



GRASSLAND SOCIETY OF NSW INC.

Newsletter

From all reports the Grassland Society of NSW Conference at Cowra was a great success - congratulations to the local organising committee for putting together a great program of speakers and field tours. If you are a member, but couldn't attend the conference you should receive your copy of the conference proceedings in the mail soon.

Just prior to the Conference was the Annual General Meeting where the committee for the upcoming 12 months was elected. The committee for 2017-18 are - David Harbison (President), Nathan Ferguson (Vice President), Janelle Witschi (Secretary), Frank McRae (Treasurer), Mick Duncan (Immediate Past President), Carol Harris (Editor), Amanda Britton, Helen Burns, John Coughlan, Keith Garlick, John Ive, Lester

McCormick and Luke Pope (committee). Welcome to the new face on the committee - Amanda Britton, who is from the Shoalhaven region and works for Local Land Services (LLS) - I am sure Amanda will be a valuable contributor to the committee and will bring a coastal perspective.

A big thank you should also go to outgoing committee member Clare Edwards - Clare, also employed by LLS has made significant contributions to the committee, Pasture Updates and conferences over the past few years.

Keep an eye on the website for upcoming Pasture Update events including one at Tooraweeha (Page 4) on October 10 and Bathurst on October 11.

You will all have heard in the news about the heightened bush fire risk this summer - it is important to know what the risks are in your area and to have a plan - make sure you visit www.rfs.nsw.gov.au/plan-and-prepare/know-your-risk for helpful tips.

Finally another date to put in the diary is November 21 - National Agriculture day. The aim of this day is for Australia to celebrate the remarkable contribution of Australian agriculture. Events are taking place right across the nation, from Perth to Sydney - and everywhere in between. You're also invited to host your own gathering. For more information go to <https://www.agday.org.au/>

Carol Harris,
Editor



Don't Forget - Membership subscription due now for 2017/2018

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How much do you know about Q Fever?

Editor's note

This article was requested by a Grassland Society of NSW member whose partner passed away from complications associated with Q Fever. Please do not be complacent about this disease and talk to your medical practitioner for further information.

Information in this article was sourced from NSW Health (www.health.nsw.gov.au/Infectious/factsheets/Pages/default.aspx) and the Australian Q Fever Register (www.qfever.org). Both these sites have general information on Q fever, and on the Q Fever Register.

What is Q fever?

Q fever is an illness caused by the bacterium *Coxiella burnetii*. Q fever is spread to humans from infected animals (mainly cattle, sheep and goats). The bacterium is spread in urine, faeces and milk, but birth fluids, the foetus and the placenta are the most dangerous sources. When infected fluids dry out the germ can remain alive in the dust for years. People can become infected by begin splashed with infected fluids, or by breathing in infected dust.

Q fever is usually an acute (immediate) infection but it can sometimes lead to a chronic (long-term) illness. Acute Q fever can cause a severe flu-like illness that is sometimes associated with hepatitis (inflammation of the liver) and pneumonia. Chronic Q fever most commonly results in inflammation of the heart (endocarditis) and people who already have heart valve disease are at increased risk.

What are the symptoms?

Many infected people have no or few symptoms. People who do become sick often have a severe flu-like illness.

Symptoms begin about 2-3 weeks after exposure and typically include: high fevers and chills, severe sweats, severe headaches (often behind the eyes), muscle and joint pains and extreme fatigue (tiredness).

If untreated, symptoms can last from 2-6 weeks. Most people make a full recovery and become immune to repeat infections. Occasionally, people develop chronic infections which affect the heart

(endocarditis) or the liver (hepatitis). Some people develop chronic fatigue (post-Q fever fatigue syndrome), which can last for many years after the initial infection. Symptoms of chronic Q fever may occur up to two years after the initial infection.

How is it spread?

People usually get infected by breathing in infected aerosols or dust when working with infected animals, animal tissues, or animal products. The main carriers of the disease are farm animals such as cattle, sheep and goats but other animals such as kangaroos, bandicoots, domestic pets such as dogs and cats can also be infected. Pigs are not known to carry the disease.

Infected animals often have no symptoms and can shed the bacteria into their urine, faeces or milk. High concentrations of the bacteria are found in the placenta (birth by-products). Q fever can be contracted by inhaling dust from wool, hides, straw or grass that contains the Q fever bacteria. Common activities where people are exposed include birthing calves and shearing. There is also a potential risk of contracting Q fever by ingestion of unpasteurised milk from an infected animal.

Spread of Q fever from person to person has been reported but is extremely rare. Contaminated work clothing may be a source of infection.

Who is at risk?

People at increased risk of Q fever include: abattoir and meat workers (including contractors who visit these facilities).

Others at risk include:

- farmers and shearers,
- stockyard workers & animal transporters,
- veterinarians, assistants and vet students,
- agriculture college staff and students (working with high-risk animals) and
- laboratory workers (working with the bacteria or with high-risk veterinary specimens).

Horticulturists or gardeners in environments where dust, potentially contaminated by animal urine, faeces or birth products, is aerosolised (e.g. lawn mowing) may also be at risk.

People commencing work in or visiting

these industries are at high risk of contracting the disease. Some long-term workers in these industries become immune to the disease without becoming sick.

How is it prevented?

A vaccine (Q-Vax®) is available to protect people against Q fever. Vaccination is recommended for all people who are working in, or intend to work in, a high-risk occupation (see Who is at risk?). Workplaces at risk should have a vaccination program.

