

As President Mick Duncan mentioned in the last newsletter most areas of New South Wales enjoyed one of the best springs for decades. Unfortunately the excellent pasture growth has one or two negatives. We have seen particularly fierce bushfires. In the first issue of 2005 we expressed our sympathy for Rosemary Sweet whose brother was killed in the Eyre Peninsula bushfires. This year we extend our sympathy to Greg and Kirrily Condon who have suffered extensive damage to their buildings and equipment. Fortunately their house was saved.

The excellent spring growth has also created some other problems for producers. One is a higher incidence of fly-strike as a result of increased breech soiling from good quality feed. Another problem is the possibility of increased fleece contamination from awned pasture species such as barley grass.

CONTENTS

Editorial (Haydn Lloyd Davies).....	1
The benefits of optimal nutrition at joining (S. Hatcher, S. Nielsen, P. Graham).....	3
National Annual Pasture Legume Improvement Program (NAPLIP) (B. Hackney, B. Dear, G. Dyce, C. Rodham).....	7
Perennial pastures in mixed farming systems (R. Hayes, B. Dear, G. Li, J. Virgona, M. Conyers)	14
Why are some farms so successful? (Libby Roesner).....	19
North West Branch Report – November 2005 (Lester McCormick).....	22
From the President's Desk (Mick Duncan)	23

Trade names are sometimes mentioned in this Newsletter in refereed papers. No endorsement or criticism of these products by the publisher is intended, nor is any endorsement or criticism implied of similar products not mentioned

Editorial cont.

The new Native Vegetation Act came into effect on 1 December 2005. We would welcome contributions from members offering their views or experiences with the new legislation.

When I was active in pasture research both in Western Australia and New South Wales we seemed to be primarily concerned with three legumes – subterranean clover, white clover and lucerne. In the case of subterranean clover and white clover management other than stocking rate had little effect, while lucerne persistence benefited from rotational grazing. There are now many alternative legumes including serradella, biserrula, balansa, trefoils and narrow leaved clover. Bob Freebairn points out that these alternative legumes require careful grazing management particularly from flowering to seed set. Bob states that with the newer legumes it is important in a dry spring to have lower stocking levels following flowering so that stock do not eat the flowers and the seed pods.

The biennial conference of the Australian Society of Animal production will be in Perth from July 10 to July 14. The theme is “Science and Industry – Hand in Glove”. Also in Perth on the Thursday and Friday of the ASAP Conference there will be a joint meeting of the 7th World Merino Conference.

The venue for our own annual conference on **July 25-27** will be the Convention Centre and Joyes Hall at Charles Sturt University, Wagga Wagga. Members requiring more information or wishing to contribute should contact Belinda Hackney, Research Agronomist, NSW Dept. of Primary Industries, PMB Wagga Wagga NSW 2650.

May all members have a good 2006.

Haydn Lloyd-Davies
Editor



The benefits of optimal nutrition at joining

Dr Sue Hatcher, NSW DPI Senior Research Scientist, Sharon Nielsen, NSW DPI Biometrician & Phil Graham, NSW DPI Livestock Officer (Sheep & Wool)

Conception rate increases with increasing fat score due to relationships that exist between fat score, bodyweight and ovulation rate (see Volume 1 Issue 2 April 2005 of this newsletter). Fat score, bodyweight and pregnancy scanning data from both the 2004 and 2005 joining at the three NSW paddock-scale sites (Carwoola, Kialami and Oak Hills) were analysed to explore the relationships between these three traits in more detail. The aim of the analysis was to answer the following questions:

- What is the relationship between fat score at joining and conception rate? How many more lambs will I get if my ewes are in better condition at joining?
- What is the relationship between bodyweight at joining and conception rate? How many more lambs will I get if my ewes are heavier at joining?
- What is most important at joining, fat score or bodyweight?
- Does a change in fat score or bodyweight prior to joining have an impact on conception?
- What is the impact of previous lambing on a subsequent pregnancy? Are dry ewes consistently dry? Do twin bearing ewes tend to continue to bear twins?

Fat score at joining and conception rate

Across all three NSW sites fat score had a significant impact on conception rate (lambs scanned /100 ewes) (Fig. 1). Ewes with higher fat scores at joining conceived more lambs than ewes in poorer condition at joining. An increase of 0.5 fat score (ie from 1.5 to 2 or from 2.5 to 3) resulted in an extra 6-7 lambs scanned per 100 ewes, while an increase of 1 fat score generated an extra 13 additional foetuses per 100 ewes scanned.

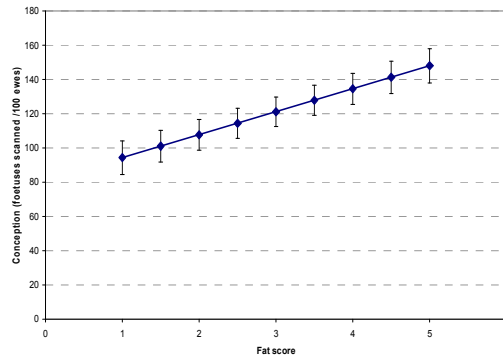


Figure 1: Conception rate increases linearly with increasing fat score.

Bodyweight at joining and conception rate

Bodyweight at joining also had a significant impact on conception rate (Fig.2). However, for bodyweight, the relationship was curvilinear. This means that as bodyweight increases so to does conception rate, but the number of extra lambs scanned per kg of ewe bodyweight decreases and actually begins to decline at higher bodyweights.

