



GRASSLAND SOCIETY OF NSW INC.

Newsletter

Well 2016 is nearly done and dusted - I know I sound like a broken record, but where did the year go? I hope you enjoy the last issue of the Grassland Society of NSW newsletter for the year.

Thank you to all of you who have contributed to the newsletter over the past 12 months - your input has been greatly appreciated and made my job a bit easier. As always, in 2017, I would welcome your letters, emails, articles or article suggestions. Please see submission details and closing date for Issue No 1 in 2017 on page 12.

The Grassland Society of NSW Pasture Update series continues

to grow from strength to strength with two very well attended events in October (reports on page 2-3). Planning is already underway for a Pasture Update in February-March 2017 on the Northern Tablelands so keep an eye on the website for more details. Also planning is underway for the 2017 conference - see "Save the Date" notice on this page.

As we move into the warmer months don't forget to get prepared for the bushfire season and make your bushfire survival plan now. Go to the Rural Fire Service website www.myfireplan.com.au for some useful tips. Also don't forget to keep an eye out for snakes as well - they

seem to be very active so far this season.

Have you paid your Grassland Society of NSW membership subs yet? If not, it is now easier than ever to do so online at the Grassland Society of NSW website - access our Payments page via the green "Join Now" button on the right hand menu and follow the prompts.

I hope you and your families get a chance to have a restful and peaceful break over the holiday period.

Merry Christmas and Happy New Year – 2017 here we come.

*Carol Harris,
Editor*

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SAVE THE DATE

Grassland Society of NSW

2017 Conference

Your System - Taking it to the next level

COWRA - July 25-26 2017



Keep an eye on the website, Facebook and future issues of the Grassland Society of NSW newsletters for further details.

Pasture Update Reports

“Invest in soil health now!” was the message to farmers at the Manildra Pasture Update

There was a great crowd of close to 60 people at the Meat and Livestock Australia (MLA) sponsored Grassland Society of NSW Pasture Update held at Manildra on Thursday 13th October. The event's first speaker, Cameron Allen from MLA, outlined MLA's current research into pastures and livestock systems, highlighting the need to invest in Phosphorus efficient pastures.

Belinda Hackney, Senior Land Services Officer from Central West Local Land Services discussed the importance of legume nodulation to increase the organic Nitrogen supply in Central West Soils.

Results from the 2015 legume survey showed 90% of paddocks had inadequate nodulation and more than 20% had no nodules at all, Dr Hackney said that “while nodulation was poor, 70% of nodules tested contained the current commercial strain of rhizobia but that rhizobia could not perform its function effectively because of a combination of low soil pH, inadequate soil nutrition (particularly sulphur) and in some cases the impact of residual herbicides”.

The producers heard about current soil and pasture health conditions in the area from local commercial agronomists, David Harbison from D R Agriculture Pty Ltd and Ross Yelland from Yellco Ag.

Mr Harbison said that “producers need to find the biggest hole in their soil health bucket and address that first. It might be liming to address low pH, a range of fertiliser top dressing products to address low Phosphorus and/or Sulphur, or even a physical or biological issue that needs to be addressed.

Phil Cranney, Senior Land Services Officer Pastures, from Central Tablelands Local Land Services said that “producers had to wait 2 months or more to receive the Lime that they ordered earlier in the year. However, there is little or no wait time at present and if soil conditions are firm enough to take a spreader, then now is as good a time as any to spread lime”.

Chair of the Grasslands Society of NSW, David Harbison, said that “the

updates have been a great vehicle to communicate the MLA research that has been happening locally. The researchers, be it government or commercial, can deliver their results at these pasture updates, because at the end of the day it's the producers that will be adopting the latest research, not the consultants or Local Land Services.”

Producers wanting to get more information should visit the Grasslands Society of NSW website www.grasslandnsw.com.au

Central Tablelands Local Land Services staff can provide independent advice to producers and support adoption of research into improved methods of increasing the triple bottom line.

For more information on Pastures, please call Phil Cranney at the Orange Office on 02 6363 7888 or Clare Edwards at the Mudgee Office on 02 6378 1700.

Grassland Society Tamworth Pasture Update 2016

With good winter rain setting the scene for a positive summer, over 115 producers and advisers in the North West attended a Pasture Update at Tamworth Friday 28 October.