People must be screened and tested before they are vaccinated against Q fever

People who work with animals or materials that may carry the Q fever bacteria should use appropriate protective equipment and be aware of the steps required to stop the spread of the bacteria.

The risk of Q fever can be further reduced by:

- washing the hands and arms thoroughly in soapy water after any contact with animals,
- washing animal urine, faeces, blood and other body fluids from the work site and equipment, and disinfecting equipment and surfaces where practicable,
- properly disposing of animal tissues including birthing products,
- minimising dust in slaughter and animal housing areas,
- keeping yard facilities for sheep and cattle well away from domestic living areas,
- removing clothing that may carry the bacteria before returning to the home environment and
- wearing a mask when mowing lawn or gardening in areas where there are livestock or native animals.

People who are unimmunised should not be allowed to visit high-risk work areas such as abattoirs.

How is it diagnosed?

The initial suspicion of a Q fever diagnosis is based on clinical symptoms and signs. Blood tests are required to confirm the diagnosis with repeated testing after two weeks.

How is it treated?

Q fever is treated with antibiotics, usually in the tablet form. A cardiac assessment, which may include echocardiography, is

required to assess whether there are underlying abnormalities of the heart valves which increase the risk of developing chronic Q fever endocarditis. Chronic Q fever infection requires prolonged treatment with antibiotics.

What is the Q Fever Register?

The Australian Q Fever Register is a database to store information about the Q Fever immune status of people who have agreed to be part of the register. The purpose of the Register is to help people working in high risk industries avoid getting the disease. It does this by allowing employers to quickly find out if you are immune or not. If you are not immune, you can be vaccinated before you are exposed to the risk of infection.

How will the Register help?

If you have been vaccinated but have lost your details, or forgotten if you've been vaccinated, you will normally need to be re-tested to check if you are protected from the disease before you

start work. Screening tests for Q fever are expensive and can take one or two weeks.

The Register will help workers by storing their vaccination or test details and by making it easier if you change employers in the future. If you agree to be on the Register your details can be checked immediately, so that, if you are immune, you can start work immediately without any danger. If you are not on the Register you will need to be tested, and then, if you are not already immune, your employer will arrange for you to be vaccinated.

What is the Q Fever Card?

When your details are entered into the Register or new information is added, a Q Fever Register Card will be mailed to you. This card contains your name, your current Q Fever immune status, and your Q Fever Register Number. This card should be kept and used to prove your immune status in the future.

You may be asked by your employers or doctors for your Q Fever Register Number. They will need your number to be able to check the Register to see if you are immune to Q Fever. Everybody on the Register is issued with a unique Q Fever Register Number which is printed on their Q Fever Card.

If you lose the card, or need the Register Number and don't have the card with you, telephone the Q Fever Register Help-Line (1300 QFEVER [1300 733837]). Register staff will ask you to identify yourself by asking your name, date of birth, and your secret question. Once identified, they will tell you your Q Fever Register Number.

If a person loses their Q Fever Card, they can telephone the Register and ask for a new card to be issued. The Card is not required for an employer or doctor to access the information in the Register - they just need to know the Q Fever Register Number. A person can get this immediately by telephoning the Register Help-Line.

Role and management of oats and short term ryegrass

Mick Duncan Agronomist, Armidale.

This summary represents some check or key points designed to produce high quality winter forage for animal consumption and /or conserved fodder.

1. The importance of early seed bed preparation. A late October /early November spray for total weed control. The main objectives being moisture accumulation, weed control (especially rat's tail) and destruction of the "Green Bridge" to reduce insects and diseases in subsequent crop. Note that the practice of "spray topping" using a sub-lethal (low) herbicide rates to prevent seed production is most unreliable. A full, lethal spray rate is preferred. Remember that the forage crop is usually a dual purpose strategy that is designed for weed seed bank reduction prior to permanent pasture establishment, as well as valuable winter forage.

2. Time of sowing is very important. From mid-February for oats and early March for ryegrasses. This will vary depending on location. Optimum soil temperature for oat germination is 15–25 °C and is similar for ryegrass. Higher temperatures at or soon after sowing frequently result in poor germination and patchy early establishment. Remember, most ryegrasses are soft, European grasses that grow well and produces high quality forage under soft European conditions. Taking it out of its "comfort zone " can be risky.

3. Weed control over summer. This is important to further accumulate moisture and control growth of volunteer or black oats and a broad range of native grasses that may harbour leaf rust inoculum, other diseases and insect pests. Summer weed (the "green bridge") control will reduce barley yellow dwarf virus (BYDV) risk and the aphids that act as the vector for spread of disease from native grasses to seedling oat plants.

4. Disease management is important. Rust in oat crops should be grazed to remove diseased tissue, reduce humidity in the canopy and promote fresh growth. Resistant varieties are limited but may be beneficial if other desirable agronomic traits are met. Leaf rust tolerant varieties regularly "break down" as new pathotypes emerge.

5. Seed treatment is a must for early control of BYDV. Choose a fungicide that contains imidacloprid (i.e. Gaucho, Hombre) This will provide useful control of the aphid vector for 6 -8 weeks and significantly reduce the incidence of BYDV that otherwise is capable of reducing oat dry matter production by 50+ %

6. Adequate fertiliser at sowing is very important. For example one of the many nitrogen (N), phosphorus (P) compound fertiliser products. Limit N application to below 30 units/ha to avoid

possible seed burning where seed and fertiliser are delivered from a common boot. Topdressing with an appropriate N fertiliser (e.g. Urea) after the first grazing will boost growth going into winter and increase quality.

