

Barkly Beef

DEPARTMENT OF PRIMARY INDUSTRY AND RESOURCES



MARCH 2018

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Gearing up for the season ahead and how we can help!

Casey Collier, Pastoral Production Officer, Tennant Creek

Well the years just seem to keep on rolling by and before we know it, Christmas has come and gone and it's time to start welcoming back old staff and inducting new staff into the ways of remote living on vast cattle stations.

Whilst the first few weeks are a flurry of induction courses dealing with safety implications, horsemanship, shoeing courses, and general cattle handling skills, many young station staff either just starting out in the industry, or those new to the region, have little knowledge of pasture species, land condition, basic cattle nutrition or even what poisonous trees or weeds look like in the region. That's where we can help!

The Barkly Office offers one day courses that deal with basic rangeland management principles. We talk about the different country types (red and black soil), and the typical plant and pasture species you might see there. We also talk about land condition, how to recognise land condition, the importance of maintaining or improving land condition and what can happen if land condition degrades.

There is a session that deals with basic animal nutrition and touches on Northern Australian supplementation regimes and the reason why certain minerals are fed when they are. A session on poisonous plants teaches participants that just because you have poisonous plants, this doesn't necessarily mean your stock are going to be poisoned and discusses strategies to avoid it. A local staff member from the Weeds branch will present a section on the common weeds found in the Barkly, their significance, treatment options and how to recognise them.



Figure 1 Rangeland Management Course participants identifying plant species found on the Barkly

The day is summarised with a mapping exercise in which participants are placed into teams and asked to use the knowledge collected over the day to design their own station, justifying the reasons why fences, bores, paddocks, and infrastructure have been placed where they have; why certain classes of cattle are have been placed in each paddock and gives them a chance to get creative.

Each participant is provided with a detailed handout book which they may keep and refer to as they progress through the season.

If you think your station may be interested in hosting one of these free Rangeland Management Courses for your staff, please contact Casey Collier or Jane Douglas at the Tennant Creek DPIR office on 08 8962 4493, Casey.collier@nt.gov.au or Jane.Douglas@nt.gov.au 08 8962 4483.

Casey Collier hits top gear in Tennant Creek triathlon

Casey Collier (Tennant Creek DPIR) and husband, Nathan Collier, recently competed in the Tennant Creek Australia Day Triathlon. The triathlon included a 150m swim, 2km ride and 2km run. While both competing as solo entrants, the duo went head to head in a little bit of friendly competition, cheered on by their three young children and both pushing themselves to beat the other. While Nathan was first out of the pool, and headed off on his bike, Casey quickly caught up halfway through the bike ride and the pair entered the check-point together. Although the duo stayed together through most of the run, Casey managed to pull in front and cross the finish line about 150m in front of Nathan. Casey managed to be the first solo female over the line, and Nathan was the second male, a fantastic achievement by both of them.

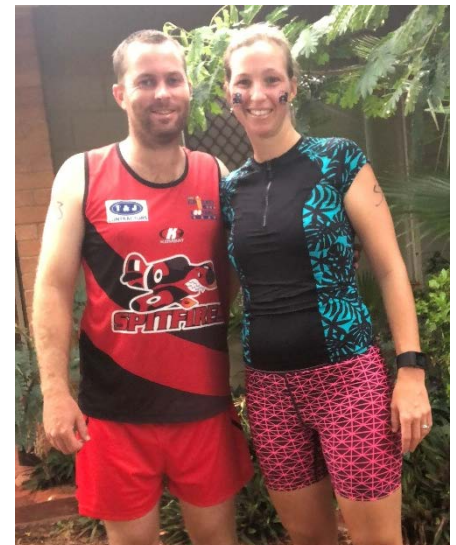


Figure 2 Nathan & Casey Collier

How dry is your wet season?

Caroline Pettit, DPIR Rangeland Research Officer, Berrimah

It has not been the wet season many had hoped for in the Barkly region. Despite promising above average rains in November 2017, the big rains didn't come in the normally wettest months of January and February leaving some pastoralists concerned about feed availability for the upcoming dry season. With a month or so left to go this wet season there is hope for further storms but forecasters are predicting only a low chance of exceeding median rainfall in March and April.

So how does the 2017/2018 wet season look when we compare it to other years? The graphs below from the CliMate app <https://climateapp.net.au/> show the cumulative annual rainfall (August-August) for every year since 1900 (thin blue lines). The red line is the current 2017/2018 rainfall and the solid blue line is the median.

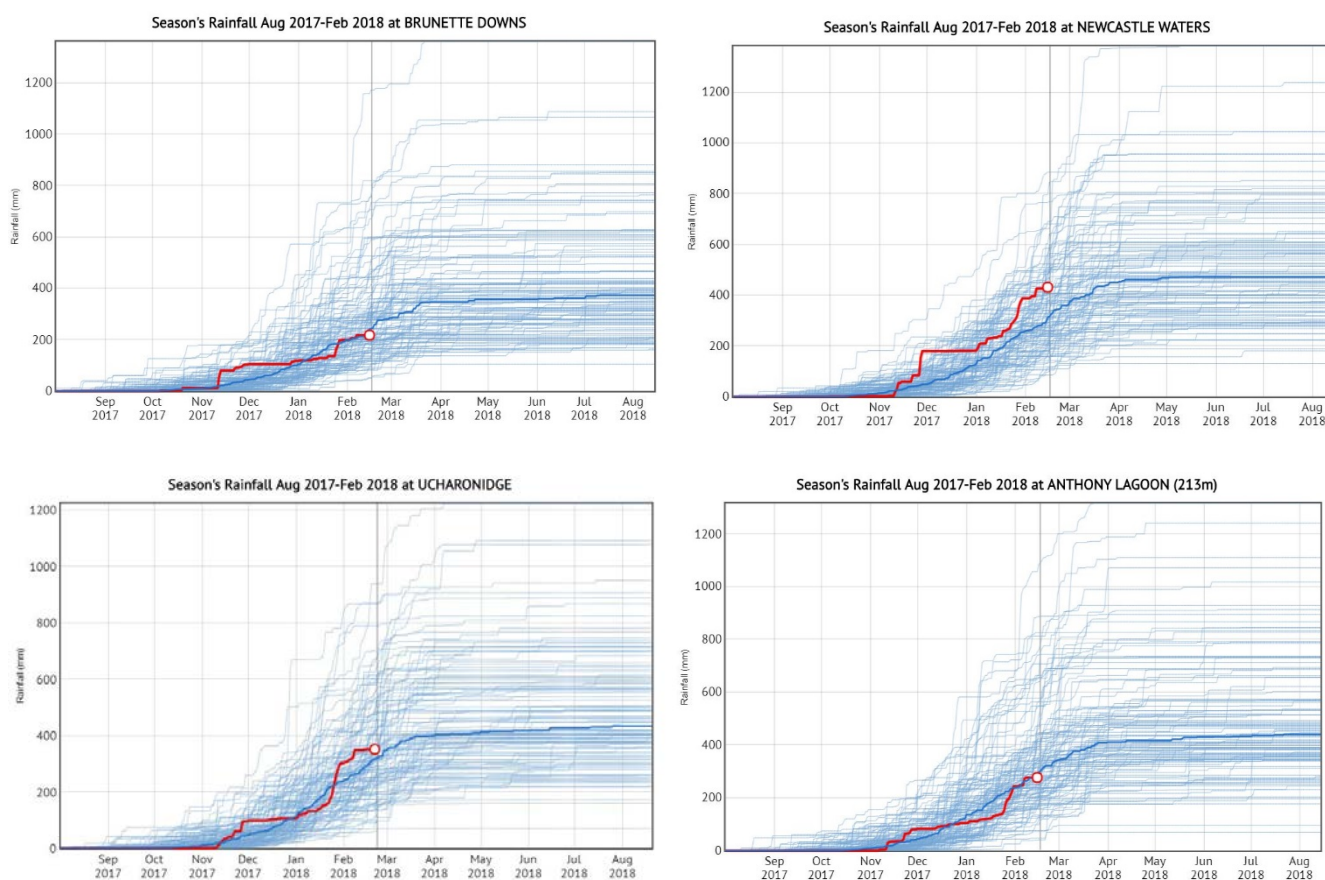


Figure 3 Annual rainfall (August-August) for every year since 1900 (thin blue lines). The red line is the current 2017/2018 rainfall and the solid blue line is the median.

