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NEWSLETTER

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The society had an excellent annual conference. Not only were the presenters, whether technical or producers very good but the selection of bus tours was excellent – so much so that the state committee is considering holding them again at the next committee meeting for those who missed out through having to make a choice. Thank you Michael Uttley and your hard working and effective committee. We are hopeful that we will move south next year, hopefully at Wagga Wagga.

One of the pleasures of the bus trips and the visit to Orange was to see that they had received some good rains in June and July and we saw some magnificent young pasture ready for grazing and no need for supplements. Hopefully there will be some follow up Spring rains.

CONTENTS

Editorial cont.

One of the strengths of the Society's Conferences is the contribution of our producers. We would deeply appreciate contributions from producer members for our Newsletter. Looking forward to hearing from you.

Regretfully we had to say goodbye to three valued members of the state committee – Greg Condon our treasurer, John Ive from Canberra and Katrina Watson. We welcome on to the committee Peter Johnson from the Orange Agricultural Institute, Belinda Hackney and David Harbison a researcher into plant and soil nutrition and now a private consultant in Orange.

The issue of Global Warming and climate change is seldom out of the media- usually all doom and gloom. In a recent issue of "Grass and Forage Farmer (the British grassland society newsletter) Dr. Alan Hopkins of the Grassland Research Institute at North Wyke states "the ready acceptance by most climate scientists for the UK is that the most noticeable effect will be slightly hotter summers (two to three degrees) in central England by 2050 and wetter winters." We hope soon an appropriately qualified climate scientist will inform us of the probable situation in Australia.

Haydn Lloyd-Davies
Editor

How much groundcover?

Warren McDonald
Former Technical Specialist (Pastures), NSW Department of Primary Industries, Tamworth

During the mid 90's agronomists on the Northern Slopes conducted a very successful extension program called "Saleable Stock from Stable Pastures". The program's aim was to provide a strategy to sustainably increase livestock production by correcting pasture nutritional deficiencies and using better grazing management to enhance groundcover.

While this project was targeted at the Northern Slopes and Upper Hunter, the extension messages were taken up readily across NSW and elsewhere.

The project used 70 percent groundcover as a minimum groundcover guideline. This followed research by Des Lang of the Department of Infrastructure, Planning and Natural Resources on a gently sloping red clay soil in the Upper Hunter Valley. This work showed that water run off and erosion both increased rapidly below 70 percent groundcover. However, the adoption of this value for other areas and situations was of a concern, clearly, optimum groundcover varies withy factors such as soil erodibility, as well as slope and likely rainfall intensity and amount.

Minimum groundcover values for other situations and areas were subsequently obtained using SOILOSS, a decision support soil erosion model developed by Col Rosewell at the DIPNR Gunnedah Research Centre. This model is a very useful tool and was used to calculate the groundcover requirements based on the variables mentioned above. Where necessary, values were modified where the authors and colleagues felt that other factors (eg plant type) also have a role.

The results have recently been published as an Agfact titled "Maintaining groundcover to reduce erosion and sustain production". It has been designed to assist producers in other areas and situations in NSW decide on the minimum amount of groundcover needed to significantly reduce erosion and water run off.

Estimates obtained for the Tablelands regions are provided below as an example.

The Agfact also provides useful guidelines on how to estimate groundcover and outlines relevant pasture characteristics that should be considered when selecting pasture species to reduce erosion and water run off.

The Agfact can be obtained from your local office of DPI or on line at www.agric.nsw.gov.au. (Find "Field crops and pastures", then "Pastures", then "Pasture management")

Reference

Lang, Des and McDonald, Warren (2005). Maintaining groundcover to reduce erosion and sustain production" Agfact P2.1.14 NSW DPI.

Estimates of minimum amounts of groundcover (%) required to reduce excessive run off and erosion and sustain productivity for a range of gradients (as defined) and soil erodibility classes.

Armidale, Orange		**Paddock slope**			
Erodibility	**Typical soil types**	**Flat**	**Gentle**	**Moderate**	**Steep**
Low	• deep sands	60	65	80	90
Low-moderate	• sandy loams, light clays • uniform clays, kraznozems and euchrozems (ferrosols)	60	70	85	95
Moderate-high	• loams • self-mulching black earths (vertosols)	60	75	85	100
High	• silts, fine sandy loams • red-brown earths (chromosols), red and yellow earths (kandosols) • solodics (sodosols)	60	80	90	100
Low-high	• drainage lines (all soils types)	100	100	100	100

Northern Tablelands Branch Field Day Report Supplementary Feeding – Path to Profit or Pain in the Pocket?