7. Plant growth hormones. There has been good results in recent years from an application of gibberellic acid (GA), a naturally occurring plant growth hormone, when temperatures are in the 5-15 °C range. Provided there is adequate foliage to take in GA oats, ryegrasses and other pasture grasses benefit from GA in the period June – August. Other nutrient deficiencies especially N, need to be corrected for best results.

8. Grazing Management. This is an important yet often overlooked aspect of winter forage utilisation. Some form of feed rationing, especially in tight winters when feed is scarce is thoroughly recommended. This may simply consist of allowing animals to graze for several hours each day. This will reduce wastage from trampling and selective grazing, but may not produce weight gains as readily as set stocking.

The following is a summary of a presentation from Mick Duncan to Northern Tablelands Local Land Services pasture field day held at 'Dalkieth' Bundarra, on 7th June 2017.

Grassland Society of NSW Pasture Update at Tooraweenah

The Grassland Society of NSW in conjunction with Central West Local Land Services (LLS) with funding from Meat and Livestock Australia has organised a pasture update at Tooraweenah on Tuesday 10th October 2017.

The focus of the day is to provide producers with the latest advice on management of pastures and livestock. Speakers at the day include soil scientists, pasture agronomists, ruminant nutritionists and livestock reproductive specialists. In the afternoon there will be visits to two local properties to discuss application of information presented on-farm.

Speakers for the day include Dr. Susan Orgill from NSW Department of Primary Industries (NSW DPI) who will present information on practical management of common soil constraints affecting pasture production. Dr. Belinda Hackney from Central West LLS will speak on legume options for pastures and setting pasture legumes up for optimum nitrogen fixation. Clare Edwards (Central Tablelands LLS) will deliver information on tropical grass options and management. John Piltz (NSW DPI) will speak on options for moisture stressed crops for livestock production and management of tropical grasses for improve feed quality. Dr. Gordon Refshague (NSW DPI – Sheep reproduction specialist) will deliver information on optimising ewe fertility under drier seasonal conditions. Following the morning speaker session, there will be visits to two local properties. At Tooraweenah, the first will be to Alan and Scott Smith. At this stop, participants will be able to learn about the use of dual purpose crops and tropical grasses in livestock production systems. The

Smith's also harvest seed from tropical grasses on their property and the steps they take in establishing and managing tropical grass pastures will be a feature of this visit.

The second property to be visited at Tooraweenah is owned by Mike and Jill Bowman. The Bowman's have a long history of improving pastures on their undulating property, including aerial pasture establishment. Tactics for pasture establishment, pasture species used, fertiliser regime and weed control strategies will be discussed at this stop along with impact pasture management has on livestock production.

In addition to speakers, attendees will also have the opportunity to discuss weed control strategies with Kevin Watling from Castlereagh Weed Control and additional issues around livestock nutrition with Luke Harrision from Landmark.

The agenda for the day is :

08.15 am - Registration

08.45 am - Welcome and brief presentation from MLA representative

09.00-09.35 am - Dr. Susan Orgill (NSW DPI Soil Unit) – *Soil issues constraining pasture production – which ones should you focus on and what can you alter economically*

09.40-10.15 am - Dr. Belinda Hackney (CW LLS pasture agronomist) – *Setting pasture legumes up for success – improving nodulation and selecting species to suit your system*

10.20-10.50 Morning tea

10.55-11.25 am - Clare Edwards (CT LLS pasture agronomist) – *Tropical grasses – what are your options and how to successfully introduce and manage them*

11.30 am – 12.00 pm John Piltz (NSW DPI Ruminant nutritionist) – *Using moisture stressed crops for grazing and fodder conservation and managing tropical grasses for increased animal production*

12.05 – 12.35 pm - Dr Gordon Refshague (NSW DPI Sheep Reproduction specialist) – *Strategies for optimising reproductive performance in dry seasons*

12.40-13.10 – Lunch

13.15 pm - Travel to first farm visit sites

13.30 - 14.45 pm Alan and Scott Smith – *Dual purpose crops, tropical grasses and tropical grass seed harvest*

14.45-15.00 pm - Travel to second farm visit site

15.00-16.15 - Mike, Will and Jill Bowman – *Pasture improvement in undulating country*

Pasture Update close 4.30 pm

For further information and registration details go to http://grasslandnsw.com.au/news/?tribe_events=tooraweenah-pasture-update

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Tropical pasture makes beneficial changes to poor soils

Robert Banks, Gunnedah

Substantial gains in productivity have been made on lighter soils with tropical perennial grass pastures in soils that are generally considered to be relatively unproductive in our farming and grazing systems. One of the poorer soil groups in the region is the Sodic-duplex soils (with names like Sodosols or Sodic Chromosols). These soils are common on quartz rich sandstones of the slopes and plains - examples are found all around and within the Pilliga Forest, and on the slopes of the sandstone hills in the Gunnedah district. They are generally acidic and sandy in the topsoils, with a very abrupt change to a much heavier clay rich soil that disperses when wet, and can be neutral to highly alkaline at depth. We know these soils colloquially as "spewy soils" (sloppy when wet) or "Sunday Country" (too wet on Sunday – too dry on Monday) and probably a few words which are not printable in a newsletter. The soils don't hold much water because water can't get into the clay rich subsoils leaving only the sandy surface soils to hold meagre amounts of water following rain and the productivity of the native grasses is limited by this lack of soil water.

A lot of the land with the sodic-duplex soils was cleared with much enthusiasm for cropping in the past. Generally these lands quickly degraded structurally and become relatively unproductive under cropping and have been regionally retired to volunteer native pastures.

