputs by biocrusts into soils and enhance soil fertility in tropical savannas.

Where are biocrusts?

They are in the top one centimetre of the soil, usually covering the 'bare' spaces between plants. Biocrusts are found all over the world from freezing Iceland to hot deserts and wet-dry savannas, but different regions have different dominant organisms in the biocrusts, depending on the rainfall and temperature. In tropical savannas biocrusts are dominated by cyanobacteria.

What do they look like?

In northern Australia they often appear as dark staining on the soil surface in the dry season (Figure 1). They can form dark green slimy films during the wet season, as seen in the images below.

Image: Dark staining on the soil surface of biological crusts on the black soil in the dry season at Kidman Springs.

Images: Cyanobacteria and associated crusts in dry and recovery stages: (A) Cyanobacterium Nostoc commune in a transition state between dry stage (arrows 1) and rehydration (arrow 2), embedded in EPS (polysaccharide slime) (scale bar 20 µm); (B) Nostoc commune encapsulated in EPS (arrow 1) and embedded in ECM (extra-cellular (slime) matrix, arrow 2), (scale bar 20 µm); (C) Nostoc in gelatinous mass EPS production state overflowing new Scytonema biocrust; (D) following EPS production, consolidation of ECM occurred with defined biocrust formation; (E) Newly developed crust (still saturated from rain) that incorporated Symplocastrum, Scytonema, Symploca, Nostoc and liverworts (Riccia); (F) Dried and cracked Symploca dominated crust in situ in early stages of disintegration following the first rains early in the wet season (Merluna, Cape York, 2010) Images Wendy Williams from: ***https://www.biogeosciences.net/15/2149/2018/***

But wait, aren't soil crusts a bad thing?

There are two types of soil crusts. **Living biocrusts are distinct** from dead physical soil crusts that form on degraded soils. Physical soil crusts can inhibit water infiltration and plant growth. Living biocrusts enhance soil moisture and plant growth.

What effect does fire and grazing have on biocrusts?

Fire can enhance biocrusts by removing litter, trees and shrubs that would otherwise compete as ground cover, yet you need the right amount of fire, not too much, not too little. Biocrusts in Australia's tropical savannas, like our native vegetation, are well adapted to fire because they evolved with fire. Preliminary sampling at our Kidman Springs Fire experiment found the highest soil plant-available nitrogen (fixed by biocrusts), was in four yearly late dry season burnt sites, more than unburnt or two yearly late burnt sites.

Grazing can also potentially open up interspaces for biocrusts by reducing plant cover. Nevertheless, the trampling by hooved animals is not something Australian ecosystems have evolved with, so our biocrusts are quite susceptible to heavy trampling. The effects of moderate vs. heavy grazing on biocrusts will be examined at the Wambiana grazing trial near Charters Towers.

If trampling is bad for biocrusts how can we manage grazing to benefit biocrusts?

Biocrusts grow during the wet season, just like plants. During the dry season they dehydrate and become dormant. The carbon and nitrogen they fix is broken down and recycled by other critters in the biocrust, and then becomes incorporated into the soil and available to plants. We suspect that spelling over the wet season and grazing during the dry season will benefit not only palatable plants, but also biocrusts, allowing them to maximise their growth and nitrogen fixation. As pruning a shrub or tree in a garden encourages growth, moderate disturbance of biocrusts can promote growth. It is also possible that some intermediate level of grazing will enhance growth and productivity of biocrusts in the savanna.

Biocrusts facts

- Biocrusts cover more than 12 per cent of the Earths land surfaces and fix 7 per cent terrestrial carbon and 45 per cent plant-available nitrogen.
- The growth of savanna grasses and forbs that don't fix nitrogen is higher in the presence of biocrusts, probably because they benefit from the extra nitrogen fixed by the biocrusts.
- Cattle have been observed to lick biocrusts! (Anecdote from Bruce Alchin).
- There are viruses, bacteria and very small insects that make their living just off biocrusts. Samples of biocrusts from Kidman Springs examined under a microscope had 'herds' of tiny collembola (springtails) selectively grazing the cyanobacteria in the biocrusts, 'like cows in a paddock walking around from here to there searching for the legumes'. These are known to increase N-fixation by cyanobacteria!
- Biocrusts can be useful in land reclamation and rehabilitation. For example native seed germination and survival is higher when you coat them in cyanobacteria.
- Biocrusts reduce the germination of weeds.
- Biocrusts are often the dominant ground cover in deserts.
- Lichens and mosses dominate biocrusts in cold deserts (southern Australia), while cyanobacteria and liverworts dominate biocrusts in warmer environments (northern Australia).