Carol Harris
NSW DPI, Glen Innes

On the Northern Tablelands a very dry late summer and autumn (the driest autumn period at Glen Innes since 1965) have meant that a lot of graziers are now facing at least supplementary feeding through winter and if conditions worsen, full drought feeding.

The decisions of what, when and where to feed are always difficult to make. The Northern Tablelands Branch of the Grassland Society in conjunction with NSW Department of Primary Industries and Granite Borders Landcare hosted field days at 'Bald Blair' Guyra and 'Giru' Deepwater in April 2005 to provide the information to make these decisions a little easier. The field days titled "Supplementary Feeding – Path to Profit or Pain in the Pocket?" were well attended by 150 local producers and covered the principles of supplementary feeding, the use of feed supplements for sheep and cattle, affects on production, availability and the costs of various feeding strategies.

Lewis Kahn from Agricultural Information and Monitoring Services and the University of New England kicked off each day with a presentation on the principles of feeding livestock and some of the decision making aids available. Lewis discussed the need to assess pasture quantity and quality as well as the five principles of feeding livestock; 1) Optimise the growth and activity of rumen microbes, 2) Be aware of substitution, 3) Provide bypass protein to animals with high feed requirement, 4) Be prepared to change supplement or feed and 5) Evaluate the feeding program.

Ian Blackwood, District Livestock Officer (Beef Products) from the Department of Primary Industries Paterson gave an informative presentation on managing cow liveweight (and hence fat score) over the winter months so as to maintain 2005 and 2006 calving patterns for beef production. Ian discussed the various options available to do this as cheaply as possible and ran the audience through a series of examples using the NSW Department of Primary Industries cost calculator which can be accessed through the Department's web site (www.agric.nsw.gov.au).

The next presentation from Michael Lollback, Sheep & Wool Officer with the Department of Primary Industries at Tamworth was on the opportunities and benefits of supplementary feeding in Merino breeding enterprises on the New England tablelands. Michael discussed the features of New England production systems, how to identify critical periods in these production systems and the benefits of supplementary feeding at these times. Michael concluded with some results from the Lifetime Wool Project site at Armidale.

As always the Grassland Society of NSW endeavours to provide a mix of science & theory with practical application and the final session at each field day saw local producers provide this balance. Sam White from Bald Blair at Guyra and a panel of Emmaville and Deepwater graziers (Bob Coldham, Murray Scherf, John Bastardi and Geoff Farlow) at Deepwater gave an account of their experiences with supplementary feeding and the evaluation processes that they go through to decide when and what to feed.

For more information or a copy of the field day proceedings contact Carol Harris, NSW DPI Glen Innes on 02 6730 1900 or go to the members section on the Grassland Society of NSW web page www.grasslandnsw.com.au.

If you have paid your 2005/06 subs by electronic banking, and haven't advised the secretary, please do so, as we cannot update your membership and send you a copy of this year's conference proceedings if we don't know you have paid.

There are a 2 or 3 entries we cannot identify, so please phone the secretary on 02 6362 6150 or email secretary@grasslandnsw.com.au with your advice.

Thank you.

This table was inadvertently omitted from the Harris and Lowien poster paper – Evaluation of tall fescue varieties on the Northern Tablelands of NSW. We print it here with the conclusions from the paper. (Ed.)

Table. Establishment, seedling vigour, yield and spring plant frequency of 15 tall fescue varieties evaluated at Glen Innes on the Northern Tablelands of NSW from November 2001 to November 2004. Means within columns followed by the same letter are not significantly different.

