

Alice Springs Rural Review

DEPARTMENT OF PRIMARY INDUSTRY AND RESOURCES



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From the editor

Conditions in Central Australia and the Barkly still remain dry, but I am hesitant to talk about the weather, even if it is the greatest ice-breaking conversation starter that Australians have ever invented.

This dry patch underlines that water is the commodity of greatest value and need in our environment. The newsfeed I get on my phone is busy with articles about water, the lack of it for irrigation, the overuse of it and harm to the environment, the contamination of it with firefighting chemicals, the reservation of it for future use by Aboriginal communities.

Finalisation of the water allocation plan for the Western Davenport region and the near completion of the plan for Ti Tree represents an opportunity, as does the passing of legislation to legalise the production of hemp for fibre and food. It will be interesting to see how this industry might develop. Trials our department completed in Katherine in 2016 showed seed yields of between four and six tonnes per hectare of low tetra-hydrocannabinol (THC) varieties. This yield was developed over a fairly short growing season of 90 days, under irrigation during the top end dry season. It will be interesting to see the response of crops over slightly longer days in Central Australia, with different temperature profiles.



Photo: Glen Oliver checking out the hemp trials in Katherine, 2016.

Continued on page 2...

I recently attended the Annual General Meeting of the Australian Date Growers Association in Lyrup, South Australia. Dates are being grown commercially in South Australia's Riverland, and most of the Association's membership is from there. For Central Australia, dates have been part of the landscape since the 1800s, with commercial production beginning in the 1950s.

Dates also use a lot of water, and are tolerant of poor quality, high salt water, which is good, considering the quality of water in many local bores. There is a market niche for khalal style (crunchy yellow) dates of the Barhee variety. These are highly sought after, especially in the Middle East, and because of their fresh nature they cannot be stored as easily as dried Medjool dates.

As Australia is counter-seasonal to the northern hemisphere, this is a real opportunity to produce a high value, low volume product for export.

The advantage central Australia has over date growers in the Riverland is higher temperatures at pollination, meaning more reliable fruit set, something for which Barhee is quite sensitive.

With wastewater being generated of reasonably poor quality in communities across the centre, maybe markets and product and water can come together for some income generation.

This rural review has a few invitations to events. Please consider attending the Old Man Plains Field Day on Thursday 26 September, the Desert Poppies 'connecting remote women through creativity' ladies day on Friday 2 November and the 'climate variability and grazing risk management' workshops on Tuesday 17 September (Barkly) or Wednesday 18 September (Tennant Creek). See inside for more details.

Stuart Smith, Editor.

Self herding in the centre

By Meg Humphrys

Self herding is a livestock management approach that uses positive reinforcement to influence grazing behaviour and encourage cattle to move into underutilised areas of paddocks but also has many other applications.



Photo: Bruce Maynard takes producers out into the field.

The Department of Primary Industry and Resources (DPIR) hosted Bruce Maynard, a passionate farmer and co-developer of the Maynard and Revell self-herding and self-shepherding management practice, in Alice Springs from Monday 29 July – Friday 2 August.

Bruce's visit to Central Australia provided an excellent opportunity for:

- a producer workshop
- collaboration with local researchers about integration of self-herding into Central Australian pastoral systems and
- a visit to Lyndavale cattle station.

Self herding workshop



Photo: The self herding workshop included figurine demonstrations of how to implement self herding tools.

On Tuesday 30 July, Bruce conducted a two hour workshop at Alice Springs Desert Park where participants were introduced to the concept of self-herding.

Bruce encourages producers to use high level stockmanship and low stress handling practices, demonstrating the positive effects of cattle choosing to be involved in their own management, rather than being forced to participate.

“Bruce emphasised that animals need to learn how to adapt, so that when they are confined in yards, being trucked, placed in a feedlot or facing unfamiliar situations such as dry times, they are more resilient,” said Meg Humphrys, Pastoral Extension Officer.

A combination of familiarity and diversity in cattle management are the take home messages from Bruce’s sessions.

Lyndavale cattle station

A small producer group workshop was also coordinated at Lyndavale cattle station south of Alice Springs, with a focus on producer needs and how self-herding can inform them. Some of the potential benefits to producers in the region discussed were:

- encouraging cattle to stay at new watering points
- wild dog management
- feral camel management
- maintaining weight on cattle during transportation
- weaner training.

There was great enthusiasm for the discussions had at Lyndavale and the self-herding applications it would be great to see Bruce back in Central Australia again soon.

Get involved

Low stress stock handling course

There are tentative plans for Bruce to return to Alice Springs later in the year to run a level 3 low stress stock handling course and work with local producers to integrate self-herding tools into management. These are dependent on level of interest.

The course costs approximately \$650. Please contact Meg Humphrys (contact details below) for more information.

Producer demonstration sites

Producer demonstration sites are Meat Livestock Australia (MLA) funded extension programs to encourage producers to learn from each other and trial on-farm benefits to cattle management tools. The last one in Central Australia was the Steer Challenge, which compared the performance of steers from ten different breeds and crossbreeds under land management recommendations.

Would you be interested in being involved in a project demonstration with a focus on self-herding applications? A small forum would be established for producers to share experiences, challenges and results in trialling self-herding methods.

Please contact Meg Humphrys, DPIR Pastoral Extension Officer to register your interest by Friday 30 August.

Phone: 0427 373 011

Email: meg.humphrys@nt.gov.au

Useful resources for producers

- Bruce Maynard and Dean Revell’s website on self-herding: <http://selfherding.com/>
- Information, and project publications about the Kidman Springs trial are on the FutureBeef webpage: <https://futurebeef.com.au/projects/self-herding-kidman-springs/>
- A poster summary of the Kidman Springs trial can be found on the FutureBeef website (download size of 3.2 mB): <https://futurebeef.com.au/wp-content/uploads/2019/01/TNRM-Walsh-et-al-Self-Herding-Poster.pdf>
- Self-herding: A smarter approach to managing livestock and landscapes (download size of 5.3 mB) http://selfherding.com/assets/self-herding_final2.pdf

Have your say on technology adoption in the red meat livestock industry



Photo: Droughtmaster cattle at Old Man Plains.

The University of Sydney is running an anonymous survey to better understand the adoption of technology in the red meat livestock industry.

All farm managers, business owners, consultants, and livestock farm employees from beef, sheep and goat industries are invited to complete the survey. It should only take approximately 10 minutes to complete.

The survey aims to:

- collect information on the livestock industry's adoption rates and use of technology on farm today and perceptions around future adoption
- collect data on the attitudes, perceptions and beliefs around reasons to adopt or not adopt technology that is currently available
- understand the drivers and barriers to technology adoption based on farm location, operation size, and type of enterprise (beef, sheep or goats).