Brunette Downs, Anthony Lagoon and Ucharonidge are all tracking close to the median for this time of year. If further rain comes, it could end up as a median rainfall season but without it, places such as Anthony Lagoon will have had a well-below median rainfall year. Newcastle Waters is having an above median year so far but will also become a median year without more rain.

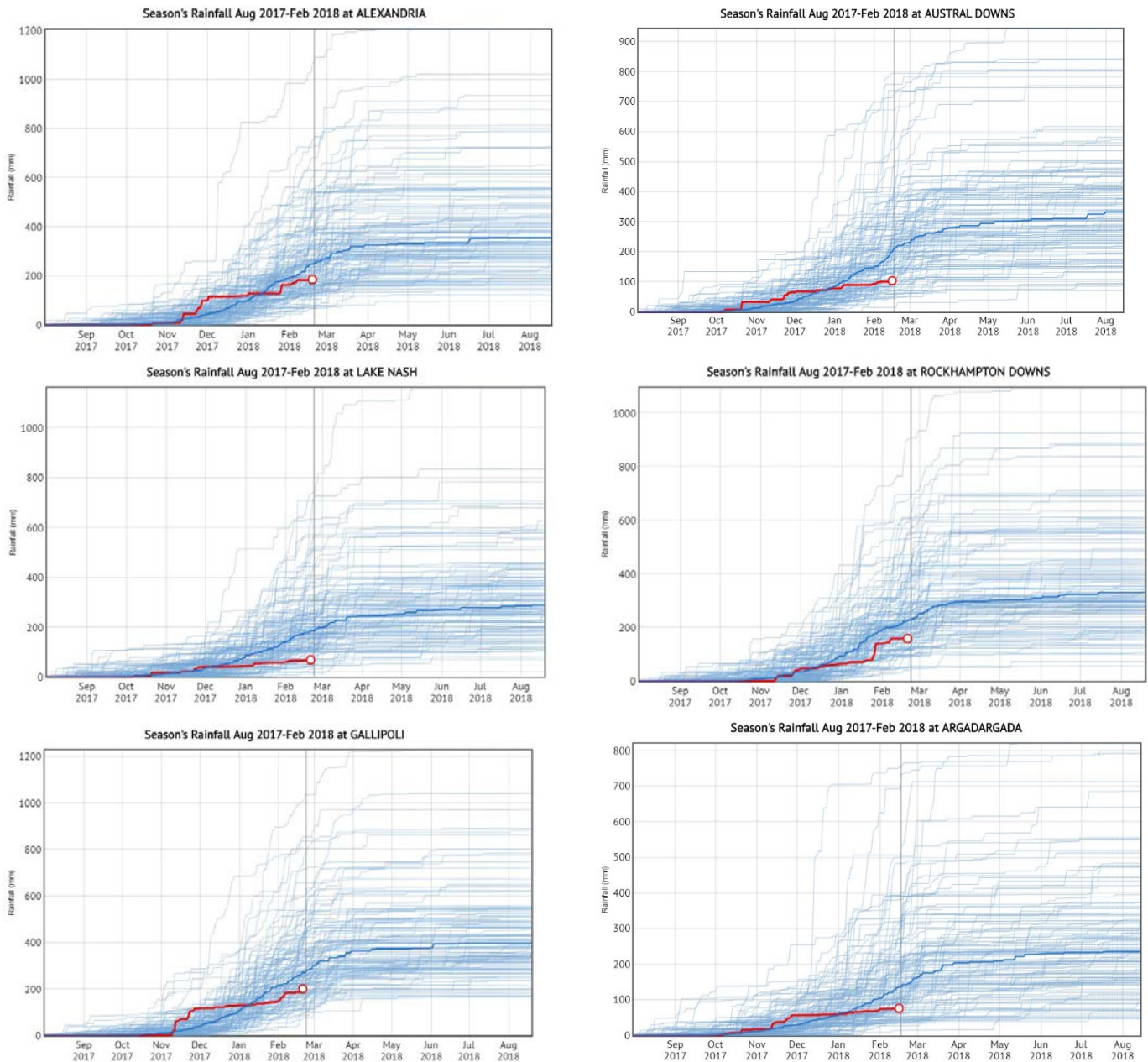


Figure 4 Annual rainfall (August-August) for every year since 1900 (thin blue lines). The red line is the current 2017/2018 rainfall and the solid blue line is the median.

Areas surrounding Austral Downs, Lake Nash, Alexandria, Argadargada and Rockhampton Downs are having a well-below median season so far. We can see where early falls pushed the total rainfall above the median for some places in November and December but the lack of follow up rain has seen the rainfall plateau and track well below median rainfall for this time of year.

So, what kind of impact are we likely to see on pasture growth from this pattern of rainfall? By using GRASP we can model the expected pasture growth for different rainfall events. The graph below uses the actual daily rainfall at Gallipoli to simulate daily pasture growth on black soil for this year (2017/2018) compared to last year (2016/2017). As of mid-February 2018, Gallipoli have received around 200mm total for the wet season. At the same time last year over 400mm had been received with over 200mm in January 2017 alone.

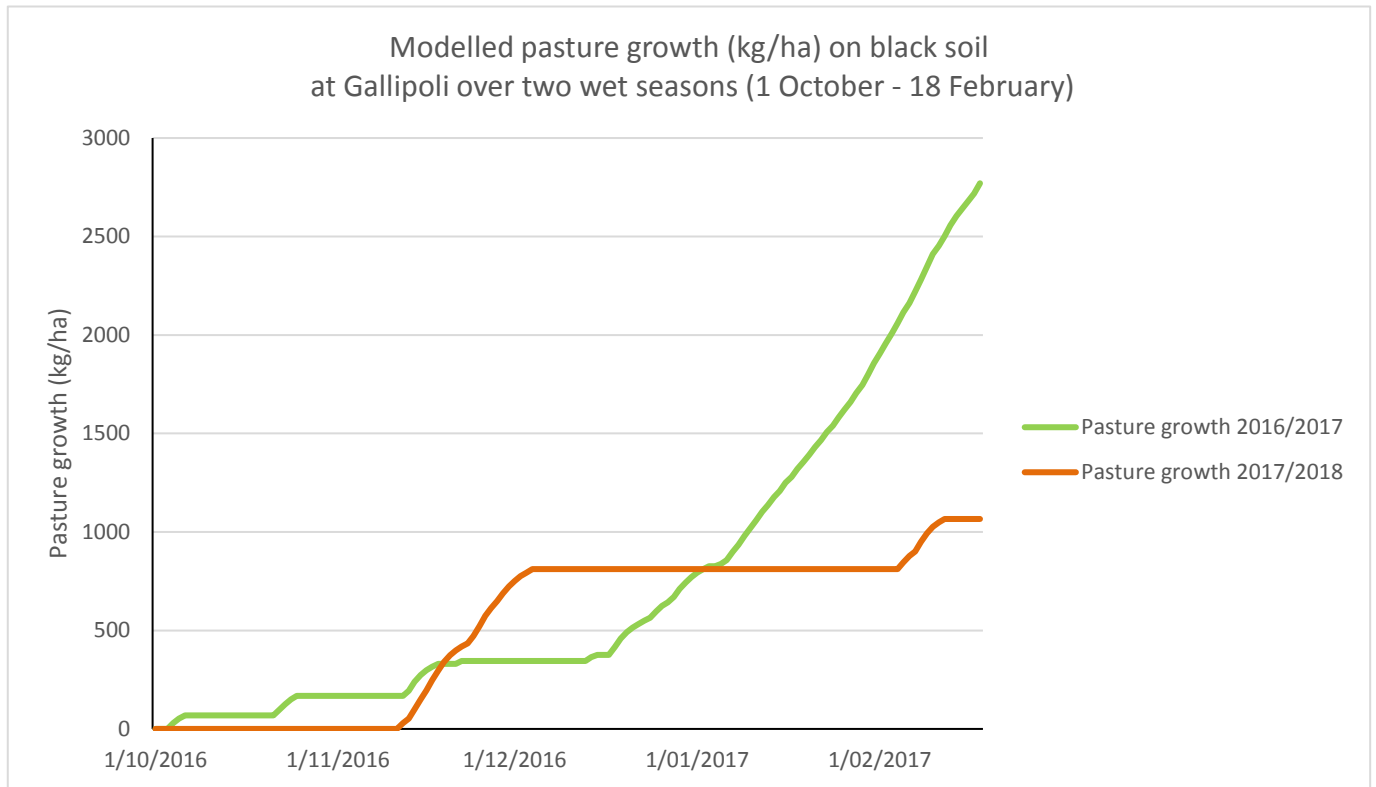


Figure 5 Modelled pasture growth (kg/ha) on black soil

The model predicts that the good early rains in November 2017 would have produced a flush of around 800kg/ha growth. Growth then halted over the dry December and January before climbing to just over 1000kg/ha after storms in February 2018. At this time last year over 2500kg/ha had grown. On average for a wet season at this site you would expect approximately 2000kg/ha growth, so 2016/17 was in the top 15% of years, compared to this year, where if no more rain falls, growth will be in the bottom 15% of years.