With good spring rainfall across many parts of the region there is increased confidence in pastures along with good cattle prices. This has meant that people are keen to maximise production from their pastures while managing for persistence and sustainability.

The event was hosted by the Grassland Society of NSW and supported by NSW Department of Primary Industries, North West Local Land Services, Meat and Livestock Australia's (MLA) and Southern Australia Meat Research Council (SAMRC).

Attendees travelled from across the North West and from as far away as Gwabegar, Pilliga, Inverell, Walcha, Upper Hunter, and Merriwa/Coolah.



▲ Attendees inspecting AusWest lucerne trial at Manildra Pasture Update.



▲ Inspecting the AusWest pasture trials at the Manildra Pasture Update.



◀ Inside session kicks off at the Tamworth Pasture Update



◀ Belinda Hackney (Central West LLS) discussing temperate annual legumes with attendees at the Tamworth Pasture Update



◀ Inspecting a tropical grass pasture at Goonoo Goonoo Station at the Tamworth Pasture Update

marketing, research, development and adoption activities.

The Pasture Update provided the opportunity for researchers to outline some of the new developments in pastures and pasture management and the opportunity to see some of the successes of this work. Suzanne Boschma (NSW DPI) outlined new work looking at tropical grass and tropical legume mixes, while Belinda Hackney (Central West LLS) spoke about her work on temperate annual legumes – both of which were on display during the field visit at the Tamworth Agricultural Institute.

A farm visit to Goonoo Goonoo Station was enjoyed including lunch on the cricket pitch. This was followed by a visit to inspect tropical grasses and hear from owner Tony Haggarty on how he integrated tropical grasses into their red meat production system. This was followed with further discussion by attendees on tropical grass management. Gavin Peck (QDAF) also led a discussion on pasture run-down and options for pasture rejuvenation and the essentials for productive pastures.

The day provided a great opportunity to listen to extension specialists, scientists and producers give their advice on topics related to livestock, legumes, tropical pastures and their rejuvenation. It was impressive to see the number of agricultural advisers present.

Lester McCormick, Grassland Society of NSW, thanked, the sponsors, all those who attended, the speakers for their input as well as those who had assisted in organising the day. A special thank you was made to George Truman, Mixed Farming Officer, North West Local land service for his role in effectively coordinating the day.

There was a great range of topics with the morning session held inside, followed by a field tour in the afternoon. Special guests on the day were Hon Kevin Anderson (Member for Tamworth), Senator John Williams (Nationals Senator for NSW) and Pam Welsh (Regional Director of NSW

Department of Industry). MLA and SAMRC were represented by Michael Crowley (MLA) and Tom Amey (SAMRC). Both were keen to be involved in the update as they were seeking landholder input into future research and development priorities, as well as providing feedback on

For more information about the Pasture Update at Tamworth please contact Lester McCormick mccormicklester@gmail.com or George Truman george.truman@lls.nsw.gov.au



Producing store lambs on a *Microlaena stipoides* dominated pasture – the impact of grazing management and stocking rate

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Abstract: The production of lambs from native grass dominated pastures in south-eastern Australia is being considered for some sheep enterprises. To determine the effectiveness of producing lambs on native pastures, a large scale grazing experiment on *Microlaena stipoides* dominated pasture, was conducted at Chiltern, Victoria, over three lambing seasons. The site consisted of twelve 3 ha plots, fenced and allocated to the treatments, according to topography and location, within the landscape. Merino ewes were joined to terminal sires with lambs sold at weaning. The four treatments consisted of 1) high stocking rate, tactical rotational grazing, 2) high stocking rate, rotational grazing, 3) high stocking rate, set stocked, and 4) low stocking rate, set stocked. For the set stocked treatments, in two out of three years higher stocking rates gave greater lamb production per hectare than lower stocking rates. Rotationally grazed treatments with higher stocking rates did not always exhibit increased lamb production per hectare, compared to set stocked treatment with lower stocking rates. This was due to a trend whereby lower stocked treatments exhibited increased per head animal performance. The most profitable lamb production system will be one that balances animal performance from a lower stocking rate with greater lamb production per hectare of the higher stocking rate.