Take the survey now through [University of Sydney's website](#).

For further information, please contact Annabel Rodgers.

Email: arod4589@uni.sydney.edu.au
Phone: 0438 704 030

Vale Doug Wilson

By Coral Allan

Long-time department worker Doug Wilson passed away peacefully at Flynn Lodge, Old Timers Village on Wednesday 24 July.

Doug starting work for the department in June 1974 and continued serving the NT Government for the next 31 and a half years in Alice Springs.

Dougie, as he was fondly known by staff, retired in December 2005 and left behind a lifelong legacy of studying plant life in Central Australia.

Doug worked in the nutrition lab at AZRI and concentrated on pastures (nitrogen, phosphorus and digestibility analyses) and animals (faecal levels of nitrogen and phosphorus analyses). During his working career he collected more than 17,000 plant specimens. In 1989 a database of the analyses was set up from the nutrition laboratory with approximately 16,500 native and some introduced pasture analyses entered. The laboratory officially closed on 25 January 2004 and Doug took up other technical duties such as vegetation survey and sampling for rangeland and cattle projects. He also co-authored the *Central Australian Grass Guide* in the last two years of his work.

Doug's work took him all over the NT into Western Australia and Queensland and he was never happier than being out and about in the countryside. He loved that with each trip there was usually something new or rarely seen or a different species of plant to see. It also always fascinated him why cattle ate what they ate as well.

After Dougie's retirement he lived in his unit until ill health saw him move to the Old Timers in 2007 where he spent the rest of his days until passing away peacefully on 24 July at Flynn Lodge.

A dedicated officer who gave so much to the NT and his Department, will be sadly missed by his old colleagues.

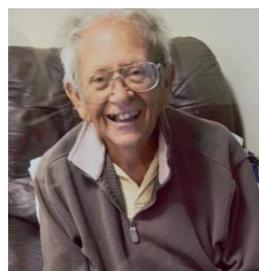


Photo: Doug Wilson

Pasture assessments on Old Man Plains

By Coral Allan

The annual pasture assessments on Old Man Plains Research Station were undertaken by Coral Allan, Chris Materne and Meg Humphrys from the end of May to end of June. The monitoring this year was tough, it was just after a small rainfall event and vegetation response was poor. That rain event made a large portion of the buffel tussocks turn rank which will be reflected in the data analysis. Any greenness found in the occasional tussock had been eaten by cattle and tussocks were pruned accordingly with the dry stalks still standing. Cattle travelled out to the outer boundary of the paddocks, eating grass far away from the watering points which we did not always pick up in our sampling. They had also been utilising top feed (shrubs) which was particularly noticeable in the mulga stands.

Purpose of monitoring

The purpose of this work is to assess if there is enough pasture on the ground to match the stocking rates for each paddock. The figures contribute to the management decisions on stocking into the coming year, which includes destocking if necessary. Eleven paddocks are assessed with each paddock having eight assessment sites located in them except one paddock that has 16 (because it was larger).

This work can be as dry as the season we are experiencing, but needs to be done for the sake of the vegetation, land and livestock. It was a tough year for monitoring with the dry conditions so it really stretched our skills to identify some of the many 'little tussocks' struggling to stay upright.

Our transect work

The sites are located 500m, 1km, 3km and 5km from a watering point and are identified by a star picket with a numbered tag attached. These sites are located using a GPS reading or from memory! At the site a landscape photo is taken along the transect which in itself tells a story each visit.

The star picket is the centre of the transect with 20 quadrats assessed either side (1 – 20 and 21 – 40). The pacing between the quadrats is 10m for the 1-5km sites and 5m for the 500m site.

Each quadrat is a metre by a metre square and assessed on total yield, percentage cover, top four species and their yield, percentage rank, buffel present/absent, defoliation, cattle activity, other grazers and grass basal area (yes we can fit that all in a metre by metre square!).

To ensure we are doing a reasonable job of 'eye ball' assessments, we calibrate by cutting and measuring vegetation. This sorts out the accuracy of our subjective assessments amongst our team and can be quite competitive at times to see who is calculating best!



Photo: Coral Allan (left) and Megan Jacobs (right) conducting pasture assessments on Old Man Plains

What now

This year has been dry with total yields down on the past few years. The numbers have not been crunched yet to give you more detailed notes but the seasons have not been kind to us all!

Ongoing decisions will need to be made about how much livestock we will be able to carry on OMP now and into summer if we do not get rain. This may impact our trial work should we have to reduce numbers but when we live in a variable climate like this we all learn to roll with the punches - all we can hope for is lots of steady summer rainfall events to spark growth events.



Photo: Meg Humphrys using a tablet for data collection at Old Man Plains

Employing young staff – working holiday makers (backpackers)

By Paddy Weir, Allambi station

In Australia, 'backpacker' is a colloquial term for young international travellers that are able to work in Australia under working holidaymaker (417) or work and holiday maker (462) visas. This system is one of cultural exchange and is reciprocated for young Australians who want to work overseas in countries where Australia has a relationship.

Backpackers need to work for 88 days in regional Australia to enable them to apply for a visa to stay in Australia for an additional year. From July 2019, a backpacker can be granted a third year travelling and working in Australia by completing another six months of work in regional Australia in their second year. If a backpacker has to live on a property to work, every day they are employed counts as days towards their work requirement, even if they are actively working or not.

Since early 2016 NT pastoralists (and North of the Tropic of Capricorn in WA and Qld) are able to employ backpackers for the entirety of their visa; previously they were only able to stay with one employer for 6 months. To enable an employee to stay longer there is a document that has to be filled in and sent to the Immigration Department notifying them of the extended work stay. There is no charge for this process. The form number is 1445 'Request Permission to work with an employer beyond 6 months on a Working Holiday or Work and Holiday Visa' and is available on the Department of Immigration and Border Protection Website.

Since the new rules came in, we have been able to offer backpackers more work if they are willing and able to stay. Because our cattle work is seasonal and a backpacker wants to travel (as well as fund their travels) it can be a win-win situation. We have had several backpackers return to work for us and it is good for business to have reliable workers that do not need to be re-trained. We have had staff with a variety of backgrounds including hospitality, electrical, nurses, teachers, builders and mechanics.

It makes good sense then, to spend some time developing a good job advertisement (Facebook, Gumtree, Backpacker Jobs Australia to name a few); a job description and an Employee Handbook (for induction purposes). Organisations such as the

NT Farmers Federation or the NT Chamber of Commerce often run short courses on many different aspects of managing staff.