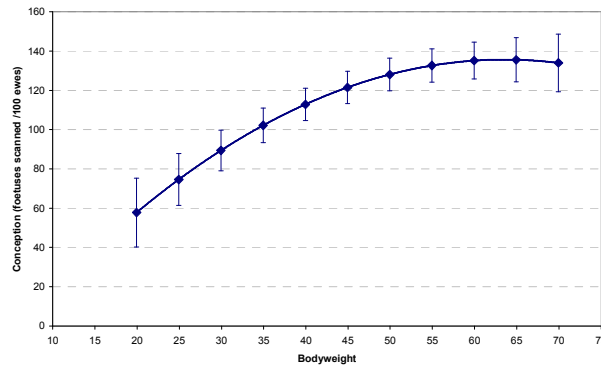


Figure 2: Conception rate has a curved relationship with increasing bodyweight.

For the data from the three NSW sites, increases of approximately 10 kg bodyweight up to about 45 kg lead to higher conception rates per kg of ewe bodyweight. But as bodyweight increased further, the conception rate per kg of ewe bodyweight was smaller and began to decline at about 55-60 kg. For the ewes

at the three NSW paddock-scale sites, conception rate was maximised when the ewes were 63 kg at joining.

So what is more important at conception - fat score or bodyweight?

The analysis indicates that the relative impacts of bodyweight and fat score on conception rate are similar. The important point to remember is that fat scores, and hence the relationship between fat score and conception, are transferable across flocks and bloodlines as they are not affected by differences in mature body size. This is clearly not true for bodyweight which varies between flocks and across bloodlines due to differences in frame size between flocks and bloodlines. The ewes in this analysis were all superfine and fine bloodlines, therefore the relationship between bodyweight and conception outlined above would not be applicable to medium and broader bloodlines.

The relationship between fat score and conception rate for the three NSW sites showed an even response of 13 foetuses for an improvement of 1 fat score across the entire range from score 1 to score 5. This suggests that drafting off the thinner ewes and giving them preferential treatment would be of no value to the average conception rate of the flock. However, if the bodyweight relationship is also taken into account, then there is value in holding the higher fat score ewes (ie maintaining their condition) and allowing the lighter ewes in the mob the chance to increase their fat score.

Does a change in fat score or bodyweight prior to joining have an impact on conception?

Neither fat score nor bodyweight changes (loss or gain) of the ewes between weaning in 2004 to joining in 2005 or in the month prior to joining had a significant influence on conception at the 2005 joining. Therefore the length and degree of condition or bodyweight loss or gain during either of these periods had little impact on the number of lambs scanned. It didn't seem to matter how the ewes reached their fat score at joining, only that they got there!

Nevertheless, the timing of the fat score increase is best done prior to the introduction of the rams. However, preliminary economic analyses suggests that supplementary feeding to increase fat score for improved conception is rarely profitable although this will depend on the responsiveness of conception rate within your flock. The latest results from the national Lifetime Wool project team suggest that an average of an extra 20 lambs are *born* per 100 ewes for each additional *condition* score (ie assessed at the 'C' site over the back bone and short ribs) at joining. However it is important to note that the national range was 5 to 40, indicating that variation does exist in the responsiveness of reproduction rate of different flocks.

Where your flock sits within this range will have a large impact on the cost-effectiveness of managing ewes to achieve fat score targets at joining (ie a +30 flock can economically be fed more than say a +10 flock). Despite this it will always be far better to achieve fat score targets at joining through management of ewe fat score from weaning using available pasture.

What is the impact of a previous lambing on a subsequent pregnancy?

Ewes that are dry are less likely to conceive at their next joining (Fig. 3). This is independent of their fat score or bodyweight at the subsequent joining. In other words a dry ewe will tend to remain dry regardless of her fat score or bodyweight at joining. Similarly there was a trend for twin bearing ewes to continue to conceive twins at their subsequent joining.

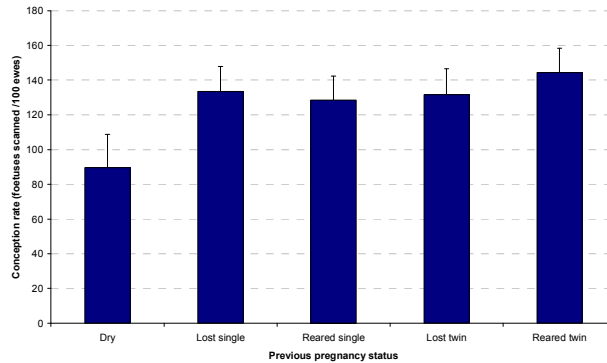


Figure 3: Dry ewes are less likely to conceive at their next joining.

There was no significant impact on the ability to rear a lamb on conception at a subsequent joining. Whether or not a ewe successfully reared her lamb in one year did not affect her ability to conceive at her next joining.

Remember, these results deal with conception. The impact of maternal nutrition (ie fat score) during late pregnancy and lactation will also have an impact on birth and weaning weights and hence survival of the progeny - this is particularly important for ewes carrying twins. It is therefore important to monitor ewes at critical stages during their reproductive cycle to minimise the difference between lambs scanned and marking and weaning percentages.

Important points

- Ewes below fat score 2.5 have an increased risk of being dry, ewes above fat score 3 can be maintained at their present body condition. The specific action for ewes between 2.5 to 3 depends on the conception response of your flocks and the prevailing seasonal conditions.

- Average flock conception rates can be improved by drafting dry ewes from the breeding mob after pregnancy scanning.
- Monitoring ewes at critical stages during the breeding cycle is essential to minimise the difference occurring between the number of lambs scanned and marking and weaning percentages.
- The aim must be to achieve the target fat score of 3 at joining off pasture. Initial economic analyses using the NSW paddock-scale site data (see below) indicates that supplementary feeding for increased conception is marginal at current market prices.



National Annual Pasture Legume Improvement Program (NAPLIP)

Belinda Hackney, Brian Dear, Gabrielle Dyce, Craig Rodham, NSW Department of Primary industries, Wagga Wagga.