Key words: live weight, native pastures

Introduction

Native pastures in southern Australia have traditionally been used for wool production from Merino wethers. Native pastures, defined as any pasture where native grasses are the main perennial component (Crosthwaite and Malcolm 2001), occupy about 3.1 million hectares (22%) of the agricultural area of south-eastern Australia (Hill *et al.* 1999). Much of this area has soils that are shallow, low in phosphorus (P), acidic ($\text{pHCaCl}_2 < 5.5$) and are considered non-arable (Simpson and Langford 1996); therefore are unsuitable for the sowing of introduced species.

There has been an increase in the production of store lambs from joining merino ewes to terminal sires. However, there is limited information available in the literature on lamb production from native pastures. Rotational grazing of native (Michalk *et al.* 2003) or introduced (Saul *et al.* (2011) pastures has inconsistently resulted in higher lamb live weights or total kg of lamb/ha, despite higher stocking rates, when compared to continuously grazed treatments. This is in agreement with a review by Briske *et al.* (2008) who found that in 92% of 38 studies there was no increase in per head animal performance from rotational versus continuous grazing, and that in 84% of 32 studies there was no increase in production per unit area.

This experiment was conducted as part of the EverGraze® project (Avery *et al.* 2009). It was hypothesised that: (1) rotational grazing would not necessarily result in increased lamb production; and (2) that lambs stocked at a lower stocking rate would have higher per head, but lower per hectare production than lambs stocked at higher stocking rates.

Method

Experimental design and treatments

The experiment was conducted between 2008 and 2011, over three lambing seasons. The site was located in south-eastern Australia, Chiltern, Victoria (S36°12', E146°35'), with an annual median rainfall of 682 mm.

Within an area of native pasture (approximately 81 ha), twelve 3 ha plots were fenced and allocated to the treatments, according to topography and location, within the landscape. The four treatments consisted of 1) High Stocking rate, tactical Rotational Grazing (HSxRGt) - Simple four sub-plot rotation (as HSxRG); with the exception of lambing to marking, when animals are set stocked, 2) High Stocking rate, Rotational Grazing (HSxRG) - Rotational grazing using 4 sub-plots, grazed for 2 weeks and rested for 6 weeks, 3) High Stocking rate, Set Stocked (HSxSS), and 4) Low Stocking rate, Set Stocked (LSxSS). The pasture was predominately

Microlaena (*Microlaena stipoides* [Labill.] R.Br) (40% DM) based but also included sweet vernal grass (*Anthoxanthum odoratum* L.) (26% DM), silver grass (*Vulpia* sp. K.C. Gmel.) (8% DM), pigeon grass (*Setaria* sp. P.Beauv.) (8% DM), wallaby grass (*Rytidosperma* spp. Steud.) (5% DM), fog grass (*Holcus lanatus* L.) (4% DM), spear grass (*Austrostipa* spp. S.W.L.Jacobs & J.Everett) (4% DM), sorrel (*Acetosella vulgaris* Fourr.) (4% DM) and subterranean clover (*Trifolium subterraneum* L.) (1% DM).

In years 1 and 2 stocking rates were 2 and 3 ewes/ha for the low and high stocking rate treatments respectively, in year 3 in response to summer rain and feed on offer, stocking rates were lifted to 3 and 5 ewes/ha.

Animal production

Large framed, dual-purpose Merino ewes, on their second parity at the start of the experiment, were used for Years 1 and 2. In Year 3, younger replacement ewes of the same bloodline were used. Ewes were allocated to the treatment balanced for pregnancy scanning results. At lambing; birth weight, sex, birth status (single or multiple), dead or alive and dam were recorded. All live lambs were ear tagged, with individual numbers and live weights recorded at marking (approximately 1 to 2 weeks after completion of lambing) and every 2 to 4 weeks thereafter, until weaning when sold at an average age of 12 weeks.

Statistical analysis

Lamb birth, marking, weaning weights and average daily growth rate were calculated on a per plot basis and presented on a per head basis. Weaning weight data was also presented on a per ha basis. This was calculated from the total weights for all the lambs in each plot expressed as kilograms per hectare. These data were calculated for each year independently.

For each year, lamb birth, marking, weaning weights and average daily growth rate were analysed in REML as opposed to the standard ANOVA, due to the complex data structure when lambs were grouped by sex, birth type and plots. The model fitted was treatments + sex +

birth type. Per ha lamb production data for each year was analysed using ANOVA appropriate for a completely randomised design (CRD), with a permutation test using the default 9999 iterations. All statistical analyses were performed in GenStat 15 (Payne *et al.* 2010).