After more than two decades working alongside young people my mantra is 'honesty is the best policy'. It is good idea to have a code of conduct – for both employers and staff. A good supervisor is able to foster a friendly workplace where people feel good about their job, work safely, productively and are open to learning. Gone are the days of the 'don't do what I do, do what I tell you' attitude. To get the best from myself and our workers I ask for:

Accountability: If you make a mistake, please own it, not saying something will just make things much worse.

Ability to inspire: Never ask someone to do something you would not do yourself or have not done yourself.

Communication: *is the key*. If you are worried about something or do not understand what you are meant to be doing, always double check to prevent mistakes or accidents.

A positive attitude is immeasurable. We have had workers that are quite capable of doing the job but their negative attitude has brought team morale down. If you are not having a good day, it is okay to be honest and say why.

Continual learning from each other makes for a better team work environment.

Treat others as you would like to be treated: As both a Mum and supervisor of young staff, I always think 'how would I like my child treated by an employer?' With honesty, fairness, firmness, and a daily exchange of teaching and learning. This includes having the difficult conversations when someone has made a mistake.



Photo: British Backpacker Shai Tovey counts the camels at Allambi station.

Over the years I have heard a few disturbing stories about how unfairly some of the young Working Holiday Makers have been treated. This includes not being paid superannuation (which incidentally the government now takes 65% of when the WHM leaves the country) to unreasonable working hours for rate of pay. In the past 12 months alone we have had two young couples that were paid only \$450 gross for a 55 hour plus working week (one couple worked on a farm in Victoria, the other on a farm in NSW). When I asked why they stayed, they said they were desperate for their 88 days and that social media is full of stories of people unable to find farm work and having to return home. In one instance the workers were not provided pay slips for more than three months work and have been forced to report this to the Fair Work Ombudsman. Travellers should not miss out on their second year visa due to an unscrupulous employer.

For further information regarding employing staff the Fair Work Ombudsman website has plenty of information regarding workers entitlements and also templates for employee contracts. Members of the NTCA are provided any amendments to the NT Pastoral Award via email in July each year.

If you need to check the status of a worker's visa then Visa Entitlement Verification Online system (VEVO) allows visa holders, employers, education providers and other organisations to **check** visa conditions (Immigration Department Website).



Photo: Shai Tovey and Sam Mortimer, British Backpackers, with a calf in the ute at Allambi Station

Japanese visit

The Japanese Parliamentary Vice-Minister for Agriculture, Forestry and Fisheries, Mr Hamamura

Susumu, and his staff visited Alice Springs on the 27-28 July. The Japanese Ministry for Agriculture, Forestry and Fisheries has an existing Memorandum of Cooperation with our department to work together on projects of mutual benefit.

The Japanese delegation was interested in Central Australia for renewable energy and water recycling, existing horticulture and cattle farming and recycling of water and organic waste.



Photo: Minister Hamamura (centre, with glasses) visiting Territory Lettuce.

After having lunch with Minister Wakefield, Mayor Ryan and the Arrente Elder in Residence for Desert Knowledge Australia (DKA), Harold Furber, the visitors received presentations from Paul Rodden, Senior Project Manager, Renewables at Ekistika at the Solar Research Centre at Desert Knowledge Australia; Wade Jenkins, New Energy Development Engineer at Territory Generation and from Dan Tyson, new Chief Executive Officer at Desert Knowledge Australia.



Photo: Minister Hamamura (Centre, with sunglasses) having ear tagging explained by Laura Heaslip at Bond Springs.

After leaving DKA, a visit was paid to Territory Lettuce, run by Mo McCosker. The visitors were particularly interested in hydrogen generation from solar power, and how this could be integrated with protected cropping.

Next day, on Sunday morning, Bond Springs cattle station's Jan and Laura Heaslip hosted a great tour of the historic buildings, the solar power generation centre and the working cattle yards.

The Japanese are keen to return to develop further research into sustainable energy production and farming in the red centre.

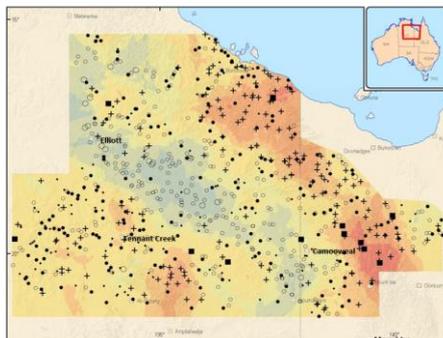
Exploring for the Future

Assessing soil fertility and mineral potential over the Barkly Tableland

As part of the [Exploring for the Future¹](#) program, scientists from Geoscience Australia are leading focused studies in the prospective region between Tennant Creek and Mt Isa to identify potential resources by assessing the chemical composition of soils.

In 2017, field crews collected soil samples from 780 sites, some from harsh remote areas where access is only possible by helicopters, to analyse the chemical elements within the soils using state-of-the-art techniques.

Figure: A map showing the phosphorus (P) distribution identified by Mobile Metal Ion analysis over the survey area. The warm (orange to red) colours show elevated – above average for the region – phosphorus concentrations (also highlighted by the plus and square symbols for the exact sampling sites), while cool (blue) colours depict areas with low P concentrations. The sampling sites are represented by the open circles.



Soil sampling surveys are an excellent low-impact means of identifying the mineral potential of examined areas as they can indicate what lies deep beneath the Earth. On top of that, the survey results provide a basis for informed decision making about regional land use and agriculture.

One of the analytical methods employed, Mobile Metal Ion analysis (MMI), emphasises mobile forms of chemical elements loosely attached to soil particles, including elements regarded as essential nutrients for plant growth and animal health: calcium, copper, iron, potassium, magnesium, manganese, phosphorus and zinc.

The data provide insight into the fertility of soils, which can support sustainable crop production and inform cattle grazing management over areas such as the Barkly Tableland. For example, the data has identified areas with various levels of phosphorus in the soil (see map), an essential element for cattle health. This has a potential to help farmers effectively manage cattle health via phosphorus supplementation.

Complete sets of maps, including georeferenced images ready for use with compatible mobile apps are available from the [Geoscience Australia website²](#)

The extensive soil sampling survey was led by Geoscience Australia in collaboration with the Northern Territory Geological Survey and the Geological Survey of Queensland.

For more information visit [the Geoscience Australia website³](#) or email efft@ga.gov.au.



Expanding knowledge about Northern Territory primary industries

By Meg Humphrys, Pastoral Extension Officer

Department of Primary Industry and Resources staff collaborated with the Arid Lands Environment Centre to run interactive workshops for primary school students at the DesertSMART EcoFair this month.