For more information, please contact:

Robyn Cowley, Livestock Industry Development
Phone 0419 829 493
Email robyn.cowley@nt.gov.au

Calf watch project update: developing tools for research on calf loss in extensive situations

Calf loss is a major source of lost income for northern beef producers, and it is estimated that neonatal calf loss costs north Australian cattle producers in excess of $53M annually. Reducing calf loss has the potential to improve weaning rates and profitability for northern cattle producers. In northern Australia, calf loss exceeding 30 per cent in first calving heifers and 15 per cent in cows is not uncommon; halving these losses would provide significant benefits.

It has been historically difficult to investigate and reduce calf loss, as calving females are difficult to find in large paddocks, and close observation during calving disturbs animals and alters behaviour (and in some cases may even contribute to mismothering and calf loss). In addition, calf carcasses are difficult to find under extensive conditions and so in many cases it has not been possible to conduct autopsies to determine the cause of calf deaths. If a system could be developed to remotely monitor calving in extensive conditions then it would be a game changer for research into calf loss in northern Australia.

The ability to be able to monitor calving remotely and locate calf carcasses for research in extensive situations will be especially useful for research into the effect of paddock size on calf loss. It is suspected that the incidence of calf loss is increased when calving occurs a long way from water points in large paddocks and that reducing paddock size may reduce calf loss rates. However there is currently little scientific evidence for this, and so it is difficult to justify spending large amounts of money on infrastructure without proof that it will reduce calf loss.

Researchers at the University of Florida (UF) have developed a system to remotely monitor calf loss. The Calf-Watch project aims to collaborate with the UF researchers to adapt their system for use in northern Australia and to use it to investigate the causes of calf loss. The systems developed in this project are expected to revolutionise research into calf loss in northern Australia. They will enable the time and location of calving to be recorded remotely so that researchers will be better able to locate cow/calf pairs shortly after calving for observation and also collect dead calves in a timely manner to conduct autopsies. Ultimately this research has the potential to reduce calf loss and improve incomes for northern beef producers.

The UF researchers have been using birth sensors which are placed in the birth canal of pregnant cows up to four months prior to calving. When the cow commences calving, the birth sensor is expelled and the change in temperature causes it to start emitting a signal that is picked up by an antenna mounted on a tower in the paddock. The signal then goes through a gateway on the tower to the internet and ultimately results in researchers being sent a notification that the cow has calved. The researchers can then locate the calving site and record observations. They also tag newborn calves with very high frequency (VHF) tracking tags which contain accelerometers that allow them to locate calves when they die (stop moving). This system has been working well in Florida but there were challenges that had to be overcome for it to be able to be used in extensive north Australian conditions.

Some of the problems that had to be overcome

In Florida the mobile phone network is used to send the birth sensor alert signals to the internet, but mobile phone coverage in the NT is not very extensive and so a way had to be found to send the birth sensor signals to the internet where mobile phone coverage is limited. This was able to be done with the help of a local Katherine communication technology business (Comcat).

Another challenge was to design towers that would be able to work effectively in the harsh NT environment (i.e. be able to withstand the heat, humidity, dust, rain, insects, dingoes, cockatoos etc.) and have an increased range. We came up with a design that was durable, cost effective and can pick up signals from within a 2km radius of the tower.

Image: One of the towers at the research site on Manbulloo (near Katherine, NT).

The paddocks in Florida where the research is being conducted are quite small and so they can be covered by one tower. Paddocks in northern Australia are much bigger and so a network of towers is required. The Calf-Watch research is being conducted in a paddock that DPIR lease on Manbulloo station (near Katherine, NT) and it was determined that four towers were required to effectively cover the 22.15 square kilometres paddock.