Results

Lamb live weight and per ha production
There were no effects of treatment on lamb live weight gain in Year 1. Lambs on LSxSS grew faster ($P < 0.05$) than those on HSxRGt in year 2; and faster than HSxRG in years 2 and 3 (Table 1). There were no significant treatment effects on birth, marking or weaning weights in any year. At the higher stocking rates of HSxSS, HSxRG and HSxRGt lamb weaning weights were not significantly affected by the grazing management strategy.

The amount of lamb produced per hectare was greater ($P < 0.05$) in HSxSS than LSxSS in Years 1 and 2, and tended to be greater in Year 3 (Table 2). In Year 1, HSxSS had greater ($P < 0.05$) per ha production than HSxRG and HSxRGt, but was not repeated in subsequent years. In Year 3, there were no significant treatment differences in per ha lamb production.

Discussion

Grazing Management

The hypothesis that rotational grazing would not necessarily improve lamb production was supported in the years in which this experiment was conducted. There were no significant differences in lamb growth rates between HSxSS, HSxRG and HSxRGt; however, there were only differences in amount of lamb produced (kg) per hectare in some years. Our findings of no improvement in animal production associated with different grazing management regimes of native pastures has also been reported for a native pasture (*Bothriochloa macra*) (Roe *et al.* 1959), and introduced species phalaris (Chapman *et al.* 2003) and subterranean clover (Lloyd Davies and Southey, 2001). Lloyd Davies and Southey (2001) found grazing management had no significant impact on the percentage of lambs reaching 30 kg (the considered marketable live weight target) or carcass weight produced (kg/ha). We found that in two out of three years, HSxSS tended to have higher lamb weaning weights than either of the rotationally grazed treatments.

The HSxSS treatment tended to produce more lamb per hectare in all experimental years, and had significantly greater lamb production than HSxRG and HSxRGt in Year 1. These findings are in

Table 1 Average Lamb birth, marking, weaning weights (kg) and ADG (average daily growth rate g/day) for LSxSS, HSxSS, HSxRG and HSxRGt (where LS is lower stocking rate, HS higher stocking rate, SS set stocked, RG rotationally grazed and RGt tactical rotational grazing).

TREATMENT	BIRTH	MARKING	WEANING	ADG
Year 1				
LSxSS	5.4	12.7	32.2	330
HSxSS	5.5	13.9	34.0	346
HSxRG	6.1	13.8	32.4	323
HSxRGt	5.4	12.5	30.6	285
LSD (5%)	0.81	3.55	9.42	95.8
Year 2				
LSxSS	5.9	20.9	42.2	326 a
HSxSS	5.3	18.7	37.1	282
HSxRG	5.1	16.7	35.9	274 b
HSxRGt	5.5	17.7	35.9	271 b
LSD (5%)	0.86	4.34	6.48	44.9
Year 3				
LSxSS	4.4	10.4	31.7	239
HSxSS	4.7	10.6	31.0	229
HSxRG	4.6	11.0	28.3	203
HSxRGt	4.4	11.0	29.4	208
LSD (5%)	0.64	2.15	3.93	31.2

Within a year means with different letters are significantly different at $P = 0.05$

agreement with Michalk *et al.* (2003), who reported that tactical grazing reduced lamb production (kg/ha) compared to continuous grazing, of native pastures. In that study, tactical grazing of native pastures included a period of deferment over summer, as well as reduced stocking rates at a winter DM threshold of 1000 kg DM/ha. It is possible, that the reported decrease in per ha production of tactically grazed treatments was in response to a reduced stocking rate associated with experimental triggers, as per head production was in fact slightly higher in tactically grazed treatments.

The results indicate that within the confines of this experiment, there is little benefit from a livestock production perspective, in rotationally grazing native pastures. As previously described, animal production on a per hectare basis is potentially increased in the set stocked regimen. The results presented show no difference in lamb weaning weights, and inconsistent differences in production, between set stocked and rotationally grazed production systems at the same stocking rate. While there were variable differences in lamb production from set stocking compared to rotational grazing under this management structure, it does not follow that the same relationship will hold for a different rotational system. Under a different rotational grazing system based on plant lifecycle and

animal requirements (as opposed to a time based rotation), rotational grazing may prove to be more advantageous as it may allow for an increase in stocking rates, thus improving pasture utilisation.