¹ Geoscience Australia website, Australian Government <http://www.ga.gov.au/efft>

² Geoscience Australia website, Australian Government <http://www.ga.gov.au/efft/minerals/fis/nags>.

³ Geoscience Australia website, Australian Government www.ga.gov.au/efft

Department of Primary Industry and Resources staff Meg Humphrys, Pastoral Extension Officer, and Sarah Tsai, Mining Officer, ran eight workshops over Thursday 8 August and Friday 9 August with students from schools around Alice Springs. The workshops were well received by students and teachers, with sessions booking out in advance.

The students learned about the different cattle breeds in the Northern Territory (NT) and why they are suited to certain locations. For example, Brahman are better adapted to heat and ticks and best suited to the northern export market, while Herefords and Shorthorn are suited to the Alice Springs region because they are not tick-resistant, the climate is right for them and their meat is better suited to the southern markets in South Australia and Victoria.

The students were also introduced to the different fruits and vegetables that are grown in Central Australia and the three production districts – Ali Curung, Ti Tree and Alice Springs.

As part of the workshop, students were given maps and asked to apply stickers of each fruit, vegetable and cattle variety in the areas of the NT that they are grown. The activity improved their geography skills as well as general science and agricultural knowledge. The students were able to take the maps home to show their families what they learned and spread awareness in the community about the NT's primary industries.

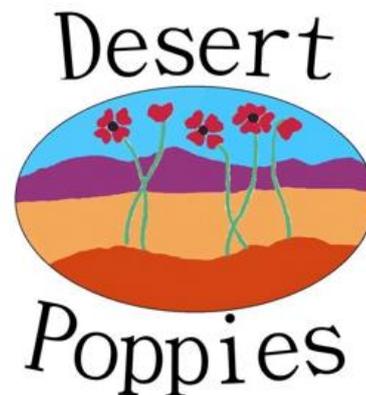


Photo: Meg Humphrys conducts one of the EcoFair sessions

Desert Poppies: Save the Date

Desert Poppies is hosting 'Connecting remote women through creativity' on Saturday 2 November from 10:00am – 3:00pm at Central Craft, at Araluen.

For more information, contact Rebecca Cadzow mtriddock@gmail.com or visit the [Desert Poppies Facebook page](#).⁴



Desert Poppies was proudly established in Alice Springs in 2013 by a group of 19 rural women. Desert Poppies provide a space for rural women to connect, network and be inspired.

Cattle theft

Cattle theft is an ongoing problem in Australia, and has been for over 200 years.

The Department of Primary Industry and Resources (DPIR) collaborates with Northern Territory Police for investigations into stock theft and ownership disputes in accordance with public service and legislative requirements. Theft of property, which includes theft of cattle, is a criminal offence under the Northern Territory *Criminal Code Act 1983* and is managed by NT Police.

The Department's Livestock Biosecurity Branch provide assistance to NT Police with alleged offences of cattle theft or ownership disputes. Regional and remotely based police officers liaise with Regional Livestock Biosecurity Officers when investigating reports of stock theft within the region.

⁴ Desert Poppies Facebook page
<https://www.facebook.com/pg/desertpoppies/>

To ensure that reports of stock theft are formally reported and due investigation process is followed, Livestock Biosecurity Officers advise livestock owners to contact the NT Police to report any alleged instances of theft.

The Northern Territory *Livestock Act 2008* and Livestock Regulations administered by the department underpins the livestock identification and movement requirements for livestock in the NT. This includes:

- brands
- waybills
- NT Health Certificates (including waybills)
- Declared Area Movement Permits
- National Livestock Identification System (NLIS).

There is one provision under the *Livestock Act 2008* which refers to livestock ownership. Section 132 (3) of the *Livestock Act 2008* states:

“A registered brand or earmark on livestock or hides that are proved not to be owned by the owner of the registered brand or earmark (the brand owner) is evidence that the brand owner branded or marked the livestock or hides knowing he or she did not own the livestock at the time they were branded or marked.”

A registered brand on cattle is prima facie evidence of livestock ownership. Livestock biosecurity officers provide information which supports the determination of livestock ownership in investigations into stock theft and ownership disputes.

The department will continue to provide assistance to NT Police for investigations relating to stock theft in the Territory.

In cases of theft, please call the Northern Territory Police on 131444.

Demystifying weather forecasts

By Meg Humphrys (with advice and assistance from Alister Hawksford and the team at Bureau of Meteorology in Canberra)

Alice Springs Pastoral Industry Advisory Committee (ASPIAC) is the centre’s ministerially appointed group to advise the department on research, development and extension issues. The group aims to meet three times a year, and

additionally contributes priorities to Meat and Livestock Australia.

For the May ASPIAC meeting, the group had a presentation from Alister Hawksford, the Director of Agriculture for the Bureau of Meteorology based in Canberra.

Alister informed the group about some of the common misinterpretations made about weather forecasts and gave listeners some tools to better understand the presentation of forecasts. To ensure that more producers in the region benefit we have summarised some of the key points below.

1. A seasonal forecast map is only useful, when used with a skill map.

A three month seasonal rainfall forecast map is only useful in conjunction with a skill map, which shows the accuracy of past weather predictions. The left hand map in Figure 1 is a forecast map, and the right hand map is a skill map. The triangle in Figure 1 represents a location in the Channel Country is placed in an area where the accuracy of past predictions is quite low, less than 45 per cent, and therefore too low to be relied upon. It would not be wise to base management decisions on the likelihood of rain using that forecast.

Alternatively, the star is in a region where the bureau has been right more times than not, 65 per cent or more, so we can have more confidence in using the forecast for decision making.

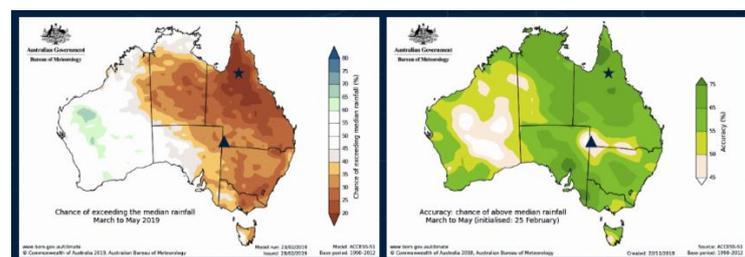


Figure 1. (Left) seasonal rainfall predictions (right) skill map.

2. Forecast maps are available for detailed locations

It’s not commonly known that there are forecast maps for quite high resolution locations.

