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EDITOR: Matthew Fletcher
Visit http://www.agric.wa.gov.au
WHERE HAS THE RAIN BEEN FALLING?

Western Australian Rainfall Deciles  1 October 2007 to 29 February 2008
Distribution Based on Gridted Data
Product of the National Climate Centre

Disclaimer
This material has been written for Western Australian conditions. Its availability does not imply suitability to other areas, and any interpretation or use is the responsibility of the user. Mention of product or trade names does not imply recommendation, and any omissions are unintentional. Recommendations were current at the time of preparation of the original publication.

Front page photo courtesy of Don Hadden, Mt Barnett.

Please check the address label on your publication. If it is incorrect or if you would like to be included on our mailing list, let us know!
Hello to all in 2008.

The Pastoral Memo is getting a following across the northern rangelands. We currently have 156 pastoralists from across the Kimberley and Pilbara and 104 other parties receiving hard copies. In 2007, 445 individual computers downloaded the Memo from the Department of Agriculture and Food website. It is great to see such a large audience making use of the Memo.

In the March edition of the Pastoral Memo there is some good reading about the differences between perennial and annual grasses and discussion on what perennial grasses do over the wet season. There is also a swag of articles talking about weeds including bellyache bush, prickly acacia, lantana and development of weed management plans in the Ord River catchment.

At the time of writing, wet season rainfall has been generally above average across the Kimberley. Stations south of Derby and in the Pilbara are still looking for a change in the weather to bring some general soaking rains to kick start some grass growth. A more comprehensive wrap-up of the wet season so far is in the Memo.

Before you sit down in a quiet corner and read the first Pastoral Memo for 2008, I would like to thank all those who have contributed articles; writing an article may seem an arduous task but I am sure it is very rewarding once completed. Once again thanks.

Happy reading.

Matthew Fletcher

Want the edge in the rain-tipping competition?

Weather is a common topic around the smoko table—especially now when we are well into the wet season. The addresses for two weather websites have been sent to me and I pass them on to our readers.

The first to grab a guernsey on my favourites list was

http://www.australianweathernews.com/forecast_OCF.htm

This site presents a nine-day forecast, is uncluttered and simple to navigate and presents rainfall forecasts in a readable table.

The next site was


The Bureau of Meteorology (BOM) water and land website is a suite of information on climate including cloud cover, average monthly and annual evaporation and historical weather observations—a one-stop shop for all weather and climate information.

I hope you find them useful—and good luck with some soaking rains this wet season.
Wet Season So Far

Pilbara—There have been no general rain influences in the Pilbara during the summer to date. Rainfall has been restricted to scattered storms with some heavy falls over small areas. These storms generally have provided good relief rains in the east-Marble Bar-Newman areas. Falls in the central and coastal areas and in the Ashburton have been much more isolated. While most properties have received at least some relief over some areas of their properties the benefit of these falls is likely to be short lived without follow-up falls. The Pilbara in general requires at least one good widespread rain influence in March/April to ensure at least some sort of a season for many pastoralists.

Halls Creek—Reports from Halls Creek have highlighted an above average rainfall season thus far. Some areas have received 600 mm of rainfall, already 80 mm above the 520 mm annual rainfall for the area. The majority of rainfall has come from storm rain helping to fill dams and run creeks. There has only been one week of monsoonal influence which was recorded in early February. Pastures have responded well so far, however they will require follow-up rain late in the wet season to enable them to carry green leaf into the dry season, otherwise they will be burnt off by the end of March negating such a promising start to 2008.

East Kimberley—Frank Wise Research Station, Kununurra has received 879 mm for the wet season (Dec.Feb.). The average for the same period is 536 mm. February 2008 has been the wettest February on record, recording 533 mm; the next wettest was back in 1969 when 506 mm was recorded. Lake Argyle recorded an overfull supply on 20 February when water started flowing over the spillway. At the time of writing the height of water flowing over the spillway was 95 cm.

Derby and North Kimberley—Generally there has been a good wet season across most of the Kimberley, the exception being the far south-west corner around Anna Plains, Mandora and Frazier Downs. Fitzroy Crossing’s season has been relatively late but most places have now had good rains. Much of the flood plains have been under water and the river remains high. In the north Kimberley, the storms started in late November and have continued with good falls at least twice a week since then. Many properties in that area remained isolated by road in early March.

Thanks to all who contributed to the weather summary for your local area.
PERENNIAL AND ANNUAL GRASSES—HOW DO THEY COMPARE?