In average years, 50 to 100mm of rain falls between March and May depending on where you are in the Barkly. However the Bureau of Meteorology are predicting that there is a low chance of receiving the median so we need to be prepared for the likelihood of little to no more significant rain.

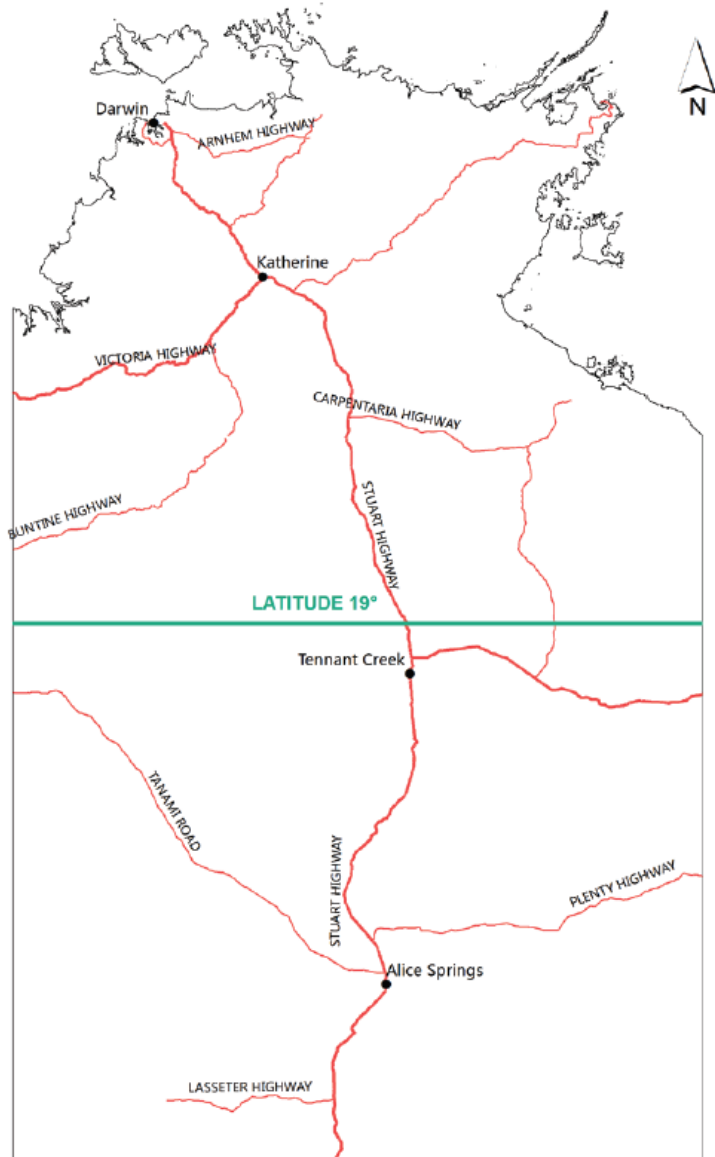
To see the rainfall outlooks for your area on the Bureau of Meteorology website, go to <http://www.bom.gov.au/climate/outlooks/#/rainfall/climatology>.

This year, forage budgeting will be critical to calculate how much pasture will be available and how to adjust stock numbers accordingly. If stocking rates are not adjusted to available forage, higher utilisation of pasture could lead to a decline in land condition. A decline in land condition during poor years can have a substantial flow-on effect into future seasons even after good rainfall. For help with forage budgeting and advice on stocking rate adjustments contact Livestock Industries Development on (08) 8962 4488.

DECLARATION OF A FIRE DANGER AREA AND FIRE DANGER PERIOD

The Executive Director of Bushfires NT, Department of Environment and Natural Resources hereby gives notice that a Fire Danger Period is declared for the period **1 January 2018 to 31 March 2018** in the part of the Territory that lies south of the 19th parallel of south latitude (starting approximately 70kms north of Tennant Creek).

The major effect of this declaration is that, throughout the declared area, a permit to burn is required before any burning is conducted, and a person must not leave an area before thoroughly extinguishing any fire they have lit. There are substantial penalties for failing to comply with these requirements.



For more information contact Bushfires NT on 8922 0844

www.nt.gov.au/bushfires





Barkly Research Advisory Committee

Resignation of Fred Hughes as Chairman

After a very successful two years on the committee, Fred Hughes (Lake Nash Station), along with his family, have moved to another of their properties down near Tambo, in central Queensland. Fred was a very active member of the committee and we, as the committee and greater pastoral industry here on the Barkly, have been very fortunate to have someone with his passion and vision for the industry ensuring that our region had input into the direction of Meat & Livestock Australia (MLA) funding for research development and extension (RD&E) across northern Australia.

Re-introducing Ben McGlynn as new BRAC Chairperson

Ben McGlynn (Rocklands Station), with the committee and former chair endorsement, has agreed to take on the chairman's position. Ben, along with his wife and three young sons, currently manage Rocklands Station, owned by Paraway Pastoral Company, on the Eastern Barkly Tableland. Acquired in 2016, Rocklands is Paraway's largest cattle breeding operation, situated on the border of Queensland and the Northern Territory on the Barkly Tableland near the township of Camooweal. Rocklands runs a 22,000 breeder herd consisting of a crossbred base with a heavy influence of Brahman cattle. The property is at a significant advantage due to its location below the "tick line", allowing it to run a crossbred herd with higher Bos Taurus content. The progeny from Rocklands are moved South and East to Paraway's Queensland grower properties.

Ben has spent a lot of time in the Northern Territory, previously working on Helen Springs and managing Brunchilly Station. During his time at Brunchilly, Ben held the position of BRAC chairman but sadly had to resign when he and his family moved to May Downs near Mount Isa, QLD in early 2013.

Ben is passionate about the industry and has a strong research focus. We look forward to re-welcoming Ben back onto the committee as Chairman.

Projects Discussed at Recent BRAC meeting

The first BRAC meeting of the year was held on Tuesday 13 February at the Tennant Creek DPIR office. Although a fairly short meeting to start off the year, one of the main topics for discussion was around the possibility of setting up a project investigating water quality and its productive effects on growing cattle. Water quality on the Barkly Tablelands has been found to be quite poor in many places with several managers suspecting this may be having adverse effects on cattle performance. Whilst this topic has been investigated in the past, a research trial is still yet to be done. Casey Collier from DPIR will discuss with Angela Carpenter from the Barkly Landcare and Conservation Association about potentially seeking funding to run a trial. Preliminary discussions suggest the main aim of the project will be to calculate the production loss from bores with high salinity and thus allow stations to make their own calculations about when it would become cost-effective to pipe in better water from elsewhere. It is also proposed to include a wider study of rates of water consumption across a range of locations and levels of salinity, as it is reduced drinking that is the cause of reduced feed intake and thus reduced growth rates. The project is still in

discussion stages and no research proposals have been drawn up, so if you would like input into the project objectives, design or methodology, please feel free to contact Ben McGlynn or myself to discuss further.

How does BRAC, NABRC and NBIC all fit together?

The North Australian Beef Research Council (NABRC) is an independent organisation comprised of research organisations, education providers and producer representatives. The main role of NABRC is to provide guidance and advice to organisations that either invest in, or undertake beef cattle research, development and extension (RD&E) in QLD, NT and the Pilbara and Kimberley regions of WA. NABRC doesn't actually fund any RD&E but rather influences the RD&E agenda, and helps to ensure that innovation and learning in the northern beef industry addresses the industry's priority needs.