The steps to find them are:

1. Go to the BoM homepage (www.bom.gov.au)
2. Click on 'Climate and Past Weather' (under 'Our Services')
3. Click on 'rainfall outlook' (at the top right of the page)
4. Click on 'chance of above median'
5. Choose a month or period of time (for example – September)
6. Click the magnifying glass on the right-hand side and type in the location. You may need to play around to find the one closest to you.
7. The pop up box gives past accuracy (if you click on the accuracy term – moderate or high for example – it gives an exact percentage).
8. To see a bar graph of rainfall predictions, click the month back or forward.

This can be done for rainfall and temperature as can be seen down the left-hand side of your screen when in the function.

This function will actually be upgraded around the end of August so the functions may change slightly.

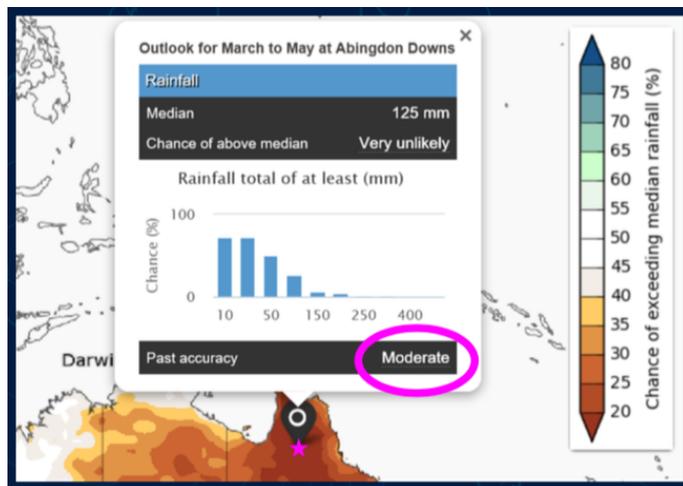
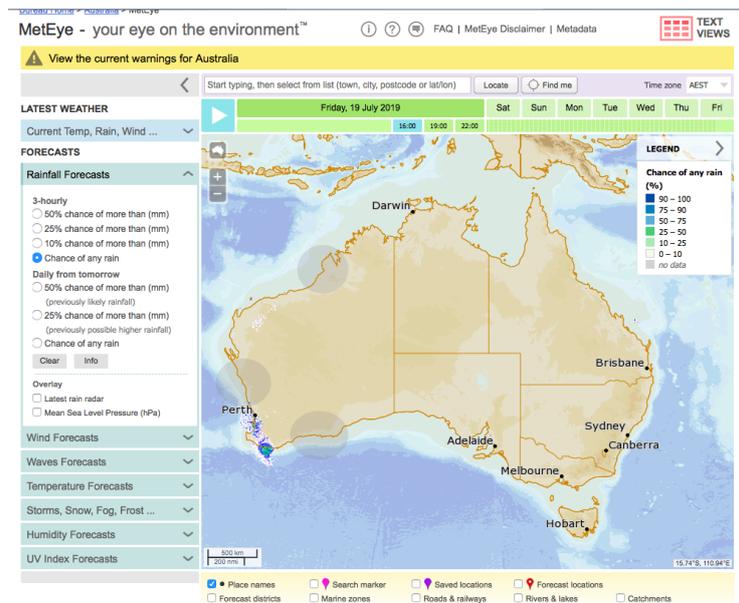


Figure 2: Rainfall Outlook for Abingdon Downs⁵

⁵ <http://www.bom.gov.au/climate/outlooks/#/rainfall/skill/seasonal/0>



3. The “chance of rain” when interpreting the forecast is actually lower than you think.

Interpreting Figure 3 as “there is a 60 per cent chance of receiving two to six millimetres of rain” is incorrect. The forecast is actually saying that there is 60 per cent chance of getting *any* rain, which is defined as receiving over 0.2mm.

There is a 50 per cent chance of getting more than two millimetres or more rainfall and a 25 per cent chance of getting more than six millimetres or more. This prediction maybe useful for painting the house but not for predicting pasture growth.



Figure 3: A forecast from the BoM website.

For more information on how to interpret rainfall predictions, Alister suggested reading a blog post which can be found at the [Bureau of Meteorology website](http://media.bom.gov.au/social/blog/209/right-as-rain-how-to-interpret-the-daily-rainfall-forecast/).⁶

⁶ <http://media.bom.gov.au/social/blog/209/right-as-rain-how-to-interpret-the-daily-rainfall-forecast/>

4. One of the most effective ways that BoM displays rainfall data is in three hourly forecasts.

BoM's three hourly forecasts are useful for when it looks like rain and there are rain sensitive farm operations to undertake.

This can be found by following the instructions below:

1. BoM home page (www.bom.gov.au)
2. Click on Meteye (right down at the bottom of the page)
3. Select location (from the search box)
4. Click on 'see text view for location'
5. The detailed three hourly forecast is then shown.

Figure 4 shows a link and example for Melbourne, where it was actually raining at the time the screenshot is taken to show the data displayed and its accuracy.



Figure 4: Three hour rainfall prediction for Melbourne⁷

Find out more about weather and climate

For more information about weather and climate predictions and how that can inform your business we have some events running in the Alice Springs region over the coming months.

Alison Kain, the “Climate Mate” for the Barkly (and nominally for Alice Springs) will be presenting at the Old Man Plain’s Field Day on Thursday 26 September with Chris Materne.

Alison will also be running Climate Mate workshops in the region. The Alice Springs workshop is on Sunday 15 September.

Advertisements for these events are noted in this Rural Review edition.

Northern Australian Climate Program



Save the Date! When and Where?

Barkly Homestead

Tuesday 17 September

Venue: TBA

Tennant Creek

Wednesday 18 September

Venue: DPIR Office, Barkly House

7

<http://www.bom.gov.au/places/vic/melbourne/forecast/detailed/>

Bringing BOM to the Bush - What is it?

A **FREE** half day workshop, including lunch, featuring:

- The Bureau of Meteorology
- University of Southern Queensland
- Local Climate Mate

Why come along?

- Learn about the **latest developments** in seasonal climate forecasting and how they apply to our region.
- Learn about the **key climate drivers** for northern Australia
- Learn how to **find, use and assess** relevant climate tools such as seasonal forecasts
- Recommended by NT pastoralists

RSVP

Alison Kain, Climate Mate

Phone: 0409 281 649

Email: alison.kain@usq.edu.au

Northern Australian Climate Program

The Northern Australia Climate Program – gaining a better understanding of our climate

The Northern Australia Climate Program (NACP) is a new program designed to bring together the best climate scientists, advisors and regional producers to promote and develop the most useful climate forecasting tools possible for the northern beef industry.