What does the NAPLIP program do?

The NAPLIP program is a nation wide breeding and evaluation program involving research departments in NSW, WA, Vic, Tas and Qld. The NAPLIP program was implemented to develop a wider range of annual pasture legumes capable of increasing the supply of nitrogen to crops and pastures. Since its inception the NAPLIP program has developed more than 30 annual legumes many of which are suited to supplying nitrogen to crops and pastures in difficult agricultural situations such as areas prone to waterlogging, low rainfall environments and acidic soils. Additionally, many of the cultivars developed have considerable advantages over previously available cultivars in terms of herbage yield, hardseed levels (protection from false breaks), insect tolerance and disease tolerance.

Current annual legume evaluations at Gerogery

Late season RLEM tolerant sub clovers – sown May 2004

- Parent lines of this group were initially collected by Phil Nichols (Western Australia Department of Agriculture. The RLEM parent lines showed excellent tolerance of RLEM attack at the cotyledon stage but had very low levels of production. These RLEM tolerant lines were then crossed with existing cultivars including Denmark and Goulburn to

- produce the lines currently under evaluation. These resulting lines retained the RLEM tolerance of the parent line, but have greatly increased productivity which is now comparable with commercially available cultivars (Figure 1)

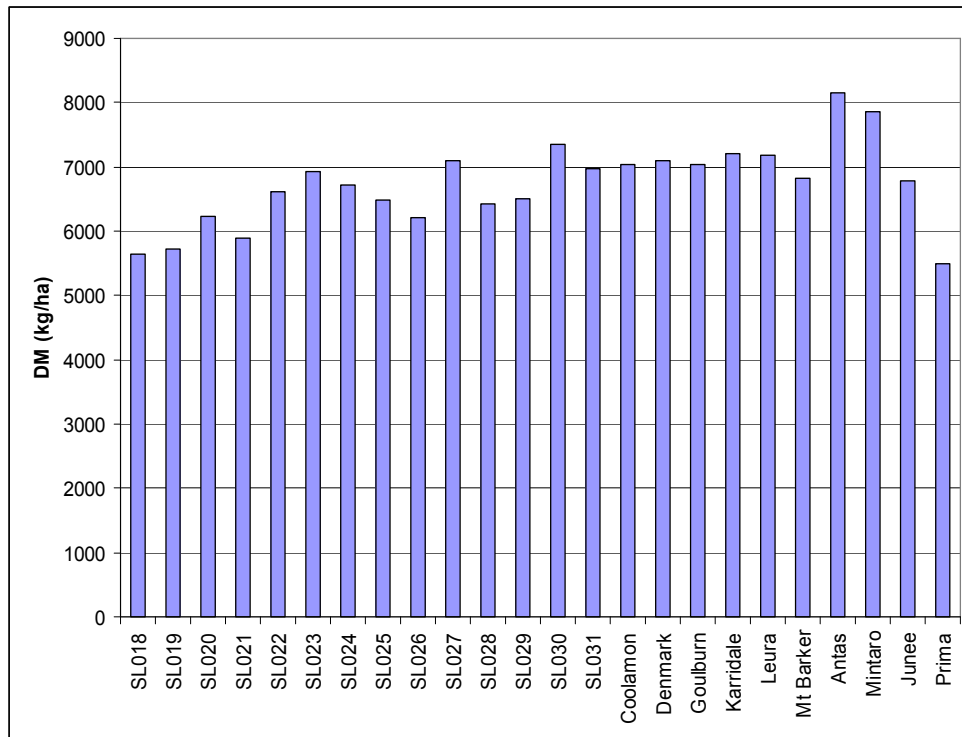


Figure 1. Dry matter (kg/ha) recorded at Gerogery on 29th October 2005

- RLEM tolerance of these lines is expressed at the cotyledon stage. Cotyledon cuticle thickness is greater in the lines being tested than in those currently commercially available. The thicker cuticle is more difficult for the RLEM to penetrate and can greatly reduce seedling losses in the early stages.
- Prima gland clover which is completely tolerant of RLEM has been included as a check. Prima is an early flowering (100-115 days after sowing at Wagga).

- Flowering times of evaluation lines recorded in under Western Australian conditions range from 128-140 days after sowing (Goulburn 136 days).
- There has been insufficient RLEM burden to test tolerance at this stage at NSW sites. However results from SA and WA have confirmed earlier results with test lines showing significantly less damage than those currently commercially available.
- Test lines have similar seed production to the commercial cultivars. Seedling density following the autumn break was similar to or better than commercial cultivars. Considering the false break in February, this indicates that hardseed levels of the test lines are similar to or slightly higher than current cultivars and should result in improved year to year persistence under variable seasonal conditions.
- Evaluation of these lines will continue for a further 12 months at which time a decision on release of best lines will be made
- A new *brachycalycinum* subterranean clover (Mintaro) to be released to replace Rosedale is also in this trial. Mintaro performed very well in evaluations at Urana and Grogan and should be commercially released in about 2 years.

Diffuse clover – sown May 2004

- Botanical name: *Trifolium diffusum*
- Lines of diffuse clover in this evaluation were developed by Pedro Evans in Victoria
- There are no commercial cultivars of diffuse clover. It is a native of Europe and Turkey.
- Many of the diffuse clover lines sown in this evaluation are quite late maturing and later season sub clovers such as Goulburn and Leura have been included as controls along with Bolta balansa and Laser Persian clover.
- Test lines produced very high levels of DM in spring 2004 (Figure 2).