Bob McCartney, Derby

Annual grasses such as Flinders and button grass grow quickly after rain and are eagerly sought after by stock. They are very palatable when green and have a high digestibility.

To ensure their survival from one year to the next, annuals direct their energy into producing seed and die off quickly once the rain stops. The root systems of annual grasses are poorly developed and plants depend on soil moisture near the surface. However, they can establish on ground that is too shallow or too poor for perennial grasses.

After reasonable years, you can often see quite dense stands of annual grasses on areas that are now too poor to support perennial grasses. Conversely, in below-average years, there may be very little production on such areas.

Come the dry season, annual grasses have little nutritional value to stock and often blow away, leaving bare ground which is then susceptible to erosion.

Perennial grasses such as Mitchell grasses have a well-developed root system and can draw moisture from much further down in the soil profile. This allows them to stay green and productive further into the dry season.

Healthy perennial grasses promote good soil structure and efficient use of rainfall. Their root systems hold the soil together, resisting erosion, and rain water can penetrate deeply into the soil profile through root channels and insect holes. Because surface run-off is reduced and slowed there is less likelihood of erosion down-slope.

At the start of the growing season, energy stored in the root systems allows perennial grasses to produce new shoots and photosynthesis can begin quickly. Cattle will preferentially select the young green tillers. Species with a high leaf-to-stem ratio seem to be preferred. Perennial plants are vulnerable to overgrazing at this stage as they need to replenish their root reserves.

Once the rains finish, perennial grasses begin to hay off and produce seed. Protein levels and digestibility fall, and food reserves are drawn back into the root systems as the plants enter their dormant phase.

Summing up

Pastures with a strong perennial component are usually far more productive than those dominated by annual grasses because they can use the resources of water, sunshine and soil nutrients more efficiently.
Forage availability is more consistent when perennial pastures are in good condition, both throughout the year and across different years.

In the northern rangelands, annual grasses can play a valuable role in animal nutrition through the wet season, particularly in good years. But perennial grasses provide the essential foundation for a successful enterprise. It pays to look after them.

**What Have Your Perennial Grasses Been Up To Over the Wet Season?**

Matthew Fletcher, Kununurra

The northern Australian ‘wet season’ is when perennial grasses explode from dormancy into a frantic but orderly race to replenish their stored reserves and to reproduce.

At the start of the wet season growth is very slow—engendered from food reserves stored mainly in the roots from the previous year’s growth.

Adequate soil moisture triggers plants to produce green leaf, allowing photosynthesis to take place. Carbon dioxide from the air and water from the soil combine with solar radiation, producing stored energy in the form of glucose, a simple sugar.

Glucose is then transformed into many compounds, one being protein which is transported throughout the plant to produce stems, leaves, flowers and seed and to replenish food reserves in the roots. This increased protein level is one reason stock have higher weight gains in the wet season.

Some perennial grasses (such as buffel grass) seed early in the wet season when growing conditions are ideal for immediate germination, growth and seed set before the coming dry season.

Other perennial grasses (ribbon, Mitchell and black spear grass) seed mid to late in the wet season. Their seed will lie dormant for the whole dry season, waiting until the following wet season to germinate.

Ideally, by the end of the wet season a plant would have grown a healthy biomass of leaf and stem, set seed and replenished root reserves, and be ready to do it all over again in the following wet season.

**Why is spelling more beneficial in the wet season than the dry?** Leaf grazed during the dry season will not be replaced because the plant is dormant. During the wet season, however, it is actively functioning leaves that are grazed. A plant must replace the leaf consumed to continue photosynthesis at the same rate.

When a plant is heavily grazed in the wet season, it must direct all its energy into simply replacing leaf material from grazing, meaning minimal energy is left over for seed set or replenishing root reserves (necessary for dry season survival). This restricts the ability of the plant to complete its life cycle and ultimately may lead to the plant being ‘grazed out’, that is, dying.

Obviously, stock need to go somewhere during the wet season; strategies such as rotating paddocks that are stocked over the wet season, moving stock between paddocks and aligning stock numbers with the amount of forage available are recommended.
Every so often there is a spate of ‘virus alerts’ which circulate on the Internet. It is important to be able to identify if these are genuine warnings, or hoaxes.

Virus hoaxes can be as annoying and disruptive as genuine viruses because they generally include a ‘send this to everyone you know’ plea. In effect, the email traffic is exponentially increased until such time as there is a break in the circulation by people aware that it is only a hoax, or until the email network has an overload (which is the general intent of all virus hoaxes).

So what should you do?

First and foremost, you should get yourself some antivirus (AV) software. There are many brand names of AV software available on the market and most are very reliable.