Use of tropical grass pastures with winter and spring active legumes has become commonplace on the northern NSW slopes and plains and to a lesser extent on the Northern Tablelands. The feed gains from well managed tropical grass pastures are well documented. Some land holders have gone from low stocking rates on poor pasture with low native grass groundcover to very high stocking rates on tropical grass pasture. Of course this has involved a change in management including monitoring cover levels, and alternating grazing with suitable rest periods to allow recovery of pastures.

Aside from incorporation of tropical grass pastures, most of these soils are highly depleted in essential nutrients, particularly phosphorus and sulphur. Phosphate and sulphur fertilisers are essential to have good outcomes in tropics and to a lesser extent trace nutrients. Adequate phosphate and sulphur is essential for the full functioning of winter legumes which fix nitrogen for tropical grass

pastures. High protein grass pastures are fed by soil nitrogen. In some cases it is useful to consider adding nitrogen fertilisers following poor winter growth of legumes to make up for lack of fixed nitrogen and maximise summer feed production.

The following report is an extract with some results of my research work, towards a PhD in Soil Science, undertaken at The University of Queensland. It gives a summary of some of my research with tropical grass pastures to date and the practical implications of some of the findings of this research.

The research has recently been conducted west of Boggabri on the property "Towri". The research compared the physical and chemical condition of soils in volunteer native pastures and directly adjacent tropical grass pastures. The soils were typical East Pilliga sandstone, low hills with sodic-duplex soils which had a long history of cropping from the 1880's until 1990 when they were retired from cropping and native pastures allowed to re colonise. Including preparation time for the tropical grass pastures, the site has had 14 years to develop under both pasture types making it an excellent site for comparison. The site can be treated as a long-term trial.

As with most soil investigations, soil pits were dug to 1.5 m in pairs across a fence line, each pair representing tropical and native pastures. Soils were

visually inspected and described, root abundance and ped size (natural soil aggregates) recorded and samples taken for laboratory comparison of physical and chemical attributes.

The most obvious immediate difference between the paired sites was that root abundance was much greater in the tropical pastures and they had foraged deep into the normally impenetrable B horizon of clay underneath the topsoil. Root counts showed that the tropical grass pasture had an average of 42 roots /100 cm², whilst natives had 23 roots/100 cm² down to 150 cm depth (Figure 1).

Soil structure was much improved under tropical grass pasture, however, topsoil structure under native pasture across the fence line remained hard-setting and structurally degraded (massive) even after 14 years. The topsoil under tropical grass pastures were loose and friable and had developed a fine structure of dark peds. Down the profile this trend continued, with the average ped size being greatly decreased in the B horizons.

Although no infiltration testing was carried out on site, it was fortunate that the soils were re-sampled following prolonged rain. When soil water content was determined on samples, it was clear that the tropical grass pasture had much greater soil water penetration and storage in the B horizons and that almost no water had penetrated to depth in the native pastures (Figure 2).

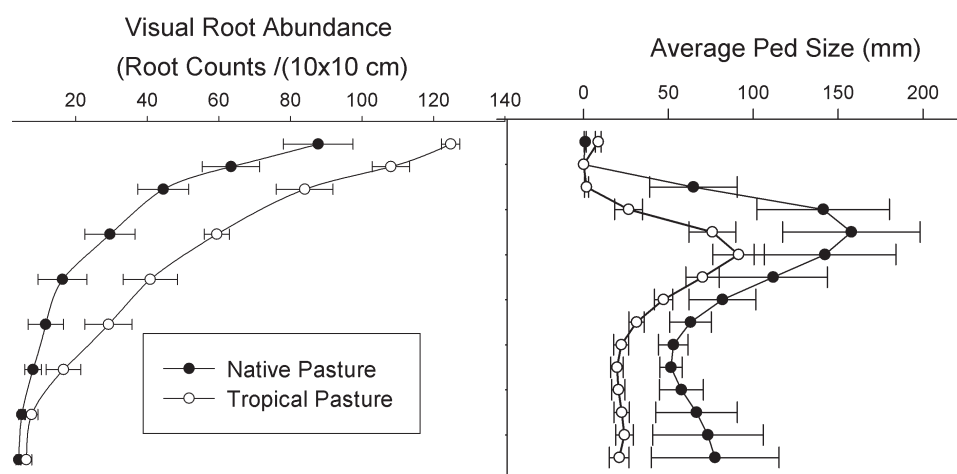


Figure 1. Whole profile differences. A) Root counts in tropical grass pasture soils. B) Aggregates in the soils under tropical grass pastures are smaller than under native pasture.

probably still going on for the foreseeable future.

Can this be achieved another way? The short answer is yes but it is prohibitively expensive and probably a temporary effect. Victorian research on sodic duplex soils shows that ripping of 20t/ha of Dynamic Lifter® into the upper subsoils can have the same effects on subsoil structure and porosity as having developed under tropical grass pastures (Gill *et al.* 2009) at "Towri". This is clearly not an option financially for most producers. Thus tropical grass pastures have an important role in soil management in sodic duplex soils. They can be grazed productively as the soil improvements are being made underneath them.