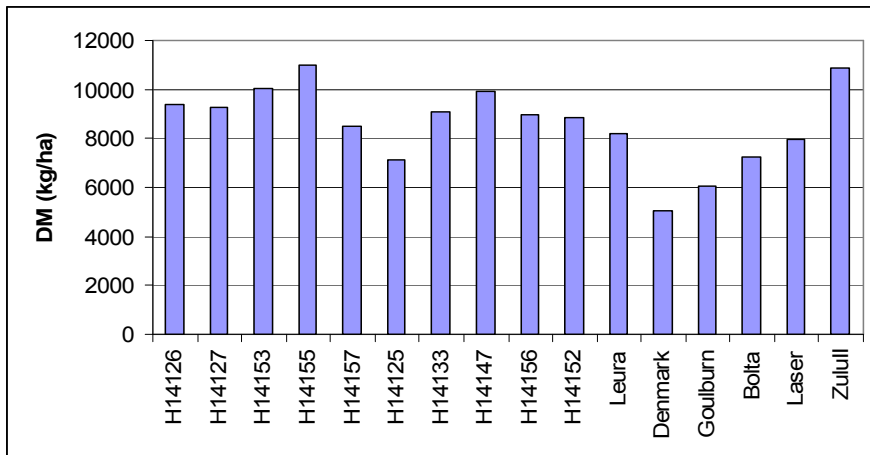


Figure 2 DM (kg/ha) of diffuse clover lines compared to commercially available subterranean, balansa, Persian and arrowleaf cultivars spring 2004.

- Diffuse clover is very similar in appearance to subterranean clover in the early stages of growth, but becomes very erect later in the season. Considering its high potential production through late spring it would appear to have potential as a fodder conservation species.
- Diffuse clover lines had similar susceptibility to false breaks compared to sub clover cultivars in this experiment. It does however, appear to be a very profuse seed producer as germination counts showed it having almost double the number of seedlings (up to 3000 per square metre) compared to sub clover (1000-1900 plants per metre square) following the autumn break.
- While diffuse clover showed similar productivity to sub clover in winter 2004, it performed very poorly in winter 2005
- Evaluation of diffuse clover will continue in 2006. However to be considered for release, its winter performance would need to improve considerably.

Other current evaluations in the NAPLIP program

- Mid season RLEM tolerant subterranean clover - Currently under evaluation at Wagga Wagga and Harden. Lines in this evaluation flower from 100-124 days after sowing in Western Australia (Urana 93 days, Coolamon 128 days, Seaton Park 103 days).
-

- Late purple clovers – Paratta has been the only commercial cultivar of purple clover available up until now. Paratta is highly susceptible to clover scorch and this has limited the use of purple clovers in farming and grazing systems. Lines under evaluation have been selected for resistance to clover scorch. Purple clovers are late maturing, staying green into late spring and early summer. They should be well suited to fodder conservation. Late purple clovers are being evaluated at Holbrook.
- Late yellow serradellas – Yellow serradellas are a deep rooted legume highly tolerant of low pH soils with high levels of exchangeable aluminium (however they are very sensitive to high levels of manganese). The yellow serradellas under evaluation at Holbrook have been selected for high herbage production and straight non-shattering pods which improves harvestability. Most cultivars of yellow serradella currently available are early to mid maturing. The lines under evaluation are later maturing and should be well suited to medium to high rainfall areas.
- Late French serradellas – French serradellas are suited to similar situations to yellow serradellas and generally are easier to harvest and process seed. Currently available cultivars have been developed for medium rainfall (500 mm) areas. Under evaluation at Holbrook.
- Slender serradella – have similar range of adaptability to yellow and French serradella. Under evaluation at Holbrook.
- Moroccan clover – this is a new species under evaluation at Grogan. It is well adapted to soils prone to periodic waterlogging.

Recent releases from NAPLIP

- *Urana subterranean clover*- Urana has been developed as a replacement for Daliak. It flowers at about 110 days after sowing at Wagga which is about 8 days earlier than Seaton Park and 7 days later than Dalkeith. It is well suited to areas with slightly shorter growing season. Urana has an upright growth habit and has increased levels of hardseed (31%) which improves persistence. Urana produced approximately 10% more herbage than Dalkeith during evaluation.
- *Coolamon subterranean clover*- Coolamon has been selected as a replacement for Junee. Coolamon is resistant to Race 1 and 2 clover scorch (Junee is susceptible to Race 2), it produced 12% more winter feed and 16% more spring feed than Junee during evaluation. Coolamon has moderate hardseed levels (24%)

- *Napier subterranean clover (yanninicum)* – very late sub clover suited to waterlogged areas with a growing season of at least 7 months. It is resistant to both races of clover scorch. Napier produced 15% more herbage in spring than Larisa and 40% more than Trikkala respectively.
- *Erica and Margurita French serradella* – hard seeded (55%) compared to the only previously available variety, Cadiz, which was almost completely soft seeded and therefore highly susceptible to loss due to false breaks. Erica is a more prostrate type better suited to grazing while Margurita has an upright growth habit and would be well suited to forage conservation. Erica and Margurita flower at approximately 120 days after sowing in southern NSW.
- *Mintaro a Brachycalycinum subterranean clover replacement for Rosedale* – this was evaluated at Grogan and Rand. It showed superior herbage production (Figure 1) and regeneration compared to Rosedale at both sites.

Soon to be released from NAPLIP

- *Purple clover replacement for Paratta* – this was evaluated at Grogan and Rand and is an earlier type of purple compared to those currently under evaluation at Holbrook. The line selected to replace Paratta is resistant to both races of clover scorch and showed superior herbage production at both sites (Figure 3).