Secondly, make sure that you keep it up-to-date. There are literally hundreds of thousands of viruses out there and there are sufficient new viruses being created that most vendors issue updates every couple of days. These updates are usually automatically downloaded to your computer when you log on to the Internet.

Recognise a hoax

For starters, most true viruses are so concealed that you won’t get any warning that it is on the way.

Most of the hoax virus emails include terms like:

- ‘AOL (or Microsoft or some other large computing company) announced today’.
- ‘It will destroy all the data on your hard drive.’
- ‘Please pass this on to all of your friends’, etc.

Nowadays viruses are designed not to destroy your data but to steal it.

What to do if you believe you have been sent a hoax

Check out the web for a list of known hoaxes.

Here are two URLs (Uniform Resource Locator) of reputable antivirus companies where you can check out if the virus is valid or a hoax.

http://us.mcafee.com/virusInfo/default.asp?id=hoaxes

If you are not able or confident to check out the web for virus hoaxes, forward, or discuss the email with a single person whom you feel can assist. Never send it to all the people you know.

The World Wide Web and email have provided us with some amazing capabilities and resources. Unfortunately, it has also unearthed some less than desirable characters.
EI in the Rangelands in 2008

Matthew Bullard, Broome

(An update on EI and changes in the requirements for bringing horses to WA)

Equine influenza (EI) may seem like old news and a long way from the Rangelands of Western Australia with no new cases of EI reported since 25 December 2007. Western Australia still can not afford to be complacent. Restrictions still apply to the importation of equines and equine tack being brought into WA. This is especially important to those expecting an influx of staff, horses, plant and equipment for the new 2008 season from NSW and Queensland.

Despite reports in the media that we are winning the battle against EI, there is still a threat for the virus to get into WA. EI is still potentially as close as the visitor or truck arriving from outside WA.

Pastoralists and contractors who employ ringers and staff from interstate, in particular from Queensland and NSW, must be especially vigilant at the start of the 2008 season that all persons, vehicles, horses, equipment and tack that come in to WA are compliant with any conditions and restrictions that still apply. (See below for information on current restrictions.)

As a reminder, EI is a highly contagious viral disease of horses, donkeys, mules and ponies that can rapidly spread causing outbreaks of respiratory disease, in many ways similar in signs, symptoms and effects as the human ‘flu’. Incubation periods can be as short as two, but up to five, days and these seemingly uninfected animals can still be shedding vast numbers of infective particles before the onset of clinical signs. There is no specific treatment in the case of EI.

Affected animals show varying degrees of fever, loss of appetite, stiffness, depression, difficult breathing with coughing (usually dry and hacking in nature) and nasal discharge. Most recover with few complications after 10 or so days but may take several weeks to return to top performance levels.

The virus is easily spread through the movement of infected animals, contaminated horse tack, contaminated people and their belongings and just about any other means you can think of where there has been contact with infected animals and this includes vehicles. Virus laden mucus from coughing or sneezing by an infected animal can spread over several (35) metres, and can survive for several days depending on the surface or material it lands on. The spread of EI between properties in Australia has been mainly associated with human movement and poor biosecurity practices. Failure to follow proper biosecurity procedures such as changing clothes, washing hands and disinfecting equipment between animals and/or property visits has enabled the virus to jump containment lines.

It should be noted that it is an offence not to report an incident of respiratory symptoms of suspected EI to the relevant authorities. Any suspicious signs of illness in your horse should be reported to your nearest vet or Department of Agriculture and Food, WA (DAFWA) office for investigation. You can call the emergency animal disease (EAD) Hotline 1800 675 888. Any reported incident is subject to risk appraisal to establish a level of risk known as the index of suspicion, taking into account the presence and severity of signs, possible contact with infected horses within a specified time period and other history of contact and movements. A reported incidence does not result in automatic quarantine.
To date, the strategic use of vaccination programs in the eastern states has been very successful in bringing the current outbreak under control but is not infallible as vaccinated horses can still excrete and spread the virus. **REMEMBER: Vaccinated animals can still carry the virus.**

**Importation of horses into WA from NSW and Queensland is still subject to restrictions subject to the following criteria and will only be allowed with the appropriate permits, declarations and quarantine procedures.**

- The entry conditions for equines DIRECTLY from a red, amber or green zone in NSW or QLD remains PROHIBITED. Horses can now be moved directly to Western Australia from the white zones of NSW or QLD or from other states, subject to the completion of a declaration.