The research sites in Florida are quite flat, have few trees and the grass is grazed quite low, whereas in the NT paddocks are larger and are often undulating with long grass and tall timber which makes finding calving cows much more difficult. In Florida it is relatively easy to find a cow when a birth alert is received, but it quickly became apparent that some sort of GPS tracking was going to be necessary to find calving cows in the NT. Initially we were told that a new model of birthing sensor was going to be produced with GPS capability, but the company changed their mind after the project commenced and so a suitable GPS tracking system had to be found. After an extensive search only one type of GPS tracking collar could be identified that met our requirements (ability to provide location in real time with pings less than 15 minutes apart, and cost <$300 per cow).

Image: A research site in Florida.

Due to the terrain in the paddocks (lots of rocky ridges and logs hidden in long grass) and the fact that the cows are not as quiet as those in Florida (they are handled a lot less) it was decided that we would not attempt to fit VHS tracking tags to newborn calves for OHS reasons and because it was felt that it might contribute to mismothering.

A pilot study was conducted with 20 cows in a small paddock over the 2018 calving season to test the equipment and iron out any bugs. This was beneficial as we were able to identify a number of issues with the technology and find solutions before scaling the work up at the Manbulloo site over the 2019 calving season. Then in August 2019, birth sensors were inserted into 200 pregnant cows and GPS tracking collars were fitted. The cows began calving on 30/9/19 and will continue until mid December. The birth sensor system is working well and alerts are being received when cows commence calving. An interesting preliminary observation is that most alerts (64 per cent) are being expelled between midday and 7:30pm, although it should be noted that often the calf is not actually born until several hours after the waters break and the sensor is expelled.

Image: The research site at Manbulloo, near Katherine in the NT.

The performance of the GPS tracking collars has been mixed. When the collars have continued to function normally they have been very helpful in locating calving cows. However some collars stopped working after a couple of weeks and in most of these cases it has not been possible to identify the birth site and find the expelled birth sensor. In these cases observations of the cow and calf have been made in the days after calving when they are seen at the water trough. The company that produces the GPS tracking collars is working on solutions to these problems and hopefully the issues can be resolved. The GPS tracking collars also contain accelerometers and it is hoped that it may be possible to use the time of calving identified by

the birth sensor alerts to identify movement patterns from the accelerometer data that are characteristic of calving. If this can be done then it should be possible to use accelerometers to identify the time of calving in future.

This project has been challenging as it has involved learning to use new technologies and adapting them for use in challenging conditions. The assistance of our collaborating research partner from UF (Dr Raoul Boughton) has been invaluable in this work. The birth sensor system was not designed for use in such extensive conditions and having 200 cows fitted with GPS tracking collars in a single paddock is thought to be a world first. However, the project is on track to achieve the aims of developing a system to remotely monitor calving in extensive conditions thus providing better ways to study calf loss and ultimately to identify ways to reduce it.

For more information contact Tim Schatz:

Email: tim.schatz@nt.gov.au

Phone: (08) 8999 2332

YOUNG GUNS WORKSHOP

Alice Springs, March 12-13

This workshop is tailored specifically for up and coming producers and provide an opportunity for them to build business skills with other young producers. There will be a bonus session on long-term wealth creation and an inspirational young gun speaker.

Get your head around more of the 'business side' of your business...

develop your financial knowledge and business understanding...
✚ understand where your business is performing well and where it can be improved...
✚ better understand how your decisions impact the bottom line of your business...
✚ determine if your business can really fund future growth, debt reduction, retirement and succession...
✚ ensure everyone in your business is on the same page...

Join a group of like-minded producers at a Business EDGE workshop and equip yourself to improve your business skills.

What you'll learn

✔ What's driving profit in your business – and what's not
✔ How to set up your financial system to provide you with the information to help manage your business.
✔ How to demystify your financial statements
✔ New infrastructure or equipment: which one will deliver the biggest bang for your buck?
✔ Funding for education, succession and retirement: how much is needed and what can your business fund?

Why attend?

✚ Gain the skills and confidence to really analyse your business
✚ Understand universal business principles and terms and their application to your business
✚ Learn from presenters who understand pastoral businesses
✚ Receive a full set of course notes and a suite of decision support tools to use at home
✚ Money back guarantee if you're not 100% satisfied the workshop has improved your business skills.

More than 500 producers have already attended Business EDGE.

Here's what a few of them had to say about it...