The finding that there was no significant increase in lamb production associated with rotational grazing is in agreement with our first hypothesis.

Stocking rate

In partial contrast to our second hypothesis, lambs from LSxSS did not have significantly heavier weaning weights than lambs from the higher stocked treatments. However, the higher stocking rates of HSxSS resulted in HSxSS having significantly ($P < 0.05$) greater levels of lamb production per ha than LSxSS in Years 1 and 2. Given the higher stocking rate treatments did not see a reduction in per head live weights of lambs, may be indicative that our rates were set too low and failed to fully test the system, and while it was not measured, it is likely that there has been a low level of pasture utilisation. In this case the potentially considerable costs associated with establishing infrastructure needed for rotational grazing, beyond that needed for fencing to land capability would not have been warranted.

While it would be preferable to test a greater number of stocking rates, and thus generate a response curve, the

Table 2 Lamb produced (weight, kg) per hectare in years 1, 2, and 3 at weaning for LSxSS, HSxSS, HSxRG and HSxRGt (where LS is lower stocking rate, HS higher stocking rate, SS set stocked, RG rotationally grazed and RGt tactical rotational grazing).

TREATMENT	YEAR 1	YEAR 2	YEAR 3
LSxSS	96.3 a	49.3 a	69.6
HSxSS	136.8 b	91.1 b	84.8
HSxRG	106.7 a	77.9 b	89.7
HSxRGt	114.9 a	87.1 b	90.1
LSD (5%)	18.71	14.74	35.06

Within a year means with different letters are significantly different at $P=0.05$

ability to test more than two stocking rates within the context of a paddock scale research project, on a commercial property was not possible. Logistics and cost constraints dictated that within the experimental methodology only the two stocking rates outlined could be tested.

While the use of higher fertiliser inputs is a viable means of increasing farm profitability through increased carrying capacity (Crosthwaite and Malcolm 2001), it is not without the added costs associated with the additional fertiliser and may suffer a period of short term operating loss, while stocking rates are increased. While supported by higher fertiliser applications, GrassGro modelling of higher stocking rate systems on native pastures (data not presented) indicates a greater requirement for supplementary feeding, associated with increased periods of reduced pasture cover.

Our second hypothesis was partially supported by our findings. While lambs from low stocking rate treatment did not have greater weaning weights than those from high stocking rates, in Years 1 and 2 per ha production of HSxSS was greater than that of LSxSS. However, the rotationally grazed treatments of HSxRG and HSxRGt did not consistently offer significantly greater per ha performance than LSxSS.

Conclusion

That there was no significant increase in lamb production associated with rotational grazing is in agreement with our first hypothesis. In partial contrast to our second hypothesis, the lower stocking rate did not significantly increase per head animal performance, however, in agreement with this hypothesis, lamb production in HSxSS was greater than that of LSxSS in two of the three years. The rotationally grazed treatments of HSxRG and HSxRGt did not consistently offer significantly greater overall animal performance than LSxSS.

Despite there being no treatment effects on lamb weaning weights, the experiment does show that it is possible to produce acceptable store lambs from a native pasture system. This is in agreement with both Michalk *et al.* (2003) and Holst *et al.* (2006) who found that lambs produced on native pasture systems were unable to reach a target carcass weight of

18-22 kg and that while lambs reached 33-36 kg at weaning, due to nutritional limitations it was not possible to get them to slaughter specifications.

Acknowledgements

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Temperate perennial pasture establishment guide now available online

A comprehensive guide to the establishment of perennial pastures is now available on the NSW Department of Primary Industries (DPI) website. It offers producers proven strategies to successfully grow productive and persistent pasture that will deliver a return on investment now and into the future.

This how-to guide is based on years of proven pasture and livestock research and incorporates many of the principles in DPI's very successful Prime Pastures Program, ProGraze® and Landscan®, and also includes results from recent research.

The guide presents a structured approach to planning and paddock preparation that will help producers identify constraints that may limit establishment, which must be addressed on a paddock by paddock basis, well in advance of sowing. The emphasis is on forward planning and management up to two years before sowing and during the first year of pasture growth.

It revisits the Prime Pastures' eight step checklist, with clear guidelines for the planning process, sowing and management during the critical establishment period. Topics covered include tips on paddock assessment, species selection, nutrition, weed and pest management, cover cropping and grazing management.