- The declaration will be required from the horse’s owner stating that the horse has been in the white zone of NSW or QLD, Victoria, SA or NT for at least 14 days and has not had any contact in the last 14 days with horses moved from the red, amber or green zones in NSW or QLD.

- Isolation facilities on arrival in WA will no longer be required under the new arrangements.

**The conditions for the importation of used horse equipment into WA remain unchanged with gear needing to be cleaned and declared to quarantine inspectors on arrival in WA.**

**Full details of all importation and application requirements are available from DAFWA.**

A full description of requirements and conditions can be obtained from the DAFWA website [www.agric.wa.gov.au](http://www.agric.wa.gov.au).

Don’t forget—good biosecurity principles are the key to keeping equine flu out of WA.

1. Avoid all possible contact with at risk and suspicious animals, equipment, tack and people. Allow a minimum of 72 hours after contact with equine animals and equipment before going near your, or other, at risk animals.

2. Keep records of all movements.

3. Keep watch and be aware.

4. Stay informed.

Further queries may be directed to your nearest DAFWA office.
Better Decisions in the Business of Beef

Breedcow and Dynama Training Workshop

Expressions of interest are sought from pastoralists and others involved in the pastoral industry in attending ‘Better decisions in the business of beef’ training workshops. Depending on level of interest, it is planned to hold at least one workshop in the Kimberley and one in the Pilbara during May 2008.

Details of this 1½-day training opportunity are as follows:

Trainers

Bill Holmes, Principal Agricultural Economist, DPI&F, Townsville: supported by Michael Jeffery, Kimberley and Peter Smith, Pilbara.

Purpose

• Participants learn budgeting methods to improve extensive cattle enterprise profitability and financial management.
• Participants discover new ways of looking at herd and property business decisions.
• Participants learn to use Breedcow and Dynama computer software to apply these methods and approaches.

Content

The Better Decisions in the Business of Beef workshop is based on using Breedcow and Dynama software to apply four approaches to beef business evaluation and improvement. Expressed as questions, these are:

• Where are we now and where are we headed?—a glimpse into the future using herd projections as a base to estimate future cash flow, net income, debt and net worth.
• Is there a better way to run the herd?—comparing herd structures and profit (gross margins) with different turnoff or husbandry choices.
• Evaluating change using Investment Analysis.
• What do we do when the plan comes unstuck?—choosing what to sell when abnormal (forced) sales are required, choosing what to buy when feed is available, and testing unexpected sales opportunities.

Workshop cost will be $500 incl. GST, and is registered with FarmBis. The Breedcow and Dynama software package will be available for purchase at $495 incl. GST.

For further information and to register your interest and preferred date and location contact:

Peter Smith, DAFWA, Karratha—Ph (08) 9143 7002; Mob 0429 087 647
email: pcsmith@agric.wa.gov.au
Bellyache Bush (Jatropha gossypifolia)

Jessica Paterson, Kununurra

Origin: Bellyache bush is a native of the Caribbean region and tropical America.

Introduction to the Kimberley: The plant was originally introduced to the Kimberley region in the late 1800s as an ornamental as it is a hardy plant that forms dense green thickets and survives well in our humid, tropical climate. It is found in disturbed areas around old homesteads, mine sites and degraded rangelands and especially along waterways.

Toxicity: Bellyache bush refers to the medicinal and purgative properties of the seed. The seeds are toxic to both humans and animals and stock do not eat the plant. The toxic substance is toxalbumin which when eaten can cause gastro-enteritis and death of some animals.

Invasiveness habits: Bellyache bush mainly invades degraded lands forming dense thickets displacing more desirable species. In pastoral areas impenetrable thickets can interfere with mustering and reduce pasture growth.

Appearance: Bellyache bush is an erect perennial shrub up to 4 m tall. It is a densely hairy plant. Leaves are alternate and are divided into 3–5 segments with pointed lobes. Young leaves are deep purple and sticky; mature leaves are a glossy dark green; the flowers are small and a purple/red colour with yellow centres clustered among the upper leaves.

Seed germination and suckering: Seeds germinate at the break of the wet season and develop throughout the remainder of the season.

Although the plant can sucker, the major method of spreading is by seed. The capsules split open when ripe, throwing the seed. The seeds can then be dispersed even further via water flow and in mud adhering to vehicles, machinery and animals.

Declared weed status: Bellyache bush is a declared weed under the Agriculture and Related Resources Protection Act.

Bellyache bush (Jatropha gossypifolia):
- P1; for the whole of the state.
- P2; for all the municipal districts in that portion of the state south of the 26th parallel.
- P4; for all the municipal districts in that portion of the state north of the 26th parallel.