We have been looking at our business through a dirty windscreen for a long time, you guys in two days have cleaned that windscreen for us." MARK- Dysart

"I came in with a below basic knowledge of business and am leaving with the confidence to really analyse our business in terms of economic value." CHLOE-Rockhampton

"It has been a very informative workshop and money/time and travel well invested." THERESA-Roma

"Very useful as it is kick starting my analysis and control of our business data and long term planning." JULIET – Roma

"Extremely beneficial and something I've needed to do for a while." TRAVIS – Mackay

THE BUSINESS EDGE
KNOW YOUR BUSINESS GROW YOUR BUSINESS

The investment...

	Full fee	Early bird
1 person	$1500	$1250
2+ from business	$1250 ea	$1000 ea

All prices exclude GST and are **fully tax deductible.**

*register and pay for the workshop four weeks prior to the start date to receive the early bird discount

The bonus...

Repeat discount 50%
Attendees of Bush Agribusiness Business EDGE workshops who do a refresher course receive a 50% discount off the applicable rate.

Fully Guaranteed - Unless you are completely satisfied that this workshop has helped you to understand and run your business more profitably, your course fees will be refunded in full, no questions asked.

YOUNG GUNS WORKSHOP

Alice Springs, March 12-13

This workshop is tailored specifically for up and coming producers and provide an opportunity for them to build business skills with other young producers. There will be a bonus session on long-term wealth creation and an inspirational young gun speaker.

Business EDGE - Know your business - Grow your business

To register visit:
www.bushagri.com.au/businessedge

For more information:
Ian McLean: 0401 118 191 or
E-mail: admin@bushagri.com.au

BUSH AGRIBUSINESS PTY LTD

The BusinessEDGE was developed by Meat & Livestock Australia specifically for extensive grazing businesses. Bush AgriBusiness delivers the Business EDGE across Northern and Rangelands Australia.

mla
MEAT & LIVESTOCK AUSTRALIA

Siam weed

Native to the Americas, Siam weed has become a major land management issue across tropical areas of Asia and Africa. In 1994 it was detected in the Tully area of Far North Queensland and until recently was confined to that region. An incursion of Siam weed has recently been detected on two properties in the greater Darwin region.

Siam weed has high nitrate levels and in some countries has led to cattle deaths and abortions when stock have been accidently fed contaminated fodder. Its rapid rate of growth means that it has the potential to outcompete crops, pastures and native vegetation. In addition to this, Siam weed may cause skin complaints and asthma in allergy prone people.

These potential environmental, economic and health impacts, when combined with the costs associated with its control mean that it is considered one of the world's worst weeds.

The Weed Management Branch has notified the National Biosecurity Management Consultative Committee of this most recent incursion of Siam weed. We are working closely with the landholders and other government departments to contain and control the current known infestation and conducting surveys to determine how far it may have spread.

As with any weed management, the early reporting of a suspected Siam weed infestation is essential to successful control and eradication efforts.

Siam weed can look similar to other weed species but there are a few outstanding features that help in identification.

Figure 1 Siam weed

The pungent smelling leaves of this scrambling climber are soft, green, hairy and roughly triangular in shape.They also have a very distinctive three-vein 'pitchfork' pattern running the length of each leaf. Pale pink-mauve tubular flowers are held in clusters at the end of the branches. The flowers can appear white if seen from a distance but will usually turn darker lilac when mature.

Siam weed flowering is triggered in mid-year by shorter day lengths and they produce enormous numbers of seeds within eight to ten weeks after flowering. Each seed has a tuft of white or brown hairs that act as a little parachute, allowing it to be easily transported by wind or water.

Preventing weed spread through biosecurity measures is as important to Siam weed management as early detection. The hairs on the seed help it attach to vehicles, clothing, footwear and animal fur. It is very important that travel through known areas of infestation is controlled and that vehicles, machinery and any personal gear used in an infested area be cleaned thoroughly before leaving an infected area.

Let's work together to stop the spread of Siam weed. If you have seen Siam weed, or think you may have it on your property please contact the Weed Management Branch on (08) 8999 4567 or at weedinfo@nt.gov.au.

Cattle tick zones change

Following a review of the Territory's cattle tick management program, livestock owners are being asked to check cattle tick zones and movement restrictions as there have been changes to the cattle tick control and infected areas.

The Parkhurst infected zone now includes Kakadu National Park and the township of Jabiru.

The cattle tick infected zone has been updated to include four properties previously in the cattle tick control zone that are focused on live export markets and therefore have no requirement to remain within the cattle tick control zone to facilitate the domestic movement of cattle.