NACP is being delivered by the University of Southern Queensland (USQ), in conjunction with the Bureau of Meteorology (BoM) along with regional partners, the NT Department of Primary Industry and Resources. The program is funded by Meat and Livestock Australia, the Queensland Department of Agriculture and Fisheries (QDAF) and USQ.

What is this program about?

Helping producers find, understand and use climate forecasting information.

Climate Mates

Eight 'Climate Mates' have been appointed across northern Australia, to liaise with pastoralists. My name is Alison Kain and I'm the 'Climate Mate' for the Barkly Tableland however because I'm based in Alice Springs, I am in a position to offer some information to central Australian pastoralists as well. Understanding the main climate drivers that affect northern Australia can help you make a bit more of an informed assessment of climate forecasts.

NEW Climate Forecast Products

Prototype forecasting tools from the scientists are also available now for your comment. Get in touch with me as soon as possible for the web address and password.

The website is pretty comprehensive with forecasts on temperature humidity index and heat wave maps, which could be very useful when you are expecting calves to hit the ground. Rainfall is an obvious one and Figure 1 shows the rainfall forecast as of the 15 August 2019 for a few different time periods. Lots of people want to know "Am I going to get three consecutive days of rain and how much will I get?" Well, get in touch and I will show you how to find that too!

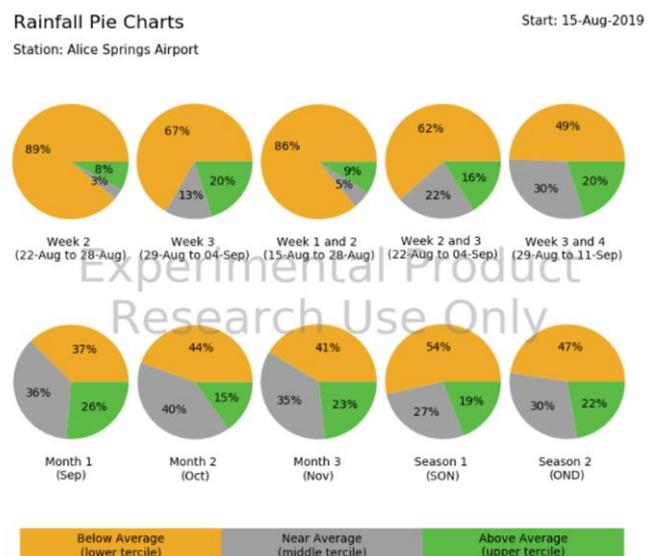


Figure 1. An example of the rainfall forecasts produced by the new BOM forecasting models. This figure shows the forecast in different time periods right through to October.

Climate Workshops

In April this year, the NACP climate scientists, BOM scientists and Anne Marie Huey (Climate Mate for the East Kimberley and VRD) held climate workshops in Kununurra and Katherine. Participants also provided practical advice to the BOM scientists which resulted in changes to the website within two months! Here is some of the feedback from pastoralists who attended:

“It improved my knowledge of interpreting data on the BoM website.”

“It helps me a lot to make climate related decisions at the field level.”

“More positive outlook on understanding tools that can be used with assistance to understand climate risk.”

“Highly recommend to other pastoralists.”

These climate workshops will be held on the Barkly and in Alice Springs in September this year. RSVPs are essential (see the advertisement in this issue), if we don't get participants, we can't justify flying people here – we all know how expensive that is!

Alison Kain, Climate Mate for the Barkly Tableland

[See our Facebook page!](#)⁸

Phone: 0409 281 649

Email: alison.kain@usq.edu.au

Please note, the Climate Mate for East Kimberley and Victoria River District is Anne Marie Huey, who can be reached via email annemarie.huey@usq.edu.au or by telephone on 08 9191 7069.

September - November climate summary for Central Australia

By Alison Kain, Climate Mate

The chance of exceeding the median rainfall (approx. 45-55 mm) is about 25-30 per cent.



Photo: Alison Kain, Climate Mate

According to the new BOM forecasting model, there is a 54 per cent chance it will be in the lowest tercile (that's the lowest third of records).

Historically, the forecast at this point of the year has been right 55-65 per cent of the time. This is because the beginning of the monsoon/wet season can sometimes be influential in November.

Maximum and minimum temperatures are very likely to be above average.

The El Niño forecast has been downgraded to inactive although there is talk of an El Niño Modoki or Central Pacific El Niño forming and that can reduce the likelihood of summer rainfall.

The Indian Ocean Dipole (IOD) exceeded positive thresholds at the end of May. A positive IOD means reduced likelihood of rain through central and southern Australia in winter.

For more information contact Alison Kain at Alison.kain@usq.edu.au, and subscribe to the newsletter.

⁸ Climate Mate for the Barkly Tableland Facebook page <https://www.facebook.com/Climate-Mate-for-the-Barkly-Tableland-1540974809338506/>

DPIR shines at the Alice Springs Show



Photo: Virtual reality at the Alice Springs Show

Show season is upon us and a team from Old Man Plains Research Station (OMP) and the Arid Zone Research Institute (AZRI) attended the Alice Springs Show recently to connect with industry and the public, and to highlight some of the great work the department is doing.

The team, which included Philip Hausler, Executive Director Agriculture Division, Stuart Smith, Regional Director Southern, Bryan Gill, Manager at OMP, Meg Humphrys, Pastoral Extension Officer, Sally Sims, Technical Officer and Jocelyn Coventry, Pastoral Production Officer, even picked up a blue ribbon for the department's pen of steers, which saw off some tough competition.

The show, which took place from 5-6 July, features quality cattle from all over the Red Centre and beyond, and our steers were up against some of the best in the Territory.

The team also worked alongside Meat and Livestock Australia and the NT Cattlemen's Association on a project that saw hundreds of show goers enjoy a virtual reality tour of the beef and lamb industries.

Donning virtual reality headsets, show goers were taken through the production process, with a focus on livestock, the environment and the consumer. Guiding them through the entire supply chain, the 'tour' covered farm, transport, abattoir and restaurant.

On Saturday after the show, some staff members attended the Centralian Beef Breeders Association gala ball at the Alice Springs Convention Centre, which the department sponsored. The theme was Starry, Starry Night and it was a great opportunity for networking and hearing directly from industry.