NABRC is underpinned by 11 regional committees, each chaired by producers who represent their regions at NABRC and Northern Beef Industry Committee (NBIC) meetings.

NBIC is made up of all the chairpersons from the different NABRC regions and the MLA representatives. NBIC assesses all the northern beef research proposals received by MLA and recommends whether or not they consider them worthy of MLA investment.

The regional committees are made up of producers and local RD&E personnel who meet regularly and ensure the regions' priority areas are addressed.

The Northern Territory has three regional committees which are: Alice Springs Pastoral Industry Advisory Committee (ASPIAC), Katherine Pastoral Industry Advisory Committee (KPIAC) and Barkly Research Advisory Committee (BRAC).

Through consultation with producers and stakeholders, each committee has identified key priority areas for their region. BRAC identified animal welfare, water resources, weeds, marketing and herd fertility as the key research areas for the region.

For more information on your local regional committee, please don't hesitate to contact Casey Collier on 08 8962 4493 or casey.collier@nt.gov.au. We are always keen for new members and if you are passionate about seeing where the industry is heading and want to have your research ideas heard, come along to a meeting and see what it's all about. More information on NABRC and regional committees can be found at <http://www.jackiekyte.com.au/nabrc/>.

Casey Collier
BRAC Secretariat
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As part of a wider Australian Government initiative to boost economic development in northern Australia, Geoscience Australia (GA) is leading the **Exploring for the Future** program in collaboration with State and Territory partners such as the Northern Territory Geological Survey to acquire data and build our knowledge of mineral, energy, and groundwater resources across the NT.

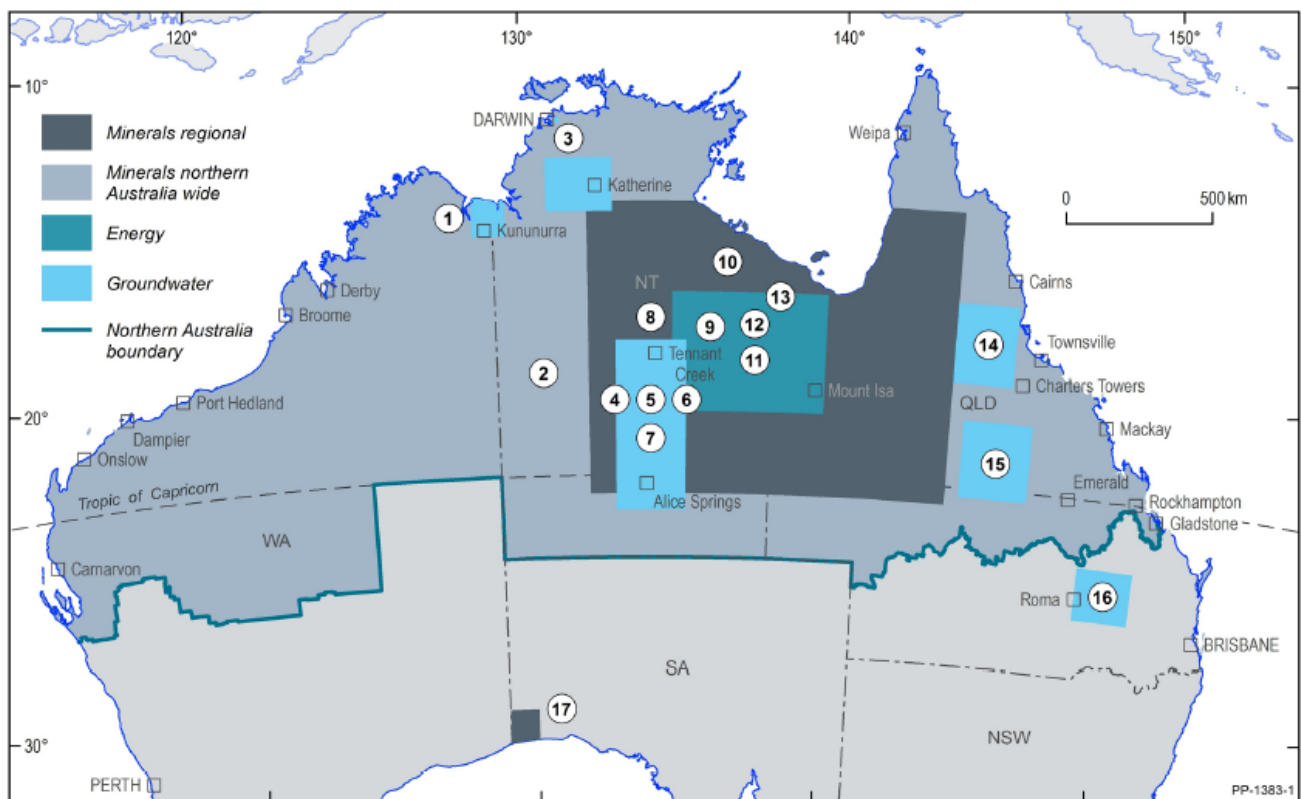
Between 2017 and 2020 several geoscience research projects will be working across northern Australia including:

- Airborne electromagnetic surveys
- Bore water testing
- Borehole logging and hydraulic testing
- Soil geochemistry
- Magnetotelluric surveys
- Seismic surveys
- Stratigraphic drilling

The information collected from these surveys will be publicly available via the GA website.

Further information about Exploring for the Future can be found at www.ga.gov.au/eftf and enquiries can be made to eftf@ga.gov.au or 1800 870 833 (Mon-Fri, 9am to 5pm AEST).

An overview of current Exploring for the Future activities



- | | | |
|--|--|--|
| ① AEM survey, East Kimberley | ⑦ Southern Stuart Corridor AEM survey | ⑬ North Australia geochemistry survey |
| ② Solid geology map | ⑧ Hydrogeochemistry sampling, Tennant Creek | ⑭ Bore hole monitoring, Upper Burdekin |
| ③ AEM survey, Northern Stuart Corridor | ⑨ AusLAMP survey | ⑮ AEM survey, Galilee Basin |
| ④ AusAEM survey, Mt Isa to Tennant Creek | ⑩ Hydrogeochemistry sampling, McArthur Basin | ⑯ AEM survey, Surat Basin |
| ⑤ Onshore drilling assessment, Mt Isa to Tennant Creek | ⑪ South Nicholson gravity survey | ⑰ Coompana drilling program |
| ⑥ AusARRAY survey, Mt Isa to Tennant Creek | ⑫ South Nicholson seismic survey | |

Exploring for the Future – Back to the Barkly

Peter G Campbell, Northern Territory Geological Survey, Department of Primary Industry and Resources

Whether it was a friendly chat and directions to a remote bore, or a shower and an air-conditioned room for the night after a dusty week collecting samples, the support of people in the Barkly region have been a vital part of the success of the first field season of the *Exploring for the Future* program.

Geoscience Australia and our collaborating partners in the Northern Territory and Queensland Governments would like to thank all involved for their help. The program is a massive scientific undertaking to revolutionise our knowledge of the mineral, energy and groundwater resources across northern Australia and be a pathfinder for future resources discoveries that will sustain future generations through jobs, infrastructure and vital regional communities.

The Barkly region between Tennant Creek, Mt Isa and the Gulf is a special focus because previous exploration has largely focused on areas around known mineral deposits like Mt Isa and McArthur River. There are large parts of the region that are 'under-explored' and ripe with potential if we look a bit deeper. With a large variety of scientific methods being applied, by the time Geoscience Australia and associates like the Northern Territory Geological Survey (NTGS) are finished in 2020 the region will one of the most intensely studied pieces of the planet.

Through the 2017 dry season Geoscience Australia has accumulated around 1600 person-days of field work – the equivalent of one person working non-stop for over four years – and that many hours again were put in by local contractors and Northern Territory staff. The results of all this work will be publicly available over the coming months as data is processed and interpreted. And while 3D images of geological structures 100 km beneath your feet may not have any immediate impact on day-to-day operations of a cattle station, some datasets such as soil and water geochemistry and airborne electromagnetic surveys that potentially reveal near surface aquifers and how they are connected will be of interest to Barkly pastoralists in due course.