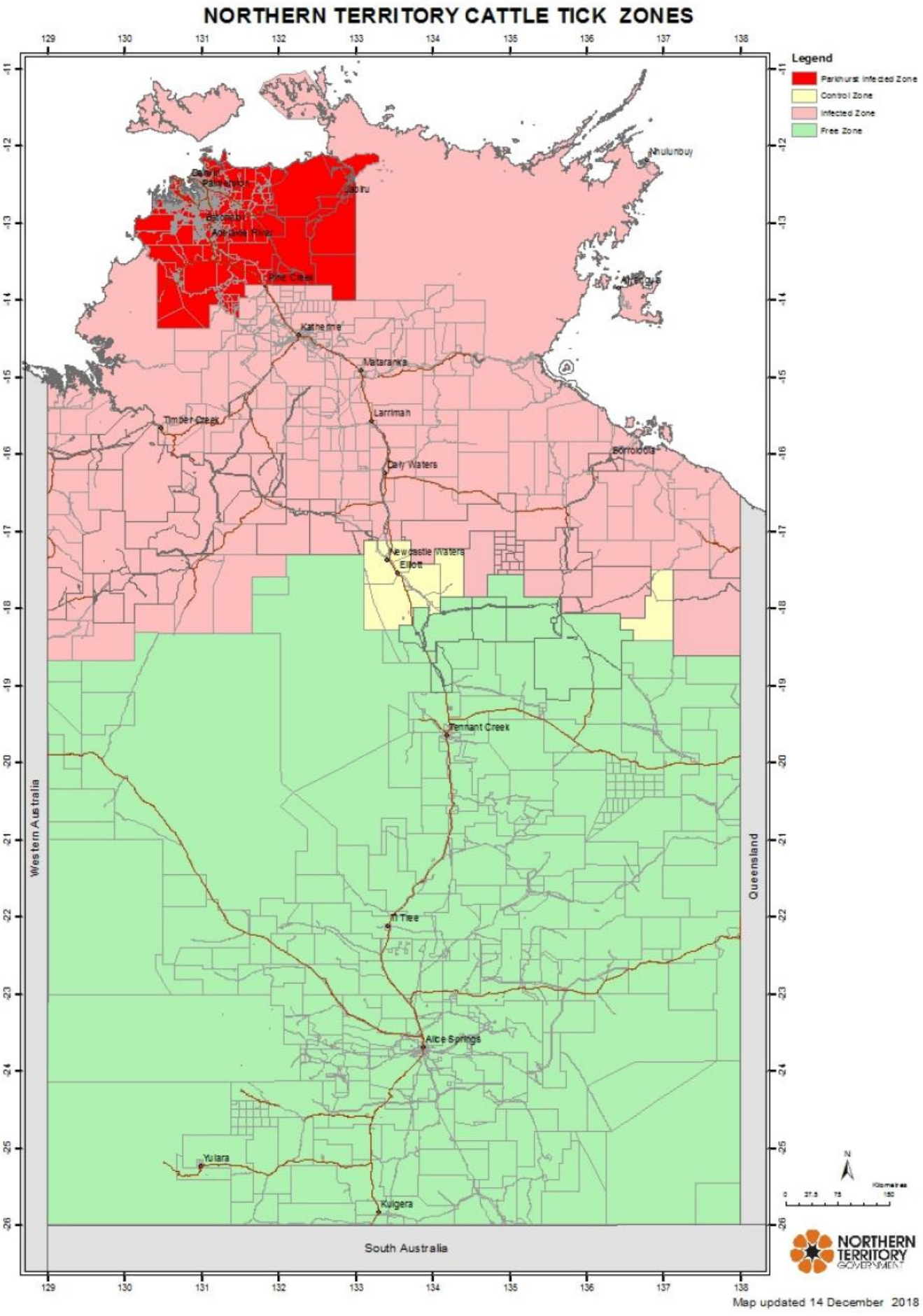
The new map is available from the Northern Territory Government website.

Livestock owners can review movement conditions by reading the factsheet.

Cattle tick is a serious pest in the NT, affecting many livestock including cattle, horses, buffalo, camel and goats. Parkhurst ticks (a strain resistant to commonly-used chemical treatments) were first detected in the NT in 1999.