- P1 Prohibits movement of plants or their seeds within the state. This prohibits the movement of contaminated machinery and produce including livestock and fodder.
- P2 Eradicate infestations to destroy and prevent propagation each year until no plants remain. The infested area must be managed in such a way that prevents the spread of seed or plant parts on or in livestock, fodder, grain, vehicles and/or machinery.
- P4 Prevent the spread of infestation from the property on or in livestock, fodder, grain, vehicles and/or machinery. Treat to destroy and prevent seed set on all plants.

Control methods and timing: The most effective methods of control are hand pulling the plants and for more substantial thickets use either a foliar spray or basal barking. The ideal time for controlling bellyache bush is during the growth period in the wet season.

If bellyache bush is identified on your property notify your local biosecurity officer at the Department of Agriculture and Food.
PRICKLY ACACIA IN THE EAST KIMBERLEY

Noel Wilson, District Manager, Kununurra

Control of two infestations of prickly acacia (*Acacia nilotica*) in the East Kimberley has continued during the 2007 dry season. Prickly acacia is one of 20 Weeds of National Significance. It is a thorny shrub that affects local biodiversity by outcompeting valuable pasture and native plants. It can grow in dense thickets around water points, restricting access to water for both stock and native animals.

The Department of Agriculture and Food has been working with traditional owners and other state government departments to control the infestations.

The main infestation is north of the Durack River, about 50 km west of Wyndham. The other is on the Pentecost River, about 60 km south-west of Wyndham. The Durack River infestation—in an extremely remote area of the Kimberley—covers an estimated 100 sq km.

National Heritage Trust funding through the Rangelands Natural Resource Management Funds will be used this financial year for control work on the Durack River infestation. The funds will also be used for follow-up control work after the wet season. Spraying along the Pentecost River continued.

The current program builds on control measures undertaken in these areas over the past few years by the traditional owners and a weed control contractor. Ongoing funding will be required for the long-term management of this weed in the Kimberley.
Lantana—a popular garden plant—is a serious threat to Western Australia’s bushland, particularly sensitive habitats.

Department of Agriculture and Food weeds officer Andrew Reeves has called on the public to help spot any infestations of pink and yellow *Lantana camara* in bushlands in an effort to halt the spread.

‘This old garden plant is the new “sleeper weed” in the environment,’ Mr Reeves said.

‘*Lantana camara* is a Weed of National Significance (WONS) that currently infests 4 million hectares of the east coast of Australia.

‘It is classified as P1, meaning that movement and sale of all cultivars and varieties are now prohibited within Western Australia.’

*Lantana camara* was banned in 2005. A trading extension for Dwarf Yellow Lantanas ended in August this year. The purple or white *Lantana montevidensis* is allowed to be sold by nurseries.

‘Extensive plantings of *Lantana camara* already exist in gardens, median strips and public areas, and infestations are being found in bushland areas in Perth, Geraldton and Albany,’ Mr Reeves said.

‘The public is asked to watch out for garden escapes of lantana, particularly in areas that have access to soil moisture and fertile soils such as along creek and river systems. These areas are the most likely to be invaded.’

Any sightings of lantana growing in bushland should be reported to Andrew Reeves at the department in South Perth on 9780 6224 or to the Pest and Disease Information Service on freecall 1800 084 881.

Strategic weed management along the Ord River has become a priority under the National Action Plan for Water Quality and Salinity (NAP).

NAP is providing support for land managers in the Ord River catchment to ensure sustainable management practices. Activities are administered by the Ord Catchment Reference Group (ORCG), an association of Ord catchment stakeholders.

One activity within the project called ‘Delivery of best management practices to land managers’ focuses on strategic weed management in priority areas and is managed from the Kununurra office of the Department of Agriculture and Food.

One of the outcomes from this project will be the adoption of weed control strategies and management plans to protect and recover water resources and associated riparian and aquatic biodiversity.

The plans will help improve soil condition, and density and cover of native vegetation, as well as ensure that the work is effective in a whole property context. Combined with other management practices, this will lead to improved water quality in the catchment.

The development of weed distribution and density maps is a significant part of the project. The maps—to be used by the land manager to develop weed management plans for the pastoral lease—will identify priority areas and species for control.

Apart from on-lease management, implementation of these plans will help reduce the spread of declared and environmental weeds that threaten production in the catchment.

The plans will further reinforce the integration of complementary management practices. For example, the use of fire can be one of the components of weed management. Weed issues and the fire regime need to be considered together for effective management.