The 2018 dry season will be just as busy for fieldwork and we look forward to working with residents of the Barkly again. Building on the data acquired in 2017, Geoscience Australia and the NTGS will be focussing fieldwork on several areas aiming toward stratigraphic drilling in 2019 – drilling not for water, minerals or oil, but drilling in key geological locations to take rock samples at depth to test and improve our interpretation of the collected data. Geoscience Australia is working closely with the NT Government to carefully follow regulation and best practice in consulting with landholders and other interested parties to ensure the work is well planned, safe and with full consent of all those involved.

Further information about *Exploring for the Future* can be found at www.ga.gov.au/efft and enquiries can be made to efft@ga.gov.au or 1800 870 833 (Mon-Fri, 9am to 5pm AEST)

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Barkly Landcare Update

Angela Carpenter, Barkly Landcare & Conservation Co-ordinator



Hi everyone, the second half of 2017 rounded off a good year for Barkly Landcare and Conservation Association:

On Wednesday 25 October 2017 Brunette Downs hosted a successful Barkly Landcare Field Day. Members were well represented and we welcomed Minister Ken Vowles and Minister Gerry McCarthy to the day. An engaging set of presenters covered topics such as pastoral developments and perspectives, natural resource funding opportunities and the landcare group, current pasture burning trials, biological and aerial weed control trials and freshwater mussels and their potential as water quality indicator species. A big thank you to Andy Bubb and AACo for organising and hosting this great event and to the speakers and guests who made the trip.

Another recent highlight was receiving the NT Landcare Award for Excellence in Sustainable Farm Practices at the November 2017 Territory Natural Resource Management conference. This was for the long-term involvement in parkinsonia biological control trials. Below are committee and members with the award.

The first part of 2018 sees us wrapping up weed control projects and pasture burning trials funded by Territory Natural Resource Management and awaiting the results of federal government funding applications. 2018 holds much potential! We look forward a productive year.



Figure 6. BLCA Members with the NT Landcare Award for Excellence in Sustainable Farm Practices, L-R: Michael Johnson, Chris Keane, Anthony Cox, Ian Halstead, Angela Carpenter, Shane Farriday, Tim Milne, Mary Vaughn, Mel Bethel and Leah Halstead.

Friday 13th July 2018

Tennant Creek & District Show

Cattle Section

Classes:

- Pen of 2 Bulls (2016 season)
- Single Local Bull (older than 2016)
- Pen of 2 Heifers 180-250kg
- Pen of 2 Heifers 250-350kg
- Pen of 2 Heifers 350-450kg
- Pen of 2 Steers 180-250kg
- Pen of 2 Steers 250-350kg
- Pen of 2 Mickeys 180-250kg
- Led Calf (handler 12 years and under)



Contacts:

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Casey Collier 08 8962 4493 Casey.collier@nt.gov.au

Start drafting off your prize-winning cattle now!

Northern Territory Cattleman's Association Update

Paul Burke, CEO, Northern Territory Cattlemen's Association

The Northern Territory Cattlemen's Association (NTCA) has had a busy start to 2018. The *Scientific Inquiry into Hydraulic Fracturing* was made public the week prior to Christmas, and with over 120 recommendations the body of work is immense. The NTCA Executive has formed a Working Petroleum Group to advise the Executive of the best path forward. The response to this report will be submitted by the end of January 2018.

In November 2017, the Federal Government delivered an options paper on proposed reforms to the Native Title Act, 1993. The NTCA is currently consulting with the pastoral industry and other stakeholders and will deliver a response to this paper in the coming weeks.

The Northern Territory Government have flagged that water reform, vegetation management frameworks and land access reviews are also all on the legislative agenda for 2018.

The NTCA is a grassroots organisation built on the principle of "Advancing and protecting the interests of cattle producers in the Northern Territory." The 34th NTCA AGM and Industry Conference will be this year held on the 22-23 March at the Alice Springs Convention Centre. With a theme of 'Innovation Generation', the program will include some interesting and stimulating topics which will aim to dissect the future of technology for our industry.

The NTCA has been fortunate to secure Air Chief Marshal Sir Angus Houston AK, AFC (Retired) , formerly the Chief of the Australian Defence Force and Chief of the Australian Air Force, he will discuss aviation safety within the cattle industry. Kalia Colbin, Ambassador for the Singularity University will deliver a presentation on nanotechnology, bioinformatics, artificial intelligence, robotics, and how these innovative technologies will impact the pastoral industry in the future.

Wes Lefroy, Agricultural Analyst with Rabobank will explain 'Blockchain' and the opportunities that this may represent for the cattle industry. David Mahony, Head of Small Business Innovation with Google, will take delegates inside Google to understand how they are overcoming the digital divide between rural and city customers.

One of the most popular sessions on the program each year is the afternoon panel session, which comprises a number of industry leaders. In 2018 the calibre of participants is outstanding: Dr Michele Allan, Chair - Meat and Livestock Australia; Fiona Simson, President - National Farmers Federation; Howard Smith, President - Cattle Council of Australia; and Tom Stockwell, President of the Northern Territory Cattlemen's Association. It promises to be an insightful session.

Tickets for the NTCA Conference can be purchased online by following the links at www.ntca.org.au. The team at the NTCA looks forward to welcoming all at the conference and are committed to working hard to represent all Northern Territory cattle producers in 2018.

Breeding EDGE Workshop



Alice Springs, NT: 04 - 06 April 2018

**VENUE
TIME**

**TBA
8:30am to 5:00pm**

BREEDING EDGE IS A THREE-DAY WORKSHOP DESIGNED TO ASSIST PRODUCERS IMPROVE AND REFINE THEIR BREEDER HERD MANAGEMENT AND GENETIC IMPROVEMENT PLANS.

Participants will be able to develop a breeding herd management plan using genetic and reproductive knowledge and technologies, to achieve desired production targets.

Attending this workshop will help you to:

- evaluate and improve your existing breeding herd management program for reproduction and genetic improvement
- understand the importance of measures of reproductive performance
- identify strategies and management to improve breeding herd performance
- develop a management plan that incorporates practical, achievable strategies and a management program to meet your desired objective(s)
- develop systems for evaluating the success of your strategies

Prices:

\$1,750 + GST / One person from a business

\$1,450 + GST / Two or more people from a business

Cost includes comprehensive set of workshop notes, workbook and lunch, morning and afternoon tea each day.

What you will learn:

- reproduction and current herd performance
- female reproduction
- managing the breeders - systems
- bull fertility and management
- reproductive diseases and diseases that impact reproduction
- breeder herd management plan
- genetic improvement of your herd (including breeding objectives)
- traits of economic importance for your herd
- genetic principles and selection tools
- selection and selection criteria
- breeds and breeding systems

Deliverers:

- Felicity Hamlyn-Hill - Beef Enterprise Advisory Services Pty Ltd
- Tim Emery - Tropical Beef Technology Services (TBTS)
- Whitney Dollemore – NT DPIR
- Vet (TBA)

Places are limited. To register contact:

Felicity Hamlyn-Hill

M: 0428 113 732 or

E: felicityhamlyn-hill@bigpond.com



Animal Health

DEPARTMENT OF PRIMARY INDUSTRY AND RESOURCES

Livestock disease investigations

The Department of Primary Industry and Resources (DPIR) provides a free disease investigation service to livestock owners for diagnosis of notifiable emergency, exotic and endemic disease, including zoonotic diseases. Berrimah Veterinary Laboratories provide free diagnostic testing for exclusion of notifiable disease for all disease investigations, and subsidies are available to private veterinarians for significant disease investigations in livestock. The Northern Australia Enhanced Disease Surveillance program is being trialled from 2017-2019 providing increased subsidies for cattle and buffalo disease events reported to and investigated by private veterinarians. This program recognises the higher costs and challenges associated with conducting disease investigations in more remote regions.

During October to December 2017, 37 livestock disease investigations were conducted to rule out emergency diseases or investigate suspect notifiable diseases across the Northern Territory (NT). Figure 7 shows the number of investigations by species of livestock.