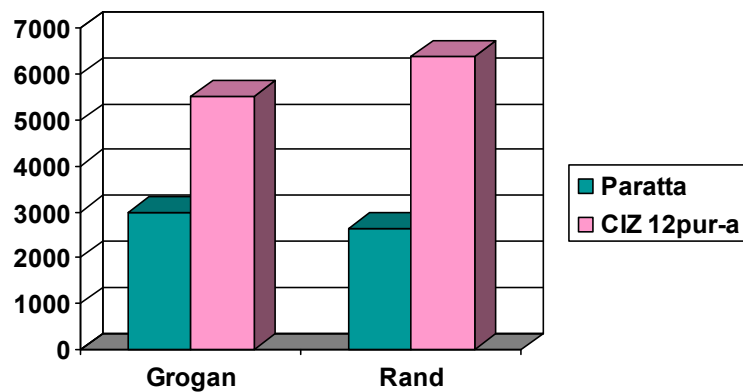


Figure 3 : Dry matter production (kg/ha) of Paratta and CIZ12 pur-a purple clover at Grogan and Rand

- *Rose clover replacement for Hykon* – the soon to be released rose clover was evaluated at Rand. It has superior herbage production compared to Hykon and Dalkeith (Figure 4) and has improved harvest and processing characteristics compared to Hykon. Rose clover has only previously been used to any extent in areas with rainfall less than 500 mm. However results from NAPLIP demonstration sites at Harden and Binalong have shown it to be worthy of consideration in higher rainfall areas. Regeneration levels of both Hykon and the new release have been outstanding. Rose clover is also tolerant of RLEM as an adult plant and if pest burdens are high it may be worth considering as part of the legume component in a pasture mix.

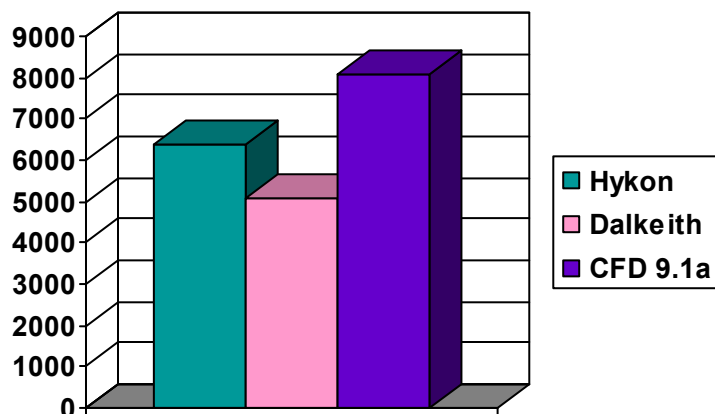


Figure 4: Dry matter production (kg/ha) of Hykon and CFD9.1a rose clover and Dalkeith subterranean clover at Rand 2003

Further information

Belinda Hackney
NSW Department of Primary Industries
Wagga Wagga
02 6938 1858
email: belinda.hackney@dpi.nsw.gov.au

Brian Dear
NSW Department of Primary Industries
Wagga Wagga
02 6938 1856
email: brian.dear@dpi.nsw.gov.au



Perennial pastures in mixed farming systems

Richard Hayes^{1,2,3}, Brian Dear^{1,2}, Guangdi Li^{1,2}, Jim Virgona^{1,3}, Mark Conyers^{1,2}

¹E H Graham Centre for Agricultural Innovation, Wagga Wagga

²Department of Primary Industries, Wagga Wagga

³School of Agriculture, Charles Sturt University, Wagga Wagga

Key points

- Perennial pasture swards have the potential to produce more biomass than annual or degraded swards, due to their capacity to extend the growing season in favourable seasons.
- Farming systems that incorporate perennial pastures are more environmentally sustainable than systems totally reliant on annual crops and pastures, particularly given the increased capacity of perennials to reduce leaching of soil moisture and nutrients.
- Perennial pasture species differ in their pattern of growth and their ability to withstand seasonal and soil constraints. For more reliable production and persistence, growers should incorporate a range of perennial pasture species in their system.

Introduction

Perennial pasture species have long been used in southern farming systems to increase annual pasture production and to provide 'out of season' feed for livestock. There is now a reinvigorated push to increase the proportion of the landscape sown to perennial pastures due to their environmental benefits.

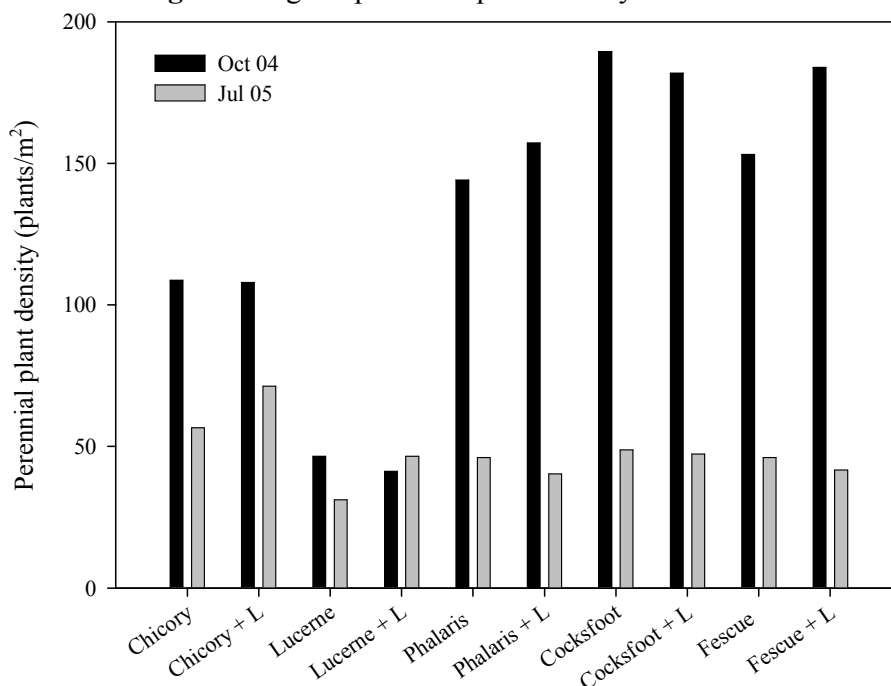
Leaching of soil water can lead to soil acidity and salinity as dissolved nitrate and salts are taken below the root zone and into ground water systems. Due to their deeper rooting habit and potentially longer growing season, perennial pasture species are far better able to dry the soil profile than annual crops and pastures. The increased dry soil buffer created under perennial pastures can act as a 'sponge', soaking up excess moisture and increasing the opportunity for soil moisture to be used by plants before it is leached to beyond the root zone.