The important findings of this research work show tropical grass pastures with winter legumes can substantially improve soils with very poor soil structure and be more productive than native grass pasture (Figures 3 and 4). The changes in production from tropical grass pastures are well known. However, this current work shows that the tropical grass pastures can initiate a series of changes in soil which help to rebuild soil through the whole soil profile within the root zone. This effect is probably a feedback effect of lots of interacting physical and chemical processes which in turn allow the soil to continue to improve. The tropical grass pastures allow an opportunity to productively and profitably use degraded sodic-duplex soils which to date have proved difficult to manage on

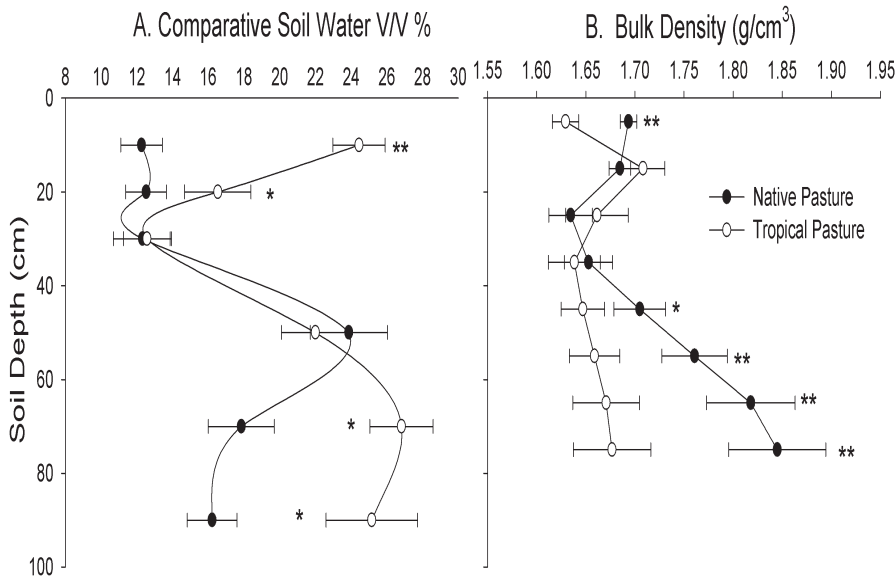


Figure 2. A) Comparison of soil water storage under tropical grass pastures vs native pastures. Note that the soil water content at 70 and 90 cm under tropical grass pasture had almost doubled compared to under native pasture. B) Bulk density (related to porosity) of surface and deep subsoil is much lower under tropical grass pasture compared to under native pasture.

Physical testing showed that the porosity of both topsoils was similar, but that the top of the clayey B horizon was far more favourable under tropical grass pasture for the passage of water down the soil profile, with a greater abundance of large pores (Figure 2). In addition to this, the subsoil even at 75 cm had a much lower bulk density. Water cannot easily move through soil with very fine pores in a dense soil and coupled with a bit of dispersion in the native pasture soils, the B horizon tended to lock up, preventing water through to the lower layers.

An examination of the chemistry showed some leaching of nitrogen and phosphorus the tropical grass pasture. Subsoil structure is regulated to some extent by biological activity, and the provision of nutrients to deeper layers in the soil allows soil fauna, fungi and roots to break up large soil structures into smaller aggregates. Soil organic carbon (SOC) was 58 t/ha (native) vs 84 t/ha (tropical grass pasture) over 90 cm depth. The greatest difference in SOC is in the top 20 cm with up to three times more SOC under tropical grass pastures versus native pastures.

Put simply, the combination of deeper roots from a more aggressive pasture which produces more dry matter appears to start something called a feedback loop of soil benefits. The roots assist in the movement of water and nutrients to deeper in the soil profile, which also assists in the development of much better soil structure. Improved soil structure means more root access and

so the process continues. The potential for roots to cycle deeper soil nutrients such as lime is being considered.

Observations of older established pastures in NW NSW indicate that the results from "Towri" suggest that the processes are not yet finished and are



Figure 3. The look at your foot test (shoe size 9). Native pasture - despite good ground cover, with standing foliage and litter, there is a lot of soil which is hard and not producing well in this photograph. Photo: R. Banks.



Figure 4. The look at your foot test (shoe size 9). Tropical grass pastures across the fence from native pasture in Figure 3 with 100% ground cover and high production.

the northern slopes and plains and to a lesser extent on the Northern Tablelands.

Acknowledgements: The author would like to thank the North West LLS, who provided funding for soil chemistry testing and Meat and Livestock Australia for providing funding the research work towards a PhD on these soil changes. Thanks also to George Avandano for access and interest, as well as Alistair Donaldson for his backhoe work and to both for their patience.

Reference

Gill, J., Sale, P., Peries, R., & Tang, C. (2009). Changes in soil physical properties and crop root growth in dense sodic subsoil following incorporation of organic amendments. *Field Crops Research*, **114**(1), 137-146.

Ian (Blue) McLean

29.11.1931 - 28.5.2017

Blue McLean was a member of the Grassland Society for many years rising to be President of the Central West Branch in Orange.

He was President of the Branch whilst running his sheep and cattle property 20 km west of Orange.

Blue had an exemplary career in the Department of Agriculture of NSW starting off at Temora and then becoming district Agronomist at Bega and later Armidale where he was an integral part of the golden era of aerial pasture improvement on the New England Tablelands.

Apart from his agricultural achievements, Blue was a wonderfully gifted sportsman. He Captained Country against City, scored 156 runs and won the match for Country. At Armidale in one cricket match he scored 165 on one Saturday and took six wickets for no runs on the following. He played golf off a handicap of two and excelled in Aussie Rules, Tennis, snooker and billiards, table tennis and many other ball games.

Blue was a strong family man reaching the stage of Great Grandparent in 2015. He was also a man who would help anyone in need at the drop of a hat.

Australia has lost one of its most solid citizens and a man who contributed greatly to the development of NSW agriculture all his life.