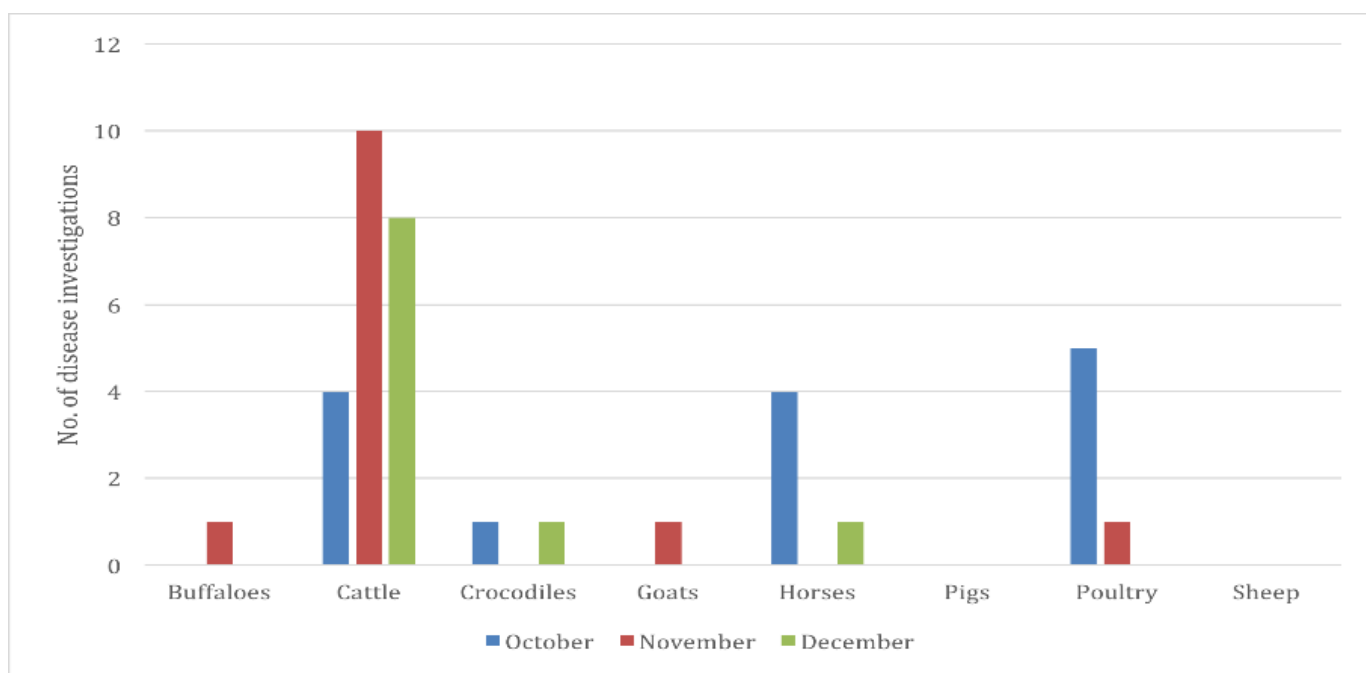


Figure 7. Livestock disease investigations by species for October to December 2017

Berrimah Veterinary Laboratories processed 119 livestock sample submissions, including samples to substantiate proof of disease freedom certifications, for accreditation programs and targeted surveillance to support market access. The following case reports are a selection of disease incident field investigations during the quarter.

Transmissible spongiform encephalopathy (TSE) excluded in neurological cattle

A herd of 220 Brahman-cross cattle on a small property outside Darwin were investigated in November after the owner of the property reported unusual signs in the herd.

Affected cattle were initially observed with signs of salivation, anorexia, a stiff hindlimb gait and glazed and red eyes. Over a period of 24 hours, the affected cattle began to lie down, and were unable to get back up. Over a period of eight days, one cow had died, four steers had been euthanased and one steer had recovered, despite all receiving anti-inflammatory treatments.

The cattle had been in the same paddock for the previous seven months. They were generally in poor condition despite having access to supplemental grass hay for approximately one month.

Laboratory tests of two affected animals indicated dehydration and a mild degree of muscle damage. Testing for bovine ephemeral fever virus was negative.

Post mortem examination of a three year old cow was unremarkable except for bone fragments in the reticulum and green ironwood leaves in rumen content. The cow was in poor body condition. Laboratory tests on tissues samples did not reveal any histological lesions, including no findings suggestive of transmissible spongiform encephalopathy (TSE) detected at the brain sites specified in the Australian and New Zealand Standard Diagnostic Protocols – TSEs.



Figure 8 Toxic leaves of the ironwood tree

Ironwood intoxication is suspected.

The main effect of ironwood is a cardiac arrhythmia (abnormal heart rhythm), which leads to severe debilitation. In some cases, the degeneration of the cardiac muscle is observed during laboratory examination and testing. This was not evident in this case.

The ironwood tree (*Erythrophleum chlorostachys*) is endemic in the northern region of the Northern Territory. Cattle bred in endemic areas will not usually consume the plant. The leaves of the ironwood tree are highly toxic when ingested. As few as two leaves are known to be lethal to cattle. The toxic agents are diterpenoid alkaloids. Young leaves of new plants are very attractive to hungry and newly introduced grazing stock.

Given the dry time of the year and scarce availability of feed, it is likely that the hungry cattle found the green ironwood plants palatable in this case.

72

Hours

Moving a horse from the cattle tick infected area?

You must give at least three days notice (72 hours) and you must then move the horse no more than two days after the supervised treatment.

Necrotising fasciitis in greyhounds

An outbreak of necrotising fasciitis in racing greyhounds in Darwin occurred over a five day period in October.

Four dogs presented to veterinary clinics with signs of lethargy, depression, elevated temperature, lameness and localised swelling of the forelimb or hindlimb, and intense pain disproportionate to the wound. Each infection started with a small skin lesion and progressed to a large area of necrosis (dead cells) and ulceration within a few hours. Another case presented in Darwin in November.

In all cases, affected dogs were euthanased and testing was conducted by Berrimah Veterinary Laboratories.

With varying levels of severity, further examination showed haemorrhage, oedema (swelling) and necrosis of the limbs, ecchymotic haemorrhage of lymph nodes and generalised congestion of tissues.

Four greyhounds were diagnosed with severe necrohaemorrhagic fasciitis and one with streptococcal toxic shock syndrome.

Death was reported to occur in another five greyhounds in Darwin without veterinary investigation.

Necrotising fasciitis is a rare disease in dogs caused by *S. canis*. The condition appears suddenly and progresses rapidly, leading to systemic illness, toxic shock and death if left untreated. It destroys the skin, fat and underlying muscle tissues. It may present in the form of pneumonia. *S. canis* is considered normal flora in dogs. The change to an aggressive pathogenic type that is invasive is poorly understood, but may be due to acquired virulence factors in a particular clone.

Bacteria usually enters through the skin and can be spread by contact with infected dogs or exposure in a contaminated environment. Stress associated with travelling long distances may decrease an animal's resistance to the disease.

Veterinary officers from the Department of Primary Industry and Resources inspected the kennels at the site and provided advice on biosecurity and disease control to dog owners, trainers and veterinarians. Two greyhound race meetings and one trial were suspended during this time to reassess biosecurity measures. Races resumed one week after the last case was reported in October.



Figure 9 Necrosis of the limb associated with necrotising fasciitis due to *Streptococcus canis* infection

A word from the Kevin de Witte Chief Veterinary Officer

Hello - as you may be aware, I am Chief Inspector under three Northern Territory acts:

- The *Livestock Act* – our principal animal biosecurity legislation.
- The *Meat Industries Act* – abattoirs, pet meat and wholesale butchers.
- The *Veterinarians Act* – where I am President of the Board.

I am currently reviewing the *Livestock Act* which, amongst a great number of biosecurity issues, will see the adoption of the Australian Animal Welfare Standards for cattle, sheep and saleyards/depots. Universal welfare standards for handling, care, fitness to travel and killing are already in operation with the past adoption by regulation of the Land Transport Standards for Livestock.



Recently, the Northern Territory cattle tick program has been under review, with a number of options proposed to the livestock industries. The Northern Territory Cattleman's Association (NTCA) has provided a response supporting the continuation of the cattle tick program, with suggested improvements particularly in regard to Parkhurst tick surveillance.