An extensive survey will be undertaken in 2020 to assess the effectiveness of the Parkhurst infected zone and determine whether Parkhurst strain cattle tick has spread outside this zone or been introduced to other properties from interstate.

For more information, please see the Northern Territory Government website.


NORTHERN TERRITORY CATTLE TICK ZONES
Legend
Parkhurst Infected Zone
Control Zone
Infected Zone
Free Zone
Nhulunbuy
Darwin
Palmerston
Jabiru
Adelaide River
Pine Creek
Katherine
Mataranka
Larrimah
Timber Creek
Daly Waters
Borroloola
Newcastle Waters
Elliott
Tennant Creek
Ti Tree
Alice Springs
Yulara
Kulgera
Western Australia
Queensland
South Australia
N
Kilometres
0
37.5
75
150
NORTHERN TERRITORY GOVERNMENT
Map updated 14 December 2018

Industry

African swine fever

Managing a response.

We all share the responsibility to protect Australia against African swine fever.

African swine fever (ASF) is a contagious disease of pigs that's spreading rapidly in Eastern Europe, China and South East Asia. An outbreak of ASF in Australia would have a significant impact on pig health, pork production and will devastate Australia's pork industry.

How would an outbreak of ASF be managed?

If ASF was confirmed in the Northern Territory (NT), the NT Government would seek to quickly eradicate the disease through:

- quarantine and movement controls to prevent the spread of disease
- destruction and disposal of infected animals
- decontamination of infected premises
- tracing and surveillance to determine the extent of infection.

What is the response plan process?

1. The NT Government will draft an Emergency Animal Disease Response Plan (EADRP) detailing the NT's recommended approach to ASF outbreak management.
2. The EADRP is sent to the Consultative Committee on Emergency Animal Disease (CCEAD), state and territory chief veterinary officers and relevant livestock industries to provide response plan feedback.
3. The response plan is then sent to the National Management Group (NMG), responsible for approving the plan and committing funding. The NMG comprises executives from the Australian Government, state and territory governments and affected livestock industries.

Would an ASF outbreak impact NT livestock?

Domestic and feral pigs are the only species which can be infected with ASF.

An ASF incursion would likely see a large number of sick pigs which would die or be destroyed and market access for agricultural industries could be interrupted.

The Australian Government is investigating strategies to facilitate trade, should ASF be detected in Australia.

What outbreak control measures would apply?

The NT Government would establish declared areas, comprising restricted area, control area or outside areas. Different control measures would apply to each area depending on property type and proximity to the disease, likely targeting domestic and feral pigs only. Livestock, other than pigs, in most cases pose a negligible risk of being contaminated with, or transmitting ASF.

NORTHERN TERRITORY GOVERNMENT

Control measures that may be used	Incursion scenarios		
	In pigs on NT property (domestic or feral)	In pigs on unmanaged NT land (feral)	Interstate
Movement controls: restrictions on movement on and off premises of pigs, vehicles, equipment, pig products and by-products, wastes and other items that may be contaminated.	Movement controls may be used to prevent or limit the movement of pigs and associated equipment in the restricted, control and outside areas.		
	In most cases, animals other than pigs pose a negligible risk of being contaminated with or transmitting ASF, and movement controls would not be necessary		
Biosecurity requirements for people: such as decontamination or clothing and footwear change when moving on or off the premises.	Within the restricted area. ✓		
Tracing: reviewing movement of animals, people and items on and off infected premises to help identify where infection may have come from - and where it may now be.	✓	✓	✓
Surveillance: checking for signs of disease or contamination, investigating anything suspicious and taking samples for laboratory testing.	✓	✓	✓
Destruction: culling of pigs that are infected or high disease risk.	Within the restricted area ✓	Within the restricted area ✓	
Valuation and compensation: for animals that have died from ASF and for animals or property destroyed as part of the official disease response - this is governed by state or territory legislation.	Properties with a PIC ✓		
Disposal: biosecure disposal of carcasses and animal by-products, waste or things that might be contaminated.	✓	✓	
Decontamination: chemical or other treatment of premises, vehicles, equipment, clothing, footwear and other things that might be contaminated.	✓	✓	

What can NT livestock producers do?