Old Man Plains Field Day

Beyond the Dry Times

OLD MAN PLAINS Field Day 2019



Department of Primary Industry and Resources (DPIR) staff are holding a field day at Old Man Plains Research Station to share knowledge and strategies for managing the landscape and livestock during dry times. The field day - Beyond the Dry Times - will include an engaging program of local and national agricultural specialists. Speakers include Chris Materne, DPIR's Pastoral Production Officer based in Alice Springs, who is involved in several projects looking at land condition improvements at Old Man Plains. He will be joined by Ian McLean, Agribusiness Specialist, Alison Kain, Climate Mate for the Northern Australian Climate Program, Will Dobbie who is a research officer involved with the Wild Dog Study, Chris Nott, President of the Northern Territory Cattlemen's Association and Christine Purdy from Meat and Livestock Australia.

Guests will be provided with 'take home tools' to help maintain their business during dry times and build resilience in the future.

Subjects covered during the day will include forecasting for dry times, informed decisions making, consistency in beef production despite seasonal variability, what's happening on OMP

and animal welfare. Beyond the Dry Times will take place on Thursday 26 September from 8.30am until 4:00pm at Old Man Plains Research Station. It is a chance for members of the beef producer community to learn, network and share experiences.

To register, contact Meg Humphrys, Pastoral Extension Officer.

Phone: 0427 373 011

Email: AccountsASP.DPIR@nt.gov.au

Please RSVP by Thursday 19 September.

Help us reach you!

We're often finding out new ways to improve productivity in agriculture in the Northern Territory (NT) – but sometimes our most important audience doesn't hear about our work. It's time for us to look at new ways to deliver information to Territorians.

Do you prefer to hear about industry news straight away on Facebook? Do you like to sit down with a coffee and a hard copy of a quarterly newsletter? Would you rather hear about research at conferences and meet likeminded people at the same time? The choice is yours, but we need to know what way agricultural news best reaches you!

Let us know

There are three ways you can help us reach you:

- Complete the [five \(5\) minute online survey at Survey Monkey](#).⁹
- Complete your [survey in hard copy](#) and return by email to communications.dpir@nt.gov.au
- Call the Communications Officer on 8999 2044 and you can do the survey over the phone.

What happens next

We will use your feedback to:

⁹ <https://www.surveymonkey.com/r/D9B5C8G>

- Demonstrate we have an audience for a Facebook page – so you can stay up-to-date with what we're up to, every day.
- Improve our regional newsletter articles and distribution.
- Improve digital access to our publications and agricultural notes.
- Identify the key conferences, meetings and events our staff should be attending.

Make a mooooooove! The survey closes at 5:00pm, **Monday 30 September**.

Pastoral Market Update

The Pastoral Market Update (PMU) is published monthly by the Department of Primary Industry and Resources to provide information on livestock exports from the Port of Darwin and interstate cattle movements.

- [Read the accessible version of the August 2019 edition on our website](#).¹⁰

Historical records for previous exports are available from the [department's website](#).



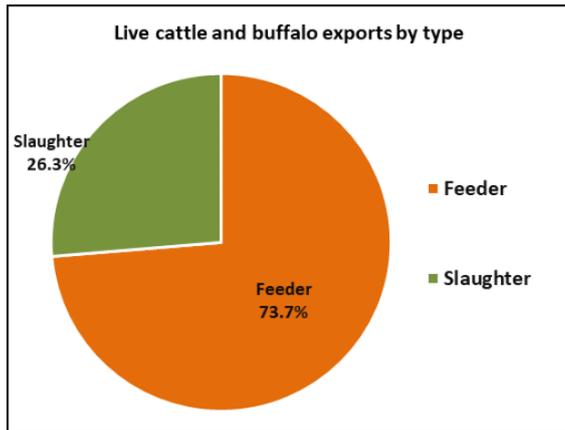
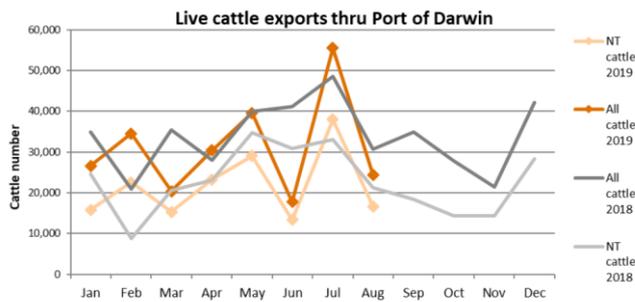
Live Exports via Darwin Port - AUGUST 2019

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 August 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 31/08/18	YTD to 31/08/19	Aug	Last month	Difference	2017	2018	Last year to 31/08/18	YTD to 31/08/19	Aug	Last month	Difference
Brunei	3,872	3,653	2,854	1,958	0	0	0	2,423	2,292	1,870	1,453	0	0	0
Indonesia	245,544	326,768	220,106	191,665	15,552	48,824	-33,272	150,489	216,634	152,998	133,626	10,645	33,420	-22,775
Philippines	0	10,482	7,430	14,345	2,875	1,626	1,249	0	7,262	5,665	10,352	1,968	1,113	855
Sabah	2,640	0	0	0	0	0	0	1,680	0	0	0	0	0	0
Sarawak	2,743	2,106	1,110	1,227	0	0	0	1,594	1,631	963	900	0	0	0
Malaysia	13,257	11,813	9,466	4,057	0	0	0	8,109	7,848	6,607	2,888	0	0	0
Vietnam	39,989	49,771	38,249	35,833	5,954	5,081	873	25,884	35,342	28,083	24,860	4,076	3,478	598
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	280,015	249,085	24,381	55,531	-31,150	190,715	272,282	196,844	174,077	16,689	38,011	-21,322

¹⁰ <https://dpir.nt.gov.au/primary-industry/primary-industry-publications/newsletters/regional-newsletters/pastoral-market-update/august-2019>



See [livestock movement statistics on our website](#).¹¹

Subscribe

[Subscribe](#) or [unsubscribe](#) to the monthly Pastoral Market Update.

Seasonal update - September 2019

By Chris Materne, Pastoral Production, Alice Springs

Positive Indian Ocean Dipole (IOD) = Expect drier than average conditions

Most climate models indicate the tropical Pacific is likely to remain ENSO-neutral (inactive) for the rest of 2019 and into early 2020, meaning other climate drivers, like the IOD, are likely to remain as the primary influences on Australian and global weather. A positive IOD is underway and forecast to continue until the end of spring. Typically, this

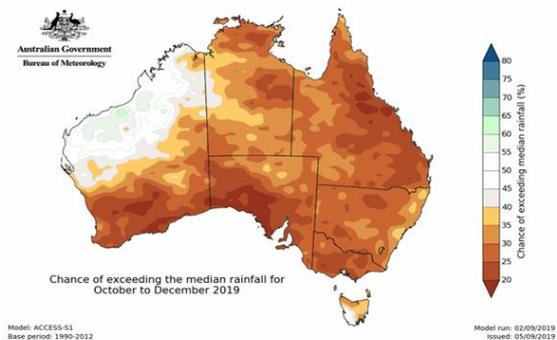
means below average rainfall for much of central and southern Australia during winter-spring, and warmer than average temperatures; consistent with the current outlook. IOD events typically have little influence on Australian climate from December to April, meaning the strong dry signal should start to weaken.