As producers, you are an important part of the NT and national animal health surveillance system that supports our public amenity, food safety, animal welfare and market access for primary produce. I have recently made **Melioidosis** and **Psittacosis** notifiable diseases in the NT to ensure that collectively we can better manage any public health aspects of these diseases. I want to mention the following cases from the past 12 months:

- **Lead residues** in cattle continue to surface. Discarded lead rubbish is the main issue.
- The alert for **Brucella Suis** has not confirmed any Brucella infection – a severe zoonoses.
- **Melioidosis** continues to be diagnosed in many species around Darwin.
- There has been the normal run of **Australian Bat Lyssavirus exclusions** in bats but no further cases. Post-exposure Rabies vaccine is available under a fee for service arrangement through DPIR for pets exposed to bats.
- There have been few **Hendra** exclusions for equines. We continue to seek samples from undiagnosed sickness in horses
- **Non-inflammatory Liver disease in young dogs** – named 'Humpty Doo Dog Disease' resulted in only two further possible cases in this build-up/spring. Theories as to the cause favour a seasonal poisonous plant, possibly a fungi fruiting.
- An epidemic of stock worker illness last wet season was confirmed as **leptospirosis**. A parallel investigation in young cattle demonstrated massive seroconversion to a selection of serovars but the illness in these cattle was shown to be an encephalitis due to **Bovine Herpes Virus 5**. At around 1% mortality – this may be more common than reported.
- DPIR confirmed a classic **Bovine Pestivirus Persistently Infected (PI)** case. Virus is endemic.
- **Salmonellosis** in two separate aviaries with significant losses of expensive birds.
- Lastly, the NT had a significant outbreak of **Necrotising Fasciitis** "flesh eating bacteria" in greyhounds in late 2017. This is a rare but often fatal disease caused by *Streptococcus canis* that killed about six dogs before management was improved. Infection in other species is possible.

The national surveillance programs such as the National Arbovirus Monitoring Program (NAMP), Transmissible Spongiform Encephalopathies (TSE) Freedom Assurance Program, Screw Worm Fly monitoring and Significant Disease Investigations continue to keep DPIR vets busy. There are also a number of Livestock Vet initiatives under the National Biosecurity Strategy. Berrimah veterinary laboratory staff are happy to discuss any interesting or challenging cases that you may have, particularly where notifiable diseases are suspected. In some cases a fee for service may apply but generally livestock investigations are free. For our contacts see: <https://www.nt.gov.au/industry/agriculture/livestock/animal-health-and-diseases/notifiable-diseases-in-animals-and-how-to-report-them>

Last week we were assessed as a government veterinary service under the World Organisation for Animal Health (OIE) standards as part of a national program – there is no doubt that the report will reflect the realities of a small livestock biosecurity team charged with many responsibilities including a critical core role in emergency animal disease response.

Regards,

Kevin de Witte
Chief Veterinary Officer, NT

Do you keep chickens at home? Then you need a Property Identification Code (PIC).

If you keep livestock on your block or in your backyard, you need to register for a Property Identification Code (PIC). A PIC is a free registration code that identifies the property where your livestock are kept.

Livestock includes cattle, buffalo, horses (inc. mules and donkeys), bison, pigs, poultry, pigeons, deer, llamas, alpacas, camels, emus and ostriches, sheep, goats and beehives.

Help keep your livestock safe in the event of a disease outbreak, bushfire or animal emergency, and register today.

Registering for a PIC is easy and free, [register online](#).

For more information visit

<https://nt.gov.au/industry/agriculture/livestock> Click on **Get a property identification code**



Feral pig hunting is popular in the Northern Territory

You can hunt feral pigs on public land as long as you carry out best practice and adhere to the relevant laws of the Northern Territory (NT).

Being a responsible feral pig hunter:

- Ensure that you obtain any necessary permits. There are heavy penalties for illegal pig hunting in the NT.
- Obtain permission from the owner if hunting on private property.
- Follow good biosecurity practice to minimise the spread of diseases, pests and weeds.

This will include:

- using personal protective equipment (PPE) (Refer to section on precautions).
- good personal hygiene (hand washing, changing soiled clothes).
- good hygiene for your dogs.
- cleaning and disinfecting work areas and vehicles when leaving a hunt.
- ensure your dogs are well handled and trained not to chase livestock or wildlife.

Be aware of your ethical responsibilities by ensuring that humane methods are utilised to kill feral pigs and that they are not subjected to unnecessary pain or suffering.

Pig hunting with dogs

Dogs are permitted to be used when hunting feral pigs in the NT, however strict regulations are in place under the NT *Animal Welfare Act* (as in force April 2017) and the *National Model Code of Practice for the Welfare of Animals: Feral Livestock Animals* to ensure the humane treatment of feral pigs and the welfare of hunting dogs are enforced.

Heavy penalties apply for breaches of animal cruelty when undertaking an activity that involves hunting. Penalties may also apply if you don't have the necessary permits to hunt on certain lands within the Northern

Territory, including on Crown land or reserves managed by the Parks and Wildlife Commission of the NT or Parks Australia.

Additional information on feral pig hunting in the NT and how to obtain a pig hunting permit can be found on the Northern Territory Government website at: <https://nt.gov.au/leisure/hunting-and-shooting>

Managing the risk of disease

Feral pigs can host a number of diseases and parasites that may be transmitted to other animals and humans. Hunting feral pigs carries a **high risk** of contracting these potentially debilitating diseases, which have serious long-term health implications. Ensure that you take steps to protect the health of your dogs and yourself.



Figure 10 Enlarged testis in feral pig with *Brucella suis*

Butchering: You should wear appropriate PPE when butchering a feral pig. This includes gloves and footwear. Worms that you may see are not important for human health and are neutralised by proper cooking. However any abscesses found are likely to contain harmful bacteria and should result in the discard of the pig carcass. Many diseases do not show any signs in the pig carcass.

Some important shared diseases in pigs and people include:

Brucellosis- Bacterial disease causing severe long term illness, fever and influenza type symptoms. Symptoms in dogs can include fever, lameness, back pain, vomiting, lethargy and enlarged testicles. Brucellosis may be contracted by butchering and handling raw infected pig meat (especially reproductive organs), contaminated equipment and clothing, urine and contact with infected dogs.

Brucellosis is a notifiable animal disease in the Northern Territory. There is a legal obligation to notify your government veterinary officer if you know or suspect that an animal has this disease.

Q Fever- A serious bacterial disease that causes severe influenza like symptoms which can be fatal. Infection is via contaminated animal tissue (especially intestinal tissue, faeces, urine and foetal fluids). Q fever is mainly spread by inhalation including during high pressure hosing, slaughtering animals and dressing carcasses.

Leptospirosis-A bacterial disease that can cause high temperatures, kidney disease, jaundice and meningitis (inflammation of the lining of the brain) which can be fatal. Leptospirosis is found in animal tissue, urine and commonly in swamp water. It enters the body through cuts and abrasions and contact with mucus membrane lining of the nose mouth and eyes.

Melioidosis – A bacterial disease. Commonly affected livestock include goats, pigs and camels. This disease has potential to be passed on to humans through contact with infected animals or soil.

Swine Influenza - Swine influenza is a highly contagious, rapid onset, respiratory disease of pigs. Pigs contract this disease through close contact with infected pigs. Swine influenza viruses are normally restricted to pigs, however occasionally a human may become infected. It is known that pigs have a potential to mix different strains of influenza viruses together to produce new strains that may have the potential to infect humans. In 2009 there was an outbreak in several pig herds in Australia that was quickly eradicated. Signs of pigs infected with Swine Influenza include:

- high fever
- discharge from eyes and nose
- sneezing
- breathing difficulties and;
- barking cough.

As well as diseases endemic to Australia, feral pigs have the potential to harbour and spread a number of exotic diseases not known to occur in Australia. This would have a major impact on international trade, the Australian livestock industry and our way of life.

These notifiable diseases include:

Foot-and-mouth disease – a highly contagious viral infection of domestic and wild cloven-hooved animals such as pigs, cattle, buffalo, goats and sheep. Symptoms found in animals include blisters and erosions in the mouth and on the feet, severe sickness and lameness.

Rabies – Rabies causes inflammation of the brain and spinal cord (encephalitis) resulting in death. The main symptoms include behavioural changes, varying neurological signs, progressive paralysis, coma and death in all species. This disease is also fatal in humans.

Swine vesicular disease – a highly contagious viral disease of pigs that is indistinguishable from foot and mouth disease. Symptoms include blisters and erosions in the mouth and feet, severe sickness and lameness.