- Complete the Livestock Production Assurance (LPA) program online learning at mla.com.au
- Have an up to date farm biosecurity plan, see animalhealthaustralia.com.au This plan should include:
  - a feral animal control plan, see pestsmart.org.au
  - overseas visitor control plans to prevent disease introduction to your property, see farmbiosecurity.com.au
- Don't feed swill to pigs! Refer to the Prohibited Pig Feed Agnote, go to dpir.nt.gov.au
- Report signs of sickness in domestic or feral pigs to the Emergency Animal Disease Hotline on 1800 675 888.

If it looks suss, call us 1800 675 888.

NORTHERN TERRITORY GOVERNMENT

Industry

African swine fever

Protect our pigs. Protect your property.

African swine fever (ASF) is a contagious disease of pigs that's spreading rapidly in Eastern Europe, China and South East Asia.

An outbreak of ASF in Australia would have a significant impact on pig health, pork production and will devastate Australia's pork industry.

The disease is spread by direct contact with infected pigs, contaminated vehicles, equipment or clothing and by feeding infected swill or meat scraps to pigs.

No vaccine or treatment is available. It's vital that we keep ASF out of Australia.

Strong biosecurity practices and hygiene are crucial.

- ASF can be carried by people on their skin, clothing, footwear and in their hair. When you and your workers enter a farm or production area ensure you use:
  - on-farm tools, boots and equipment if provided
  - a footbath for footwear
  - a suitable disinfectant, such as Virkon S or chlorine, for disinfection of equipment.
- When you and your workers leave a farm or production area, always disinfect boots, clothes, vehicles and any equipment leaving the site.
- Always wash your hands with soap and water before and after handling animals.

Overseas worker vigilance.

- Those who have contact with pigs at home should wait seven days before having contact with pigs in Australia or avoid having contact with pigs in Australia.
- Workers should not bring any clothes or equipment used with pigs in their home country to Australia.

Protect your property.

For more resources to help keep your farm clean go to farmbiosecurity.com.au

Know the signs.

Early detection is key to eradicating disease. Symptoms of ASF include:

- sudden death or death within one-two days
- blotching of skin, especially the ears
- loss of appetite
- huddling or hiding in corners
- diarrhoea, which may be bloody.