The outlook for October to December 2019 indicates that:

- **DRIER** than average conditions are expected across most of the NT for the remainder of 2019.
- **WARMER** than average days and nights are more likely across the entire NT.

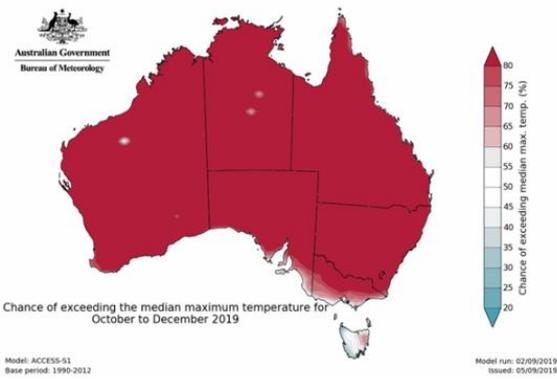
For further information go to:

<http://www.bom.gov.au/climate/outlooks/>

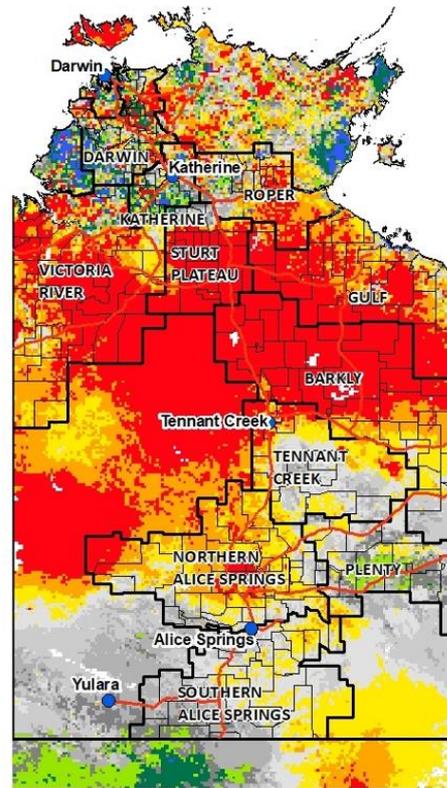


Above: Bureau of Meteorology map shows chance of exceeding the median rainfall for October to December 2019

¹¹ <https://dpiir.nt.gov.au/primary-industry/primary-industry-publications/newsletters/regional-newsletters/pastoral-market-update/august-2019>



Above: Bureau of Meteorology map shows chance of exceeding the median maximum temperature for October to December 2019



Past 12 Months Pasture Growth relative to historical growth since 1957 (as at the 1st September 2019)

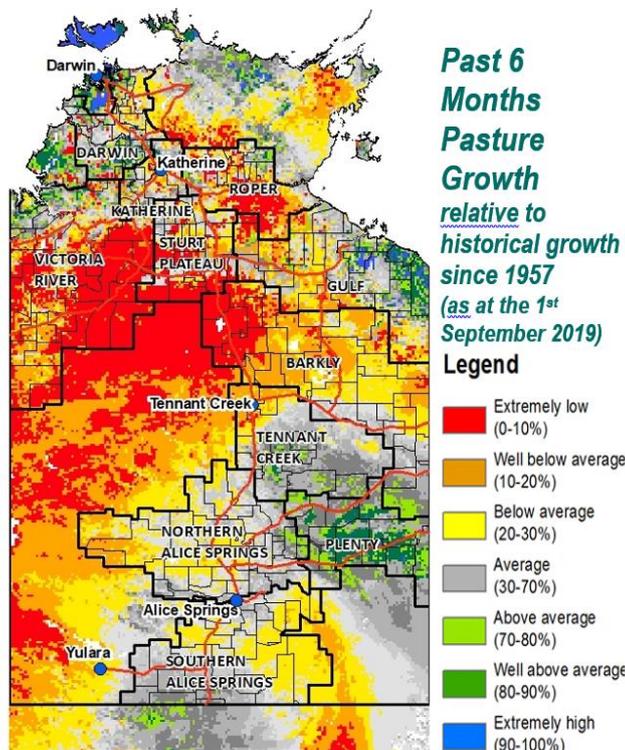
Northern Territory Pastoral Districts					Comments
Indicator	Southern Alice Springs	Plenty	Northern Alice Springs	Tennant Creek	
2018/19 Total pasture growth	↓	↔	↓	↓	Arrows indicate trend compared to the long-term median.
Current estimated standing biomass	↔	↑	↔	↔	Arrows indicated trend since previous quarter.
Current fire risk	↓	↔	↔	↔	Arrows indicate the trend since the previous quarter.
Current seasonal outlook	↓	↓	↔	↑	Arrows indicate the trend since previous quarter and consider forecasted model predictions.

Legend:
 ↑ = Increasing Trend
 ↓ = Decreasing Trend
 ↔ = Steady
 Green = low risk
 Orange = watch
 Red = high risk

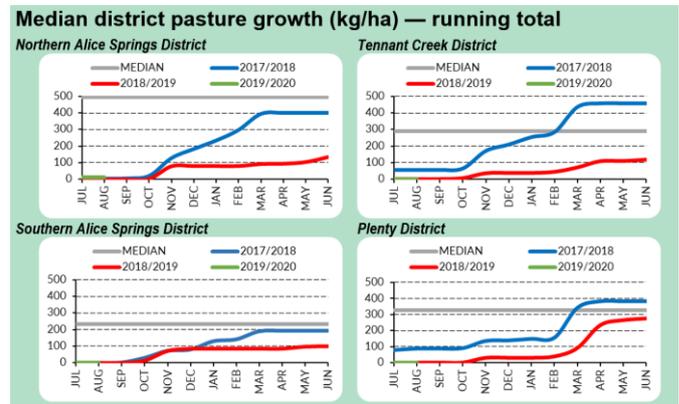
Above: Past 12 months pasture growth relative to historical growth since 1957

Above: Northern Territory pastoral districts table

AussieGRASS September 2019



Above: Past six months pasture growth relative to historical growth since 1957



Above: Median district pasture growth

Contact

If you would like further information, please contact Chris Materne on (08) 8951 8111.