This study compares the relative performances of phalaris, chicory, cocksfoot, tall fescue and lucerne in terms of biomass production and soil moisture levels. The soil is acidic; pH_{CaCl} 4.3 & 4.2, and Aluminium 13.7% & 23.1% at 0-10cm and 10-20cm respectively. Half of the experiment had surface applied lime

incorporated to a depth of about 8cm. This increased pH in the 0-10cm zone to 5.4 and reduced Al levels to 1.1%, but had no measured impact below 10cm. The trial was sown on 27th August 2004.

Plant Density

Fig 1. Change in perennial plant density after the 1st summer

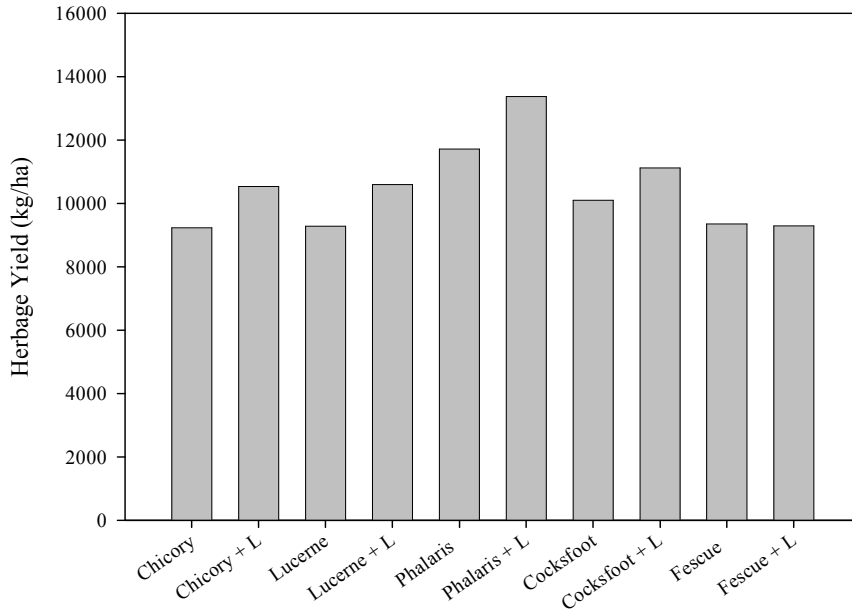


All species emerged successfully after a spring sowing regardless of the addition of lime. Lucerne had by far the lowest plant density of any species 2 months after sowing, but with 40-50 plants/m², plant density was still considered adequate for a productive sward. The density of the perennial plants was again counted in July 05 after the very late breaking rains in early June. All species except lucerne experienced considerable plant mortalities over the long summer period, plant densities being reduced in most cases to around 40-50 plants/m² (Fig 1). Lime improved lucerne survival over summer, increasing plant density from 31 to 47 plants/m².

Herbage yield

Total biomass of all swards between September 2004 and October 2005 was calculated, and presented in Fig 2. All swards yielded a similar amount of biomass, mostly between 9 – 11t/ha. Phalaris yielded more than any other treatment, due mainly to its superior growth over winter 2005. There is a trend in most treatments suggesting that lime increases total biomass. This trend is not seen in the fescue swards, most likely due to the dominance in that treatment of the acid-tolerant annual grass weeds.

Fig 2. Total annual biomass production of 5 perennial pasture swards, with and without lime



As biomass continues to be monitored over summer and into next year, it is likely that differences in production will be identified between the swards. Chicory and lucerne are both summer active species, Fraydo fescue is a strongly summer dormant cultivar, and the phalaris and cocksfoot cultivars are somewhat intermediate; summer dormant but could become active with large amounts of summer rainfall. The limited summer rainfall experienced in 2004-05 would partially explain why phalaris has yielded the most biomass in this experiment. Chicory and lucerne swards are likely to be shown to be more productive than they have been if more rainfall occurs in 2005-06. In the context of a production enterprise, it is important that growers have a range of species (either grown separately or in mixtures) to better cope with this type of seasonal variability.

Soil moisture

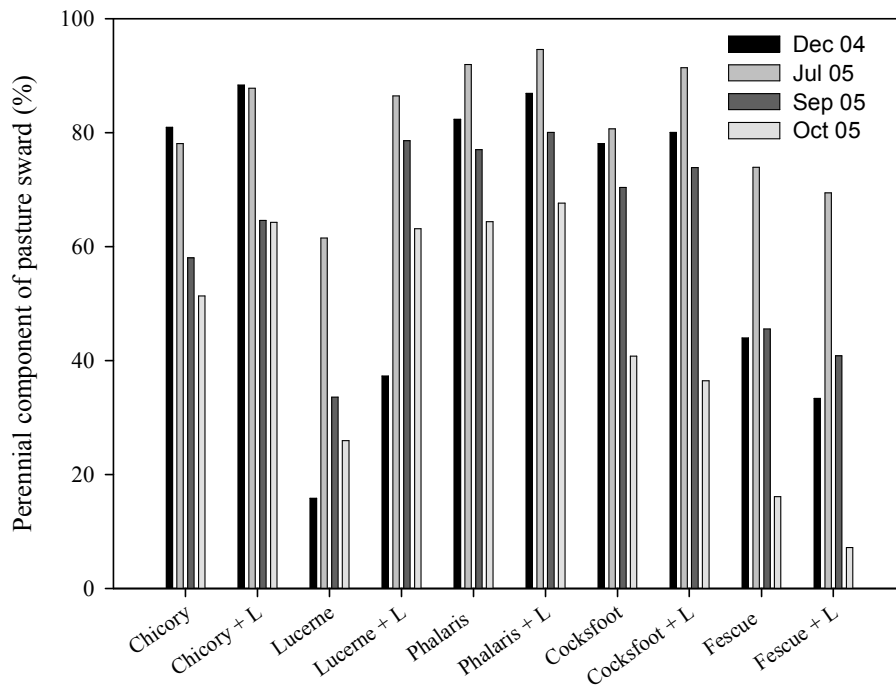
Soil moisture has been monitored in this experiment since November 2004 to a depth of 3m, using a neutron moisture meter. Although we have seen evidence of the soil profile wetting up over winter between 1-2m in the profile, there has not been any difference between treatments either in the depth or rate at which the soil is drying out. This is perhaps a reflection of the similarity in herbage production between treatments.