Products from this project will be used with other NAP-funded projects to address a range of concerns in the catchment. If you would like to know more about the NAP projects, please call the Kununurra office (9166 4000) or contact the executive officer of ORCG (Liz Brown) on 9169 2610.
New Technical Officers in Kununurra

Kath Ryan and Elizabeth Tierney have started as technical officers in the East Kimberley Rangelands Development branch of the Department of Agriculture and Food WA (DAFWA).

They will be assisting Paul Novelly on research into landscape function analysis application on pastoral leases in the Ord catchment and will also be assisting Noel Wilson on weed mapping and management plan development for selected leases within the catchment.

The projects are funded through the National Action Plan for Salinity and Water Quality (NAP).

Elizabeth has moved from Northam, where she was a development officer with DAFWA. Kath has moved from Darwin, where she worked for a consultancy for two years as an environmental scientist.

Who are you?

If you have recently taken on a role as an owner, lessee or manager for a property, We want to know who you are!!! HELP US HELP YOU. Keeping up with the enormous changes in land ownership and management throughout the state is a huge task. Having the right name and contact details for properties is important to assist us in cases of emergencies such as biosecurity incidents or the like. It also ensures that innovative and essential information gets to you and doesn’t end up as ‘return to sender’!

Contact your local DAFWA office now!

Kununurra Office  9166 4014  Dave Hadden
Derby Office  9191 0353  Bob McCartney
Pilbara Office  9143 7006  Rebecca Dray
Carnarvon Office  9956 3322  Valerie Shrub
Kalgoorlie Office  9088 6016  Samantha Van Wyngaarden
South Perth Office  9368 3732  Michael Andacich

http://www.agric.wa.gov.au
Welcome to the Department of Agriculture and Food (DAFWA) Mapping and Analysis division. The CRIS Group (Client and Resource Information Systems), assisted by regional officers of the department, stores and manages information about the people and land the department deals with every day. The group also aims to provide a mapping service that is beneficial to you and the management of your property. We hope to continue this service, but we cannot do this without your help. We would like to remind you to continue to send in your property updates (i.e. new bores, tracks, fence lines) to your local DAFWA office or to the CRIS Group in head office (South Perth).

The department offers a range of pastoral lease map printing and laminating services to relevant and interested parties within the pastoral industry. A range of various sized maps can be provided and laminated to suit the needs of the job. We can also provide maps with such features as topographic backgrounds, aerial photo imagery, contours, soil-landscape mapping, vegetation mapping or land system information and composite maps for those managers who run adjacent leases.

Don’t forget—FIRST PROPERTY MAP FREE*—those pastoralists who provide us with significant key updates to their property map will receive the first revised copy free of charge. You can provide changes to property maps by either drawing on a hard copy map of the lease or providing details and GPS coordinates.

Contact the department to discuss your map requirements and information regarding map charges with one of our mapping officers. Remember to speak with staff before collecting GPS data to ensure that you use the correct format to capture the information needed.

If you have any queries or suggestions on how to improve our map service to you, then please let us know.

We look forward to hearing from you.

* Please note: For copies of property maps not owned or managed by yourself, we require written approval from the owner/manager of the property concerned.

Contact your Local DAFWA office now!

Kununurra Office 9166 4014 Dave Hadden
Derby Office 9191 0353 Bob McCartney
Pilbara Office 9143 7006 Rebecca Dray
Carnarvon Office 9956 3322 Valerie Shrub
Kalgoorlie Office 9088 6016 Samantha Van Wyngaarden
South Perth 9368 3732 Michael Andacich
“ON THE ROAD TO MUCHEA”
21.02.08

Welcome to the seventh edition of “ON THE ROAD TO MUCHEA”.

UPDATE ON THE LIVESTOCK CENTRE

Expressions of Interest for the provision of woodchips / sawdust closed this month with good interest received. WAMIA see an opportunity to come to an arrangement with a garden supplier to harvest the manured product for commercial use.

Stage 2 earthworks continues and will do so until mid April for the 16ha “cut and fill” upon which the Saleyard pad will sit.

The final design meeting was held last week, with only minor changes proposed – these will be considered and implemented. The design will be finalized early next month.

NOMINATE – OR BE LATE

ALL producers must nominate all stock for Midland so that Sale by Category can commence in the next month.

Sale by category will see the cattle sale order changed: category instead of agent order. Agents will rotate (in draw order) within category. The Sale by Category trial will commence with cows and bulls.

This will provide better presentation of stock for the buyers.

Nominations are the basis of the planning the sale and presenting your stock - all cattle must be nominated by 5pm on Friday. Those cattle not nominated will be placed in a “second run” (sold later in the sale as a separate group).