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Feedback sought on horse identification

Horseowners are being asked to have their say about the possible introduction of mandatory identification for all horses in NSW.

NSW Department of Primary Industries (NSW DPI) is seeking feedback via a short online survey (www.surveymonkey.com/r/HorseID) to gauge interest and support for a simple NSW horse identification scheme.

"This initiative was originally raised by NSW Police via NSW Rural Crime Investigators," said DPI Director Biosecurity & Food Safety Compliance, Peter Day.

"DPI is prepared to take the initiative forward but we would need the support of the horse industry.

"I invite horseowners to participate as their feedback will help mould the future of the equine industry.

"People can respond to the survey on the DPI website (www.surveymonkey.com/r/HorseID), on the NSW DPI Biosecurity and Food Safety facebook page (www.facebook.com/NSWDPI.Biosec/) or by completing an online survey form emailed to horse associations and groups."

Mr Day said there are many potential benefits of identifying all horses in NSW, for example by microchip with details registered in a central database.

"It could improve disease control and traceability, reduce horse theft and misrepresentation, and benefit horse welfare," Mr Day said.

"Rider and handler safety could be improved by reducing misrepresentation of a horse's history and potentially enhancing purchaser information.

"Horse attendance could be more easily recorded at events where horses gather in numbers and pose a higher than normal biosecurity risk."

Mr Day said it is not proposed that the level of traceability would extend to recording property to property movements, as required with the National Livestock Identification System for cattle.

"Any horse identification scheme would require industry support and would only be the result of industry feedback," Mr Day said.

"Responses to the survey questions will help guide us towards the most practical and useful way to record the identity and location of horses.

"This could be the registration of a unique horse identifier, place of residence, owner's contact details, any change of residence and the death of a horse.



"It would be a big boost to the biosecurity capability of NSW to know where horses are located in the event of a flood, fire or emergency disease outbreak, such as the Equine Influenza epidemic in 2007."

Currently the requirement in NSW is that horse owners must obtain a property identification code (PIC) (www.dpi.nsw.gov.au/animals-and-livestock/nlis/pic) for the land on which horses are kept, but some properties with horses don't have a PIC.

Submit your feedback:

The survey (www.surveymonkey.com/r/HorseID) is available to fill out online and it should take no longer than 15 minutes to complete. The survey is open until 1 December 2017.



Local Land Services Central Tablelands

DPI research boosts lamb production 20 per cent

NSW Department of Primary Industries (DPI) research has shown graziers can increase pasture growth, stocking rates and lamb production per hectare by 20 per cent or more.

As part of the EverGraze program, DPI researchers developed key findings for graziers by investigating grazing management intensity and interactions with landscape variability to reflect real livestock production systems. NSW DPI rangelands and tropical pastures leader Warwick Badgery said the trial near Orange compared continuous grazing on one paddock, rotational grazing on four paddocks and short-duration rotational grazing on 20 paddocks to determine the best balance for graziers.

"Increasing grazing management intensity from one-paddock to a 20-paddock system lifted pasture growth by 21 per cent, which allowed stocking rates to be increased by 22 per cent and lamb production by 20 per cent," Dr Badgery said.

"It is important to note whole-farm profitability of the 20-paddock system was lower than the other systems due

to the higher infrastructure costs and a flexible approach to suit conditions was best."

Key findings from EverGraze showed while seasonal variability had a greater impact on profitability than grazing management strategies and systems, the right grazing management strategy could help cushion the impact of climate. Flexible management reduced grazing pressure to prevent pasture falling below critical benchmarks of 80 per cent ground cover and 0.8 tonnes of dry matter per hectare of standing biomass.

Increased grazing management intensity also resulted in higher herbage mass and ground cover, with differences most pronounced in high production zones on the lower slopes, where selective grazing was regulated through grazing management.

Modelling strategies showed flexible management options were best based on optimising ewe numbers and sale time of lambs, as pasture degradation occurred more often when ewe numbers were increased than when grazing lambs were sold at greater weights.



NSW Department of Primary Industries researcher Dr Warwick Badgery inspects the EverGraze research trial with grazier and trial advisory panel member Johns Rowlands and NSW DPI researcher Dr Felicity Cox.

The value of the findings is marked in a special issue of *Animal Production Science* (57:9) (refer to list of paper titles in Research Update below), which highlights the systems nature of EverGraze work conducted by NSW DPI.

Evaluation of EverGraze from 2009 to 2014 showed that the national research program at Orange and five other sites resulted in 1130 producers making changes to grazing management, covering an area of 617,300 hectares.

Research Update

Keeping you up-to-date with pasture and grassland research in Australia. Abstracts of recently published research papers will be reprinted as well as the citation and author details in you wish to follow up the full paper.

Animal Production Science - Volume 57 Number 9 2017

RESEARCH FRONT: Orange EverGraze proof site

Foreword: 'Orange EverGraze proof site' - Warwick Badgery and Wes Brown

Balancing animal, pasture and environmental outcomes in grazing management experiments - D. L. Michalk, W. B. Badgery and D. R. Kemp

Designing a grazing-system experiment for variable native pastures and flexible lamb-production systems - W. B. Badgery, D. Mitchell, G. D. Millar, K. Broadfoot, D. L. Michalk, P. Cranney and W. Brown

In a native pasture, landscape properties influence soil moisture more than grazing management - D. C. Mitchell, W. B. Badgery, P. Cranney, K. Broadfoot, S. Priest and D. Pickering

Increased production and cover in a variable native pasture following intensive grazing management - W. B. Badgery, G. D. Millar, K. Broadfoot, D. L. Michalk, P. Cranney, D. Mitchell and R. van de Ven