Botanical composition

At each harvest, an assessment is made to determine the proportion (by weight) of the various components of the pasture sward. The proportion of the swards made up of the respective perennial species at each harvest is presented in Fig 3. It is evident that the botanical composition of a sward varies with time, and can sometimes vary with the addition of lime.

One of the benefits of incorporating perennial pasture species into farming systems is their increased ability to supply feed soon after the autumn break and over summer, after annual species have senesced. Annual species are less able to produce biomass after the autumn break because they have to start from seed, and it takes time for them to germinate and develop a root system capable of sustaining significant growth. Fig. 3 illustrates the value of the perennial component, as in most treatments it comprises around 80% of the sward just after the autumn break and at the end of spring. The proportion of perennial species decreases during winter and spring mainly due to the dominance of annual grass and legume species.

Fig 3. Botanical composition analysis:
proportion of pasture sward made up of perennial species



Notice:

"Catchment and Natural Resources Management 2006 - Learning to Better Manage our Catchments" conference to be held on 23 and 24 February 2006 at the Albury Conference Centre. The cost is \$675.00 and the conference director is Professor Paul Boon of Victoria University. To register phone 03 8354 5000 or email registration@halledit.com.au. Visit the Grassland Society's webpage for more information www.grasslandnsw.com.au.

Why are some farms so successful?

Libby Roesner, Condobolin

Six case studies which detail the management and philosophies behind some of New South Wales' most successful mixed farm enterprises have just been released as part of the national Grain & Graze program.

Grain & Graze is a four-year program developed to boost profitability of mixed cropping and livestock enterprises while managing natural resources. Central West / Lachlan, which extends from the central tablelands to the western plains of NSW, is one of eight regions in the grain/sheep/beef zone of southern Australia participating in the Grain & Graze.

The focus of the Central West / Lachlan project is on collating farmer knowledge and driving research and development that will help local farmers become more confident, profitable and sustainable.

The farm case studies were designed to provide a better understanding of what makes a farm business a success. They profile six producers in the region that are running highly successful mixed farming enterprises – documenting their management practices and philosophies as well as the economic and environmental impacts of their business.

The case studies have been published as six full-colour A4 brochures. These will be available to all who register their interest and will also be distributed at local events in coming months. They will be used to provide local farmers with immediate, relevant information on successful whole-farm systems; identify issues for future R&D; and help with the design of related trials.

Grain & Graze project officer Margaret Wynne said the case study farms were each quite different: some using conventional practices, others using new, innovative techniques – such as pasture cropping, cell grazing and perennial forages – to make their businesses work.

Margaret said one of the case studies profiled Geoff, Di and Stephen Chase's mixed farming enterprise, Waitara, in Trangie. To manage their farm successfully the Chases rely on seasonal conditions to decide their cropping methodology.

Margaret said being conscious of chemical resistance, the family preferred to use a combination of tools, such as chemicals, fire, machinery, stock and micro-organisms, to manage their soils from year to year.

The planting of old man saltbush (OMSB) was also a key management principle for the Chases. As a drought-proofing strategy, the family planted 80 ha of land to OMSB in 1996. Since then, they've increased the area planted to 120 ha and now use it as a whole-farm management tool to supplement stock feed and spell pastures. The saltbush has also reduced the threat of salinity by reducing water tables and revegetating salted land.

Another of the case studies focuses on the Cavanagh family, of Young, who, over time, had diversified their risk and intensified the farm operations to produce high returns. They now run an intensive cropping program, feedlot sheep, contract-grow dairy heifers and manage a contract windrowing business.

The other four case studies look at businesses in the region which rely on pasture cropping, conservation farming and conventional farming methods for their success. Each case study outlines the key management principles and economic performance of the farming system.

Those who would like to receive a copy of the case studies can have them mailed directly by filling in the attached form and sending it to their local Grain and Graze Regional Coordinator, Libby Roesner, or sending their details by email.

The Central West / Lachlan Grain & Graze project, due to conclude in 2008, involves the cooperation between NSW Department of Primary Industries, Department of Environment & Conservation, Stipa Native Grasses Association, Central West Farming Systems, Central West Conservation Farming Association and the Central West and Lachlan Catchment Management Authorities.

Grain & Graze is the result of a partnership between four of Australia's major research and development corporations: Meat & Livestock Australia, Australian Wool Innovation, Grains Research and Development Corporation and Land & Water Australia. To get involved in your regional Grain & Graze program visit the website at www.grainandgraze.com.au.