If you do not know the exact number of stock that you are going to send, an estimate is acceptable. Cattle nominations cannot be provided on Saturday.

There are 3 ways you can provide nominations (Hotline OR fax OR e-mail):

1. The Nominations Hotline will take calls 24 hours a day. Just telephone the FREECALL number 1800 721 728, this will connect to a call centre that will ask:-

   Sheep or cattle, Agent, Producer name and telephone number, Will you be providing a breakdown of your stock? (If no: the total number of mixed) If yes, the number of bulls, cows, heifers, steers, calves for the calf sale (in the case of cattle) or the number of lambs and adult sheep (in the case of sheep). Finally, the name of the carrier is sought.

2. Fax nominations via fax number -(08) 9250 4954

3. E-mail: nominations@livestocklogisticswa.com

Western Australian Meat Industry Authority,  
Livestock Logistics WA, PO Box 1434, Midland Western Australia 6936  
WAMIA: (08) 9274 7533 • LLWA Saleyard: (08) 9250 8093 • LLWA Facsimile: (08) 9250 4954

http://www.agric.wa.gov.au
A land system is an area or group of areas with recurring patterns of topography, vegetation and soil. Land systems are made up of a number of land units.

Land units are areas with similar landforms, soils and vegetation within land systems. They are finer in scale than land systems.

Have a look at your most recent Range Condition Assessment to see which land systems have been mapped on your lease.

The mapping of land units (the components of land systems) was investigated by the Department of Agriculture and Food, Western Australia (DAFWA) and CSIRO Division of Land and Water as part of the Ord Bonaparte Program.

A process to map land units was developed and demonstrated for part of the Ord River catchment, combining the use of existing soil and land system mapping, digital datasets (satellite imagery, terrain model, etc.) and a substantial amount of targeted field work to check the ground-truth of the mapped land units.

Maps were developed for several East Kimberley stations, essentially subdividing the land systems into a series of clearly defined land units, and then mapping the boundaries and calculating the area of each unit.

As part of the National Action Plan for Water Quality and Salinity a project entitled ‘Delivery of Best Management Practices to Ord Catchment Land Managers’, DAFWA is currently assessing opportunities provided by land unit mapping to:

- better estimate long and short-term carrying capacities
- improve placement of fencing, and
- optimise location of new water points.

In essence, describing and mapping the landscape at the land unit level allows a better definition of the major landform types, how soil types vary, and what the dominant grasses are in any particular area.

With more precise mapping, managers can have a greater degree of confidence with tasks such as estimating a paddock’s carrying capacity, deciding on where to run a new fence line or locating a new watering point. Land unit information could also be valuable for fire management purposes.

As an example, a description of the Richenda land system from the original (1970) CSIRO survey followed by a description of the land units mapped during the Ord Bonaparte Program is presented below.
Richenda land system described at the land system level in the original CSIRO survey

<table>
<thead>
<tr>
<th>Unit</th>
<th>Area</th>
<th>Landforms</th>
<th>Soils</th>
<th>Vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Large</td>
<td>Rocky hill slopes</td>
<td>Mainly outcrop</td>
<td>Granite hills and lower slopes, rock outcrop and skeletal soils, snappy gum sparse low woodland (<em>E. brevifolia</em>) over soft spinifex (<em>Plechtrachne pungens</em>).</td>
</tr>
<tr>
<td>2</td>
<td>Medium</td>
<td>Lower slopes, colluvial in lower sectors</td>
<td>Mainly outcrop with shallow skeletal soils</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Very small</td>
<td>Drainage floors</td>
<td>Medium-textured alluvial soils</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Very small</td>
<td>Channels</td>
<td></td>
<td>Fringing communities</td>
</tr>
</tbody>
</table>

Land units within Richenda land system mapped by DAFWA for an East Kimberley lease