Although the guide focuses on establishment of new pasture, producers are also encouraged to consider renovation of existing pasture as an alternative to completely re-sowing paddocks. The guide provides fertiliser and grazing management strategies that can invigorate established pasture at a fraction of the cost of sowing new pasture.

Farming Together

The Farming Together initiative is a \$14.9 M national, two year campaign for primary producers and processors to collaborate and claim marketplace power.

This federal Government initiative aims to build financial and societal sustainability across Australia's primary producers.

Farming Together aims to:

- Improve knowledge of how co-operatives, collective bargaining and supply chain negotiations can improve farmers' returns.
- Improve the knowledge of options available to farmers and farm advisors regarding such innovative business models including various forms of collaboration
- Improve the agriculture focused legal and financial expert advice available regarding the process,

implementation and management of such business models

What's in it for you?

Your great idea gets personalised feedback by a business expert. If your idea shows promise, it will be considered for Farming Together funding to help bring your idea to fruition. Funds can be used for product marketing, consultancy and research and development.

What's the process?

Register online with your idea to kick-start your concept and we'll get back to you by the close of the week. You need to be an Australian citizen farming to ATO-recognised guidelines.

Visit www.farmingtogether.com.au to complete a simple self assessment.

Want to know more? Phone Andrew or Nick on 1800 005 555 or email info@farmingtogether.com.au

Merino Superior Sires New edition now available

Merino Superior Sires, the annual publication of the Australian Merino Sire Evaluation Association (AMSEA) has been released on the Merino Superior Sires website and can be downloaded now at www.merinosuperiorsires.com.au

In this year's edition, in addition to the three standard industry indexes that are reported, you will find a new wool focused index. This additional index, called the Wool Production Plus index (WP+) is a direct outcome of sire evaluation entrants requesting an index that better reflects many of their breeding objectives – to breed sheep with more wool. More information about this index can be found within Merino Superior Sires.

To find out more about Merino Sire Evaluation and read the latest results,

go to the download reports section of www.merinosuperiorsires.com.au.

Hard copies of Merino Superior Sires are being distributed in the near future. If you do not normally receive a copy and would like to, or have any questions in relation to Merino Superior Sires, please contact:

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AusWest | SEEDS

How to manage grass seeds

There are no easy answers to grass seed control, but the good news for producers is there are grass seed management options available to suit all production systems.

Sheep industry consultant, Geoff Duddy, said sheep producers who successfully managed seeds relied on a combination of short, medium and long-term strategies.

“Although grass seeds only threaten livestock a few months of the year (late spring through summer is the risk period) controlling them needs to be a year-round focus,” Geoff said.

“Grass seed management should be part of good pasture management regardless of the time of year.”

He said it was important to assess the best combination of agronomic, grazing or management strategies for the season, and for individual production goals.

If seed has set and there are no seed-free paddocks, short-term options include:

Feedlotting – relocate stock out of seedy paddocks to avoid grass seed contamination.

Early turn-off – only if sheep are seed-free (don't make seeds someone else's problem).

Strategic grazing – this enables priority stock, such as lambs, to graze low-risk paddocks.

Effective strategies to employ a couple of months before seed set include:

Spray topping – If paddocks with problem annual grasses are identified early in the season, graze heavily over spring and remove stock two to three weeks before grass maturity (for uniform grass seed heads). Apply a non-selective herbicide between head emergence and the milky doughy stage (depending on chemical used) to prevent seed set.

Spray grazing – Spray broadleaf weeds when they are 6-8 weeks old with a low rate/ sub-lethal dose of a selective herbicide. Plants wilt, increasing sugar levels and palatability. After 7-10 days, graze the paddock at 4-5 times the normal stocking rate. Avoid grazing pasture below 3cm to prevent damage to

desirable plants. This technique is most effective in the two weeks after spraying.

Premature shearing – Shear before seed set to reduce grass seed contamination of wool. This is also a good long-term option for producers who don't wish to use chemicals (or have resistance issues), or if all paddocks have a seed risk.

Winter cleaning – To manage pastures badly infested with silver grass, and to a lesser extent barley and brome grass, spray before they set.

Mechanical control – Harrowing or slashing long pastures reduces the likelihood of grass seeds entering the eyes of sheep, and works well in conjunction with early shearing.