If it looks suss, call us 1800 675 888

NORTHERN TERRITORY GOVERNMENT

NORTHERN TERRITORY GOVERNMENT

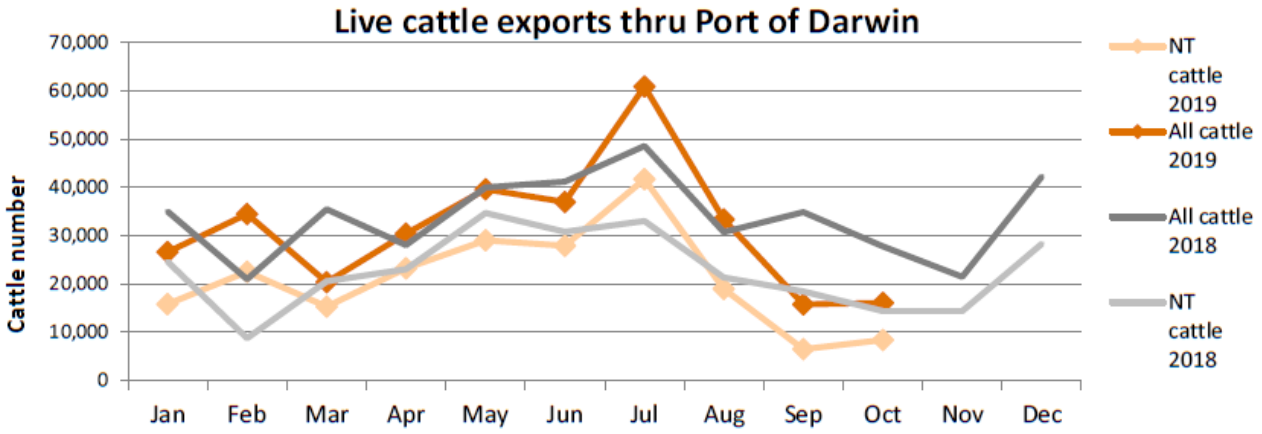
Pastoral Market Update

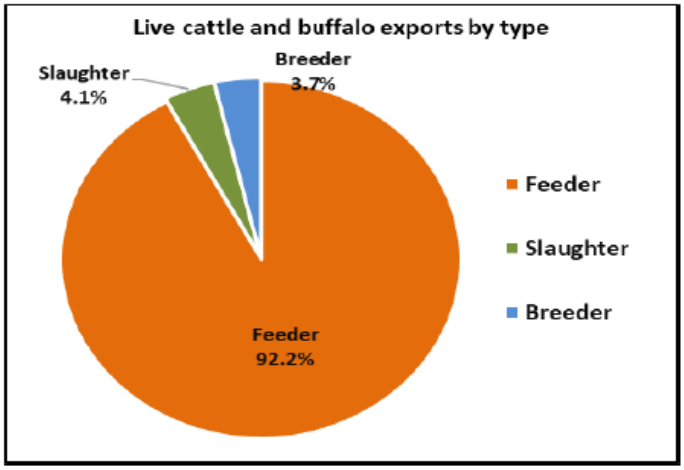
DEPARTMENT OF **PRIMARY INDUSTRY AND RESOURCES**

Live Exports via Darwin Port – OCTOBER 2019

Please note: figures are for stock exported through the Port of Darwin only; some NT stock are exported through interstate ports.
Please note: the NT Cattle figures here have been rounded respectively and may not tally to totals.
The figures listed below are correct as at October 31 2019 and are subject to change as further data becomes available.

Destination	Export of ALL CATTLE (including interstate)							Export of NT CATTLE (estimate only)						
	2017	2018	Last year to 31/10/18	YTD to 31/10/19	Oct	Last month	*Difference*	2017	2018	Last year to 31/10/18	YTD to 31/10/19	Oct	Last month	*Difference*
Brunei	3,872	3,653	3,653	4,121	659	0	659	2,423	2,292	2,292	2,828	345	0	345
Indonesia	245,544	326,768	273,364	244,014	13,400	13,994	-594	150,489	216,634	180,858	161,634	7,017	5,747	1,271
Philippines	0	10,482	10,482	14,345	0	0	0	0	7,262	7,262	10,019	0	0	0
Sabah	2,640	0	0	0	0	0	0	1,680	0	0	0	0	0	0
Sarawak	2,743	2,106	1,110	2,293	66	0	66	1,594	1,631	963	1,619	35	0	35
Malaysia	13,257	11,813	11,813	6,638	0	0	0	8,109	7,848	7,848	4,834	0	0	0
Vietnam	39,989	49,771	41,408	43,151	1,930	1,778	152	25,884	35,342	29,739	28,547	1,011	730	281
Egypt	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thailand	800	1,720	800	0	0	0	0	535	1,274	658	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	308,845	406,313	342,630	314,562	16,055	15,772	283	190,715	272,282	229,621	209,481	8,408	6,477	1,931





OTHER LIVESTOCK 2019

Destination	Buffalo		Goat		Camel	
	YTD	Oct	YTD	Oct	YTD	Oct
Brunei	578	0	0	0	0	0
Indonesia	2,921	730	0	0	0	0
Philippines	0	0	0	0	0	0
Sabah	315	315	0	0	0	0
Sarawak	342	342	0	0	0	0
Malaysia	927	0	0	0	0	0
Vietnam	2,114	214	0	0	0	0
Egypt	0	0	0	0	0	0
Thailand	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0
TOTAL	7,197	1,601	0	0	0	0

LIVESTOCK MOVEMENT STATISTICS

Reports for livestock movements from NT to Interstate, within NT and Interstate to NT are updated biannually - see www.dpir.nt.gov.au/primary-industry/primary-industry-strategies-projects-and-research/livestock-movement-statistics

Total of ALL CATTLE through Port of Darwin							Total of NT CATTLE through Port of Darwin						
2012	2013	2014	2015	2016	2017	2018	2012	2013	2014	2015	2016	2017	2018
246,990	359,616	493,958	510,860	372,251	308,845	404,401	234,249	308,784	324,477	295,738	236,511	190,715	271,001

Subscribe or unsubscribe to the monthly Pastoral Market Update.

Prepared by NT Department of Primary Industry and Resources. For further information contact PMU@nt.gov.au.

To:

POSTAGE
PAID
AUSTRALIA

If undeliverable, please return to:

Department of Primary Industry and Resources
PO Box 159
TENNANT CREEK NT 0861