Seasonal diet selection by ewes grazing within contrasting grazing systems - Felicity Cox, Warwick B. Badgery, David R. Kemp and Gaye Krebs

The intensity of grazing management influences lamb production from native grassland - W. B. Badgery, G. D. Millar, D. L. Michalk, P. Cranney and K. Broadfoot

Post-experimental modelling of grazing systems to improve profit and environmental outcomes using AusFarm - K. M. Broadfoot, W. B. Badgery and G. D. Millar

Assessing the profitability of native pasture grazing systems: a stochastic whole-farm modelling approach - Martin R. Amidy, Karl Behrendt and Warwick B. Badgery

Synthesis of system outcomes for a grazing-management experiment in temperate native pastures - W. B. Badgery and D. L. Michalk

Animal Production Science

<http://www.publish.csiro.au/an/issue/8282>



Pasture data now at producers' fingertips

For the first time, southern livestock producers will have access to quantitative data about the performance of pasture varieties at their fingertips, with the launch of the Pasture Trial Network (PTN) website at the Grassland Society of Southern Australia Annual Conference in Nagambie, Victoria.

The website – tools.mla.com.au/ptn – will see seasonal dry matter performance data delivered through a website, giving producers unrivalled access to independent pasture information that will contribute to increasing the competitive advantage of pasture-based industries.

It is the culmination of more than 10 years' work by Meat & Livestock Australia (MLA) forming a partnership with all major pasture seed companies, developing research protocols, and undertaking trials to deliver meaningful data to producers to help with their pasture variety decisions.

MLA's Feedbase Program Manager, Cameron Allan, said the PTN program has the potential to increase producer confidence in superior pasture genetics, which could have a flow-on effect both in terms of livestock performance and greater investment in development and adoption of improved pasture varieties.

"We want livestock producers and their advisors to be equipped to make informed and confident decisions about selecting pasture varieties with superior genetics," Mr Allan said.

"The two primary drivers of livestock productivity are the quality of the animal and the quality of the feedbase, which provide the platform for livestock to reach their genetic potential.

"There has been significant investment in improving the genetics of livestock in Australia. The impact of this investment is clearly demonstrated through the broad producer adoption of programs such as LAMBPLAN and BREEDPLAN that

deliver objective information to assist decision making.

"The PTN is about working towards the same endpoint of objective data supporting decision making."

Mr Allan said the approach of livestock producers to adopting superior animal genetics had not been matched by a similar level of improvement within the pasture feedbase.

"Livestock producers are often reticent to adopt new pasture varieties that exhibit superior genetics and performance, in part because producers and their advisors often lack the confidence to transition into new pasture varieties," Mr Allan said.

"This lack of confidence is perhaps driven in part by either a lack of variety performance data that is comparable to support a decision, or a lack of confidence in the data available.

"This is not the case with livestock genetics, where there is a plethora of substantive, independently-verified comparative data relating to livestock performance."

Mr Allan said the lack of confidence on behalf of producers can create a lack of incentive for investment in better plant genetics.

Australian Seed Federation (ASF) Chief Executive Officer, Bill Fuller, said Australia's pasture seed supply industry has many parties with a stake in the sale of seed.

"There are numerous seed companies, each with their own portfolio of products to sell, along with a number of large and small wholesale companies," Mr Fuller said.

"The ASF pasture database - www.asf.asn.au/seeds/pasture-seed-database/ - highlights the vast array of products that

producers and advisors are confronted with when making a decision relating to seed selection.

"There are also numerous corporate and independent retailers, each with unique relationships with seed suppliers.

"While seed companies do a lot of their own trialling and often test the lines of other companies, they do not share data."

The PTN aims to overcome this 'closed-shop' approach, and seek to be much more cost efficient for all.

Mr Fuller said while the ASF Code of Practice sets out standards relating to the reporting of trials that all ASF members abide by, the highly competitive nature of the industry contributes to the perceived loss in producer confidence in the information presented to them.

"With transparent industry involvement in the PTN we are seeking to increase productivity growth to benefit livestock producers and supply chain stakeholders," Mr Fuller said.

The PTN aims to:

- support producers to make decisions based on objective data that meets their needs
- increase confidence with purchasing decisions
- use improved statistical analysis towards genetics by production regions with control lines so producers can get the best idea of performance of lines in their location.
- At an operational level, the PTN aims to improve the delivery and deployment of new pasture varieties through improved efficiencies and testing, which will help facilitate more effective R&D investment.



MEAT & LIVESTOCK AUSTRALIA

From the President

What a difference 12 months can make. This time last year much of the state needed a snorkel to move anywhere, now there is plenty looking skywards in hope, as conditions are getting very dire in many areas. The north east and very south of the state seem to be the anomalies, which is good that at least someone is getting a season. The very sharp frosts are hanging around, and certainly not helping the soil temperature or soil moisture levels either.

Since last I wrote, the 30th Conference of the Grassland Society of NSW Inc., titled "Your system – Taking it to the next level" was held, in Cowra on July 25th and 26th 2017. This was the first of the 'biennial' conferences, following member feedback that every second year would be a better format, and what a success it turned out to be. By comparison to previous conference numbers, the 2017 delegate numbers were up 30%. A very comprehensive program was compiled by the organizing committee, and this along with good market prices across all of the grazing industries at the time, contributed strongly to the attendance.