Genetics – Selective breeding enables lambs to reach target weights early, so they can be sold before the main grass seed period.

“Even keeping 1-2 paddocks seed free may be sufficient to substantially reduce the impact of grass seeds on your operation,” Geoff said.

He added that producers should be aware that efforts to provide ‘clean’ pastures can be undone by not paying attention to uncontrolled grass seed.

“Seed pick-up risk can be reduced by keeping all laneways, holding areas, tree lines and sheep camps free of grass seeds and avoiding mustering or handling stock during high-risk times.”

Grass seed management calendar

Management Option	Calendar	Short-term	Long-term
Strategic grazing	Spring	Y	
Genetics	Year-round		Y
Targeted marketing	By seed set		Y
Feedlotting	Spring	Y	
Selling lambs earlier	Spring	Y	
Modifying lambing times	To suit enterprise		Y
Premature shearing	Spring	Y	
Mowing or chemically cleaning pathways to watering points	Spring/summer	Y	
Avoid mustering/moving stock during seed pick-up times	Spring/summer	Y	
Winter cleaning	Autumn/winter	Y	Y
Spray grazing	Autumn/winter		Y
Spray topping	Spring	Y	
Crop rotation	To suit enterprise	Y	
Pasture improvement	Spring		Y
Fodder crops	Sown winter-spring	Y	Sometimes
Harrowing and slashing	Spring	Y	

Producers can also implement longer-term options, such as:

Fodder crops and improved pastures – Replace problem grasses with more productive and nutritious feed. Grazing management and soil fertility are important to maintain a competitive, improved pasture that will keep weed invasion to a minimum. Options include oats or a combination of oats and vetch, barley and vetch, and pulses (peas, beans, vetch).

Editors Note: This article was sourced from the MLA website in November 2016 - <http://www.mla.com.au/news-and-events/industry-news/how-to-manage-grass-seeds/>

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.

The contribution of qualitative behavioural assessment to appraisal of livestock welfare

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Abstract: Animal welfare is increasingly important for the Australian livestock industries, to maintain social licence to practice as well as ensuring market share overseas. Improvement of animal welfare in the livestock industries requires several important key steps. Paramount among these, objective measures are needed for welfare assessment that will enable comparison and contrast of welfare implications of husbandry procedures or housing options. Such measures need to be versatile (can be applied under a wide range of on- and off-farm situations), relevant (reveal aspects of the animal's affective or physiological state that is relevant to their welfare), reliable (can be repeated with confidence in the results),

relatively economic to apply, and they need to have broad acceptance by all stakeholders. Qualitative Behavioural Assessment (QBA) is an integrated measure that characterises behaviour as a dynamic, expressive body language. QBA is a versatile tool requiring little specialist equipment suiting application to in situ assessments that enables comparative, hypothesis-driven evaluation of various industry-relevant practices. QBA is being increasingly used as part of animal welfare assessments in Europe, and although most other welfare assessment methods record 'problems' (e.g. lameness, injury scores, and so on), QBA can capture positive aspects of animal welfare (e.g. positively

engaged with their environment, playfulness). In this viewpoint, we review the outcomes of recent QBA studies and discuss the potential application of QBA, in combination with other methods, as a welfare assessment tool for the Australian livestock industries.

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- Biosecurity specialist advice

Specialist advice

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AGnVet, Grassland Society of NSW and Auswest Seeds Holbrook Field Day

Glenn Judson, who is the Program Leader for the Nutrition and Farm Systems group with Agricom in NZ, was the key speaker at a field day at Holbrook organised by AGnVet Services Holbrook, The Grassland Society of NSW and Auswest Seeds on Tuesday 9th August. Glenn also provides technical sales support for both the New Zealand and Australian businesses and has travelled extensively throughout Australia.



beef and lamb systems and the role of herbs and brassicas in these systems.

As evidenced on the day grazing canola can also have a fit in these systems if the agronomy and grazing management is understood. The value of pasture legumes not only for their grazing value, but also nitrogen input and weed control were discussed in a seed crop of Viper balansa clover at Holbrook Seeds.

Glenn also spoke at Lambex 2016 in Albury following the field day and emphasised that efficient lamb production is about growing as many lambs as fast as you can. This presentation took a practical view of what makes an efficient production system and explored a couple

of key principles of efficient lamb production. He provided examples of nutritional interventions at key periods within the production cycle that have long lasting benefits to the whole system and demonstrate the impact stocking rate can have on efficiency. He also discussed research work focusing on the effect using novel forages has on eating quality of sheep meat.