Classical swine fever- a highly contagious viral disease of pigs, capable of spreading rapidly in susceptible pig populations. causing fever, purplish skin blotching and sudden death

Surra -a disease caused by the blood-borne parasite *Trypanosoma evansi* that is transmitted by biting flies. It can become established in a variety of animals including cattle, horses, pigs and dogs. Typical signs include chronic wasting, weakness, pale gums and swelling of the legs and brisket. This disease is often fatal. Surra would be virtually impossible to eradicate if it became established in Australia and is present in countries as close to Australia as Indonesia, Papua New Guinea and Timor.

Precautions to prevent the spread of infections

- Do not feed raw feral pig meat to your dogs (especially reproductive organs, blood and offal).
- Use PPE. Cover all cuts and abrasions with waterproof dressings and wear rubber latex gloves and boots when processing feral pig carcasses to minimise exposure to potentially contaminated carcasses.
- Always wash hands and equipment thoroughly after butchering and processing feral pig carcasses.
- Wash dogs well after each hunt. Use PPE when washing and administering first aid to dogs
- Watch for signs of illness in your dogs and contact your local veterinarian if you have any concerns.



Figure 11 Diseased feral pig

Important information

Feral pigs are a high risk for spreading diseases to humans, hunting dogs and other animals. All diseases shared with pigs are serious for people and must be diagnosed and treated by your doctor who must also notify the health authorities in case further action is required for your benefit.

Contact your local veterinarian if you notice **any illness** in your dogs.

Consult your doctor **immediately** if you develop symptoms after contact with potentially infected animals and inform them of your pig hunting practices.

If you suspect a pig disease of concern contact your Regional Veterinary Officer

Darwin 8999 2035 **Katherine** 8973 9716 **Alice Springs** 8951 8181

Or call the Emergency Disease Watch Hotline on 1800 675 888 (24hr Hotline)

Livestock Biosecurity Branch

NT Waybills – Return PINK Copies

Have you sent your PINK copies in to your Regional Livestock Biosecurity Officer recently?

It is a mandatory requirement for cattle, buffalo, sheep, goats, camelids (including camels, alpacas and llamas), deer and pig owners to complete a waybill whenever stock are moved outside the boundaries of a property.

Pink copies must be sent within 28 days

It is an offence under the Livestock Regulations not to complete a waybill correctly and may incur a penalty for not submitting the Waybill pink copies to the Registrar in 28 days after completion.

NT PICs – use the **NT PIC Search database** - <http://pic.primaryindustry.nt.gov.au/>

National PIC Registers using your NLIS account-<https://www.nlis.com.au/> *Search the PIC register*

NOTE: Post PINK copies within 28 days to Regional Livestock Biosecurity Officer

Check out our Websites <https://www.nt.gov.au/industry/agriculture/livestock> or contact your RLBO for assistance

Darwin Region

Rob Wait (RLBO)
GPO Box 3000
Darwin NT 0801

Katherine Region

Josh Haigh (RLBO)
PO Box 1346
Katherine NT 0851

Tennant Creek Region

Tom Haines (PLBO)
PO Box 159
Tennant Creek NT 0861

Alice Springs Region

Greg Crawford (RLBO)
PO Box 8760
Alice Springs NT 0871



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34th AGM & INDUSTRY CONFERENCE
ALICE SPRINGS - 22 & 23 MARCH 2018

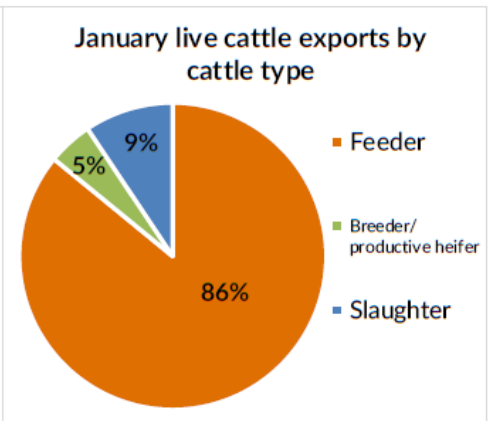
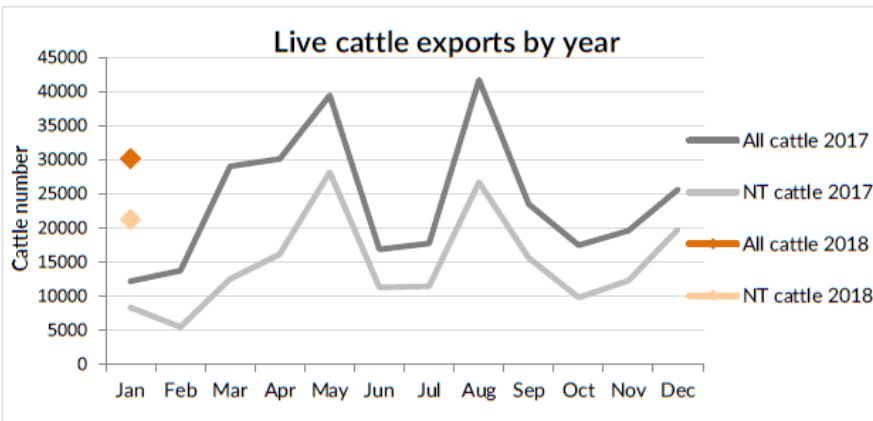


Live Exports via Darwin Port – JANUARY 2018

Please note: figures are for stock exported through the Port of Darwin only; some NT stock are exported through interstate ports

CATTLE

Destination	Export of ALL CATTLE (including interstate)							Export of NT CATTLE (estimate only)						
	2016	2017	Last year to 31/01/17	YTD to 31/01/18	Jan	Last month	Difference	2016	2017	Last year to 31/01/17	YTD to 31/01/18	Jan	Last month	Difference
Brunei	3,379	2,793	0	0	0	0	0	2,314	1,701	0	0	0	0	0
Indonesia	296,230	226,304	11,067	27,364	27,364	19,775	7,589	195,037	138,912	7,537	19,264	19,264	15,266	3,998
Philippines	4,697	0	0	0	0	0	0	3,236	0	0	0	0	0	0
Sabah	0	2,640	0	0	0	0	0	0	1,680	0	0	0	0	0
Sarawak	1,220	2,138	0	0	0	0	0	843	1,189	0	0	0	0	0
Malaysia	10,959	12,557	0	0	0	0	0	7,476	7,671	0	0	0	0	0
Vietnam	36,405	39,989	1,127	2,830	2,830	5,904	-3,074	24,783	25,884	767	1,992	1,992	4,558	-2,566
Egypt	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thailand	0	800	0	0	0	0	0	0	535	0	0	0	0	0
Cambodia	2,766	0	0	0	0	0	0	1,936	0	0	0	0	0	0
TOTAL	355,656	287,221	12,194	30,194	30,194	25,679	4,515	235,625	177,574	8,304	21,257	21,257	19,824	1,432



OTHER LIVESTOCK

Destination	Buffalo		Goat		Camel	
	YTD	Jan	YTD	Jan	YTD	Jan
Brunei	0	0	0	0	0	0
Indonesia	0	0	0	0	0	0
Philippines	0	0	0	0	0	0
Sabah	0	0	0	0	0	0
Sarawak	0	0	0	0	0	0
Malaysia	0	0	0	0	0	0
Vietnam	0	0	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	0	0	0	0	0	0

CATTLE MOVED FROM NT TO INTERSTATE

Destination	Jan	YTD as at 8/02/2018
NSW	264	264
QLD	658	658
SA	495	495
VIC	281	281
WA	0	0
Total	1,698	1,698

NATIONAL CATTLE PRICES

www.mla.com.au/prices-and-markets

CURRENCY EXCHANGE RATES

www.oanda.com/currency/converter

Total of ALL CATTLE through Port of Darwin							Total of NT CATTLE through Port of Darwin						
2011	2012	2013	2014	2015	2016	2017	2011	2012	2013	2014	2015	2016	2017
269,617	246,990	359,616	493,958	487,568	355,656	287,221	253,797	234,249	308,784	324,477	287,892	235,625	177,574

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Pastoral Production Officer	Jane Douglas	08 8962 4483
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Landcare Facilitator	Angela Carpenter	08 8962 4494
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