If you would like to receive a FREE COPY of the case study brochures, please fill in the following form indicating your interest by ticking the relevant case study boxes and send to: Libby Roesner, Central West/Lachlan Grain & Graze Coordinator, PO Box 300, Condobolin NSW 2877 or email to: libby.roesner@dpi.nsw.gov.au with the following details and the number of the case studies you would like to receive.

Name: _____
Company/Property Name: _____
Role: _____
Producer? Yes / No
Address: _____
Town: _____ Postcode: _____

- 1. Low risk farming in a variable climate - The James Family, Condobolin
- 2. Pasture cropping as a whole farm system – Mathew and Kylie Barton, Gollan via Wellington
- 3. Mixed farming with Old Man Saltbush – Geoff, Di and Stephen Chase, Trangie
- 4. Intensive conservation farming – Richard Langley, Greenthorpe
- 5. Conventional farming with an eye to effective succession – Craig & Liz, Barry & Jan Tanswell, Goonumbla via Parkes
- 6. Intensification and diversification in a mixed farming system – The Cavanagh Family, Young
- Please also put me on the FREE email distribution list for Grain & Graze to keep me up to date with local events and training occurring in the Central West/ Lachlan Catchments. This is an electronic service **only**.

My email address: _____

(Note that to comply with legal requirements of the Privacy Act, your information will not be used for any other purpose or provided to any third parties.)



North West Branch Report

Since our last meeting the branch has been very busy with spring field days.

5 October – Alternative legume field day at “Newhaven”, Tarawan. Inspection of Graham Crocker’s trial and Fiona Scott’s lime and fertiliser demonstration, DPI.

18 October – Field day at Tamworth Agricultural Institute. Inspection of alternative legumes trial – Graham Crocker, DPI. Weed control in lucerne – Andrew Storrie, DPI. Lucerne breeding – Rex Williams, DPI.

25 October – Grain and Graze field day. Dual purpose forage lines, “Apsley” Willow Tree. Included Top Fodder, utilising excess feed – Loretta Serafin and Ian Blackwood, DPI.

3 November – Breakfast on the plots, “Leaholme” Manilla. Inspection of CRC perennial pastures for recharge site, featuring temperate and tropical species – Simon Turpin (Namoi CMA), Sue Boschma, Mark Brennan and Lester McCormick, DPI.

11 November – Barraba Pasture Tour “Banoon”, “Mayvale” and “Bareela”. Field day featured managing water and salinity in the landscape, fescues and lucerne. George Truman (Namoi CMA), Lachlan Rowling, Carol Harris and Lester McCormick, DPI.

Spring field days attracted 181 participants. An additional field day on machinery conversion, at Narrabri, will probably be run next year.

Tropical grasses, establishment and management remain high on the interest list of graziers and fescue is also pushing the boundaries.

A lot of interest has also been generated for alternative legumes such as Purple clover and Sulla.

Weed control in lucerne is still a major issue even with the increasing list of chemicals.

If the Society is considering study tours “Tropical grasses in Queensland” could prove a popular topic.

Lester McCormick
For the North West Branch
17/11/2005

From the President's desk

Best wishes for 2006 to all Grassland Society members.

I hope both seasonal conditions and commodity prices will be favourable for livestock and grain producers at a time when costs of production and in some cases market frustrations combine to put more pressure on primary producers.

The Grassland Society strives to improve the flow of information from a wide range of sources to all of our members. This newsletter, so capably edited by Haydn Lloyd Davies is one example of our communication channels. Another is the internet site, recently upgraded by Leah Lane from Glen Innes. The site is an increasingly valuable source of technical information, with many easy to follow links to seed and fertilizer companies, government agencies and many other areas of direct relevance to members. All members now have a password that will allow them access to the "members only" area with open access to a lesser range of information available to non members.

We welcome letters to the editor on most topics. The Society does not wade into political debates, leaving those matters to industry organizations. We are pleased to print letters on most topics of relevance to native and improved pastures, their integration into cropping systems and livestock production.

Please put the 2006 conference dates into your diary or calendar – *25th to 27th July*. (Note that this is one week later than previously stated.) The conference is now shaping up very well with first class speakers on relevant subjects of interest to all members. The conference organizing committee is hard at work to put together yet another stimulating experience. We owe a big "thank you" to NSW DPI and CSU staff and representatives of various private sector organizations for their hard work. A full list of committee members appears in each conference proceedings to acknowledge this great effort.

Best wishes to all.

Mick Duncan

THE GRASSLAND SOCIETY OF NSW INC.

**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 563 members and associates, 75% of whom are farmers and graziers. The balance are agricultural scientists, farm advisers, consultants, and 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.

OFFICE BEARERS OF THE GRASSLAND SOCIETY OF NSW - 2005-2006

STATE EXECUTIVE

Mick Duncan (President)
Rob Eccles (Vice President)
Dianne Smith (Secretary)
Linda Ayres (Treasurer)
Rob Eccles (Sponsorship)

Committee: John Coughlan, Hugh Dove,
Haydn Lloyd Davies, Richard Bloomfield,
David Harbison, Frank McRae, Lester
McCormick, Belinda Hackney,
Peter Johnson, Mike Keys

BRANCH REPRESENTATIVES

North Western Slopes

Loretta Serafin

Central

John Coughlan

Southern Tablelands

Peter Simpson, Hugh Dove

South Western Slopes & Riverina

Peter Orchard, Alison Bowman

Western Slopes & Plains

Di Foran

Northern Tablelands

Mick Duncan

APPLICATION FORM

Name:

Address:

.....

.....

..... Postcode.....

Subscription for 2005/2006 (July to June)
is \$50. This entitles you to copies of the
Newsletters and a copy of Annual
Conference Proceedings.

For more information, please contact the
Society's Secretary, Dianne Smith
(telephone: 02 6362 6150).

Send membership application to:
The Secretary
Grassland Society of NSW
PO Box 471
Orange NSW 2800