<table>
<thead>
<tr>
<th>Unit</th>
<th>Landform</th>
<th>Soil</th>
<th>Vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIC_3</td>
<td>3; Rolling to steep high hills</td>
<td>Pockets of shallow stony soil and much outcrop of granite or gneiss</td>
<td><em>Eucalyptus brevifolia</em> sparse woodland with <em>Triodia bitextura</em> and occasionally hard spinifex species or <em>Sesima nervosum</em>.</td>
</tr>
<tr>
<td>RIC_4</td>
<td>4; Undulating to steep low hills</td>
<td>Pockets of shallow stony soil and much outcrop of granite or gneiss</td>
<td>Open woodland of <em>Eucalyptus brevifolia</em> with an understorey of <em>Triodia bitextura</em> or hard spinifex (<em>Triodia wiseana</em> or <em>T. racemigera</em>).</td>
</tr>
<tr>
<td>RIC_5</td>
<td>5; Very low gently undulating to rolling rises</td>
<td>Red shallow loams, sometimes gravelly, over parent material of granite or gneiss</td>
<td>Woodlands of <em>Eucalyptus brevifolia</em> and <em>Corymbia</em> spp with understorey of <em>Triodia bitextura</em> or <em>Triodia wiseana</em>; less frequently <em>Sesima nervosum</em>.</td>
</tr>
<tr>
<td>RIC_6</td>
<td>6; Level to undulating plains</td>
<td>Variable sands and loams, often shallow</td>
<td>Woodland of <em>Corymbia</em> spp and <em>Eucalyptus brevifolia</em> with an understorey of <em>Chrysopogon fallax</em>, <em>Heteropogon contortus</em> and <em>Aristida inaequiglumis</em>.</td>
</tr>
<tr>
<td>RIC_7</td>
<td>7; Drainage floors</td>
<td>Medium-textured alluvial soils</td>
<td><em>Corymbia dichromophila</em> woodland with scattered <em>Carissa lanceolata</em> and <em>Terminalia</em> spp and understorey of <em>Heteropogon contortus</em> and <em>Chrysopogon fallax</em>.</td>
</tr>
<tr>
<td>RIC_8a</td>
<td>8; Major watercourses, channels and banks</td>
<td>Deep sands on river banks and bed loads of gritty sand and cobbles</td>
<td>Fringing woodlands of <em>Melaleuca</em> spp and <em>Eucalyptus camaldulensis</em> with numerous coarse perennial grasses and sedges.</td>
</tr>
<tr>
<td>RIC_8b</td>
<td>7; Drainage floors sometimes with channels</td>
<td>Sandy loam duplexes</td>
<td>Variable very open woodlands with eucalypts and <em>Bauhinia cunninghamii</em>, with patchy grasses <em>Heteropogon contortus</em>, <em>Chrysopogon fallax</em> and <em>Xerochloa</em> sp.</td>
</tr>
</tbody>
</table>
HAVE YOU BEEN CONCERNED ABOUT FIRE IN THE KIMBERLEY?

THIS IS THE OPPORTUNITY TO HAVE YOUR SAY!

Ord Land and Water, Halls Creek East Kimberley Land Conservation District Committee and the Landcare Regional Facilitator are organising a fire forum. The fire forum will provide an opportunity to learn about current research and Government Agency policy and plans. It also provides the opportunity to voice your opinions and aspirations which will contribute to setting community goals for fire management in the Kimberley.

Key speakers at the Fire Forum include: Jeremy Russell-Smith on the success of the Carbon Abatement project in Northern Arnhem Land and the key role indigenous fire teams play in the success of fire management; Gay Crowley on the role of wet season (storm) burning as a management tool on Cape York Peninsula and the application of this tool in maintaining open grasslands; John Silver and Cait Westlake on the Eco Fire project in the West Kimberley, a coordinated approach to reducing late dry season wildfires.

There will be three sessions; Indigenous session starts at 10.30 am on 27 March, at Waringarri Aboriginal Corporation conference room, Community session starts at 5.30 pm on 27 March, at the All Seasons Kununurra and Land Managers session starts at 9.30 am on 28 March, at Kingston Rest. All are welcome to attend any session. Refreshments will be supplied at each session. For more information please contact Corrin Everitt on 0400 639 807 or email corrin@brolgasenvironment.com.au.

EAST KIMBERLEY FIRE FORUM
27 & 28 MARCH 2008
CATTLE MARKET UPDATE—FRIDAY 7 MARCH 2008

Export numbers (Northern ports 2007)

- 45,423 head of cattle left the Broome Port in 2007.
- 43,036 head of cattle left the Wyndham Port in 2007.
- 24,004 head of cattle left the Port Hedland Port in 2007.

Live export price quotes (c/kg lw)

<table>
<thead>
<tr>
<th></th>
<th>TW</th>
<th>LW</th>
<th>LY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light steers (280 - 400 kg)</td>
<td>Darwin</td>
<td>185</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Fremantle</td>
<td>165</td>
<td>160</td>
</tr>
<tr>
<td>Heavy steers (400+ kg)</td>
<td>Darwin</td>
<td>170</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>Fremantle</td>
<td>160</td>
<td>150</td>
</tr>
</tbody>
</table>

Source: MLA’s NLRS, Landmark