The program contained themes and papers on;

- 'The big picture' – MLA's Richard Norton and Uni of Melbourne's Bill Malcolm,
- Filling the feed gap, grazing cereals and potential 'perennial' crops,
- Opportunities in legumes, native pastures, alternative fertilisers and ameliorants,
- Technologies; drones, dse potential and EID's, and
- Meat quality and ewe pelvimetry.

These were presented by Producers (the next generation of), Industry, and researchers and extension personnel from the University of Melbourne, Cowra Research Station, NSW DPI, Local Land Services and Agriculture Victoria.

Attended by approximately 200 farmers, agronomists, and industry personnel, delegates were also able to attend one of three bus tours to regional farming activities. Tours towards Mandurama/ Woodstock, Cowra/Greenethorpe and Gooloogong/Canowindra gave delegates the opportunity to see lamb, beef, legume

alternatives, forage conservation and dairy, on farm with producers who very kindly opened their properties for our benefit. Much discussion was generated on all tours, with the conference dinner that evening enabling much networking and further discussion.

The "Pasture Updates" program is in full swing. Tooraweenah (October 10th) and Bathurst (October 11th) are being planned as I write, and plans for others in NSW are being finalised. Please keep an eye on the web site for the next "Pasture Update" near you.

I hope the rain comes sooner rather than later, even for the cropping folk in much of NSW. I look forward to talking with members and guests at some of the pasture updates later this year.

All the best,
Regards,
David Harbison,
President.



NEW MEMBERS

The Grassland Society of NSW welcomes new members

Mike McKenzie, Yass River; Sandy Biddulph, Cootamundra; Patrick Armstrong, Hobbys Yards; Anthony Duggan, Oberon; Tom Brewer, Tarcutta; Sarah Baker, Forbes; Kate Byrne, Forbes; Sarah Cavanagh, Chatswood; Clark Livestock, Lyndhurst; Rod Hoare, Binda; Max Vowell, Orange; Ross Graham, Cowra; Rose Mannion, Forbes; Tom Davison, Fortitude Valley; Tim Tarlinton, Wagga Wagga; Christine Ferguson, Bourke; Greg Paul, Eugowra; Peter Johnson, Truganina; Glen Uebergang, Inverell; Peter Arden, Blayney; Kieran Hawker, Cowra; Sally Jones, Griffith; Keith Hyde, Boorowa; Derrek Dedoncker, Cowra; Richard Campbell, Cowra; James Millner, Blayney; Pat Clowry, Manildra; Tom Gunthorpe, Kangiara; Will Storrer, Hillston; Matt Bowden, Cudal; Warren Scheetz, Culcairn; Michael Payten, Canowindra; Noel Mckay, Billimari; Greg Bramley, Wingello; Dave Mcgregor, Crookwell; John Poole, Woodstock; Paul Cusack, Cowra; Rob Harborne, Murrumbateman; Hartley Wilson, Forbes; Peter Sykes, Humula; Mitch Small, Cowra; Luke Comiskey, Maryvale and Chrissy Brown, Mudgee.



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Inclusion of an advertisement in this publication does not necessarily imply an endorsement of the company or product of the Grassland Society of NSW.

The Grassland Society of NSW Inc is a unique blend of people with a common interest in developing our most important resource - our Grasslands

The Grassland Society of NSW was formed in March 1985. The Society now has approximately 500 members and associates, 75% of whom are farmers and graziers. The balance of membership is made up of agricultural scientists, farm advisers, consultants, and or executives or representatives of organisations concerned with fertilisers, seeds, chemicals and machinery.

The aims of the Society are to advance the investigation of problems affecting grassland husbandry and to encourage the adoption into practice of results of research and practical experience. The Society holds an annual conference, publishes a quarterly newsletter, holds field days and is establishing regional branches throughout the state.

Membership is open to any person or company interested in grassland management and the aims of the Society. For membership details go to www.grasslandnsw.com.au or contact the Secretary at secretary@grasslandnsw.com.au or at PO Box 471 Orange 2800

Office Bearers of the Grassland Society of NSW - 2016-2017

State Executive

David Harbison (President)
Nathan Ferguson (Vice President)
Janelle Witschi (Secretary)
Frank McRae (Treasurer)
Mick Duncan (Immediate Past President)
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John Coughlan (Central)
John Ive (Southern Tablelands)
Mick Duncan (Northern Tablelands)
David Harbison (Central West Slopes and Plains)
Nathan Ferguson & Helen Burns (South Western Slopes & Riverina)

If you are interested in reactivating an old branch or forming a new branch please contact the Secretary at secretary@grasslandnsw.com.au or by mail at PO Box 471 Orange NSW 2800

Grassland Society of NSW Snippets



Next Newsletter: The next edition of the newsletter will be circulated in December 2017. If you wish to submit an article, short item, a letter to the Editor or a photo please send your contribution to the Editor - Carol Harris at carol.harris@dpi.nsw.gov.au or DPI NSW 444 Strathbogie Road Glen Innes 2370. The deadline for submissions for the next newsletter is Monday 8th November 2017.



Electronic newsletter: Don't forget you can receive the Grassland Society of NSW newsletter electronically. Just email your details to Janelle (secretary@grasslandnsw.com.au) and you will be added to the list. Next newsletter you will receive an email notification with a link to the newsletter on the website.



Fan of Facebook - make sure you check out the Grassland Society of NSW Facebook page. You can either search for GrasslandNSW or access the Facebook page through our web site. Pasture Update details will be posted on the Facebook page as well as the website. Please feel free to Like Us, as well as post photos of pasture and/or related topics in your area.

Grassland Society of NSW - PO BOX 471 Orange NSW 2800, www.grasslandnsw.com.au

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