Lambex attendees participating in the Pre-Conference Northern Bus Tour also had the opportunity to discuss their lamb production systems with Glenn. Of particular interest was the use and management of Lucerne and Tonic plantain at Tim Trescowthick's property.

The afternoon involved active paddock discussion on grazing management and animal requirements in high production pastures including:

- Herbs – management and animal performance
- Grass options and potential companion species
- Brassicas – management and utilization
- Feed requirements of sheep and cattle

Using his experience in developing strategies to improve the nutritive value of forages to develop grazing systems for a range of different forages, Glenn concentrated on temperate pastures for



Colin Geddes, Glenn Judson, Tim Trescowthick and Julie Brien in a lucerne and tonic plantain pasture.

About to start a degree in Agriculture? Check out the Horizon Scholarship.

The Horizon Scholarship is an initiative of the Rural Industries Research and Development Corporation (RIRDC) that, in partnership with industry sponsors, supports undergraduates studying agriculture at university.

Eligibility - To be eligible for the Horizon Scholarship students must be entering their first year of university, studying a degree related to agriculture. Students must also have started their tertiary studies no longer than two years after leaving high school. For more information visit: www.rirdc.gov.au/horizon

Amount - \$5,000 per year

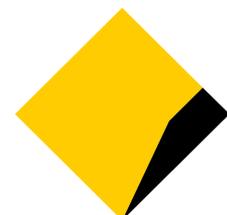
Duration - Length of degree

Closing Date - 17 February 2017

Apply Now - Applications opened on 1 November.

Students apply directly to the RIRDC. Application forms can be downloaded from the RIRDC website at www.rirdc.gov.au/horizon or by contacting RIRDC on 02 6271 4132.

CommonwealthBank



From the President

Hello 'From the President'.

What a spring! Floods, cold, late growth, you name it. Whoever you speak to has a different take on the back end of 2016. The mixed farmers are still waiting for parts of paddocks to dry out, the tablelands are waiting for some warmth to get growth to take off, and plenty in the middle are looking for the stock – they are in there somewhere!

Generally, it has been a pretty good three months for the pasture folk. In my travels I have been to Bourke, Tamworth, Canberra and through plenty of the central tablelands and slopes. In short, green everywhere, which is a lovely change. Being able to take advantage of the added dry matter is seeing plenty of graziers making silage and hay. You don't make any money looking at grass, and there will always be another time when you hoped you had a bit more on hand.

Another benefit of fodder conservation in years such as this is the added control of

annual weeds. With the season we have had, I am seeing lots of 'dirty' paddocks, even the good ones have more rubbish this year than normal. Keeping that weed seed bank as low as possible will enable the best performance of your desirable species again next year.

Another year has passed, and again the MLA funded 'Grassland Society of NSW Pasture Updates' have been a great success. The most recent of these were at Manildra and Tamworth. Numbers at both were terrific, well over 100 at Tamworth in what was a 'cracker' of a day. The organisers need to be congratulated on providing such great content, that attendees saw great value in. On behalf of the Grassland Society of NSW Inc. I would like to thank MLA for their support of this initiative. Keep an eye on our web site for more 'Pasture Updates' early in the new year.

One for the diary. In the very early stages of planning is the now 'Biennial' Conference. Titled "Your System – Taking

it to the next level", the 2017 conference will be held in Cowra, on July 25th and 26th. There are plenty of topics on the agenda that will challenge everyone, regardless of the 'system' you are operating. We look forward to hosting you in July 2017.

On behalf of the Grassland Society of NSW, I wish all our members, their families and friends a very safe and merry Christmas, and I hope to hear of a prosperous start in all regions of NSW in 2017. For those who have lost loved ones of recent times, this may be a difficult time for you. Take comfort as we will all be thinking of you. Stay well, think of others, and as always, don't be afraid to ask "How are you going?"

All the best,

David Harbison,
President.



**Wishing our members
and their families a Merry
Christmas & a happy and
healthy New Year**



Disclaimer

While every effort is made to publish accurate information the Grassland Society of NSW does not accept responsibility for statements made or opinion expressed in this newsletter.

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

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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 March 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 February 24 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 articles in your area.

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