Cultivar	Establishment (Plants/m^2)	Shoot length (mm)	Total yield (kg DM/ha)	Spring Plant frequency %		
				2002	2003	2004
Advance	89 cd	199.5 defg	3744 hij	45	38	37
AU Triumph	107 de	254.8 b	7040 bcd	64	60	71
Demeter	67 abcd	232.3 bcde	6865 cde	51	68	75
Dovey	68 abcd	233.3 bcd	9223 ab	62	58	79
Dovey+Prosper	152 f	233.0 bcd	8381 abc	61	50	57
Fraydo	100 de	240.5 bc	3814 hij	59	50	39
Jesup	79 bcd	201.9 defg	4972 fghi	55	47	59
Prosper	149 f	228.8 bcde	3989 ghij	51	43	43
Quantum	152 f	297.0 a	9860 a	78	68	83
Resolute	164 f	219.2 bcdef	3405 ij	57	48	34
Torpedo	139 ef	176.6 g	3056 j	47	40	52
Typhoon	33 a	223.8 bcde	5259 defgh	38	42	66
Vulcan	96 cd	183.5 fg	5760 defg	63	44	65
106	41 ab	205.3 cdefg	5210 efghi	45	36	55
108	56 abc	202.8 defg	6491 def	42	46	78
l.s.d. * P<0.05	40.46*	37.20*	1791*			

Conclusions

On the Northern Tablelands of NSW where the temperate types of tall fescue are well adapted relatively new varieties (post 1990) have been evaluated for establishment, seedling vigor, yield and persistence at Glen Innes. The varieties Quantum and Dovey showed significantly higher production than the traditional varieties of Demeter and AU Triumph but persistence over 3 years was comparable. The winter active Mediterranean varieties of tall fescue did not

perform well in this evaluation and appear to have limited use on the Northern Tablelands. It is important to continue this evaluation to provide more long-term data on persistence as well as evaluate tall fescue over a wider range of geographical locations.

Grazing Management Changes Needed in Future

Bob Freebairn
Regional Director of Agriculture, DPI, North West New England Region

Where the drought has broken (or at least temporarily broken), a common observation has been that some paddocks responded quickly and provided extremely useful feed, while adjoining paddocks provided almost no feed.

In many cases these comparisons offer guidelines for best management to ensure pastures survive droughts and quickly return to post-drought productivity. Some key points are groundcover (plant remains, either butts/debris), organic matter, pasture type, pre-drought/drought/post-drought grazing management, and soil fertility.

The more a paddock has been grazed bare and the lower the groundcover, the greater the risk of rapid water run-off. As a general rule on country with 70 percent or more groundcover, even on moderately sloping country, run-off is minimal. In contrast bare soil commonly sees almost all moderately or greater intensity rain runs off.

This leads to the need for a radical rethink of grazing management for many people. While the use of various supplements, and constant grazing, has seen the last skerrick of feed utilised, this has been at the expense of feed production once a break occurs. Soil erosion losses follow a similar trend with high risks of major erosion when groundcover is below 70 percent.

Low organic matter, generally resulting from long periods of overgrazing, cultivation, and poor soil fertility, also means water infiltrates into the soil only very slowly. Therefore the increased risk of run-off, and the less feed grows following rain. The difference in infiltration rate for a low verses high organic matter area can be fivefold.

Perennials generally respond much quicker to breaking rains. Annuals take time to germinate and develop roots. If it turns dry soon after rain they may not have had time to establish before top-soil moisture dries out. Early plant death is the result. In contrast perennials quickly activate an existing root system and within days provide good feed.

Research involving over 100 DPI trials since the 1980s in areas of the north west, central west, and Hunter has almost always shown that pastures where soil nutrient deficiencies were corrected, produced 10-12 kg/ha/drymatter per mm of rainfall. In contrast drymatter production was generally two- five kg/ha where deficiencies were not addressed.

Pre-drought grazing management is important. Perennials with good root reserves coming into the drought can almost certainly cope longer with drought stress. Not necessarily strict rotational management, but some degree of allowing plants to regrow and rebuild root reserves prior to grazing is important for many if not most perennial species.

When breaking rains occur there is the need for pasture grazing as soon as possible. However unless a pasture is allowed to get going, early grazing generally has a very detrimental effect on pasture productivity and persistence.

DON'T FORGET

YOUR 2005/2006 SUBSCRIPTION

IS NOW DUE

A Grain & Graze trial at Condobolin has introduced a perennial shrub to the cropping system to try to reduce profit variability on mixed farms from year to year.

***Libby Roesner**, DPI Condobolin*

By incorporating alleys of old man saltbush in crop and pasture paddocks, researchers hope to improve the quality and reliability of summer forage for stock.

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 nine regions in the grain/sheep/beef zone of southern Australia participating in Grain & Graze.

The Central West / Lachlan region consists of six sub-projects – one is integrated farming systems in the west of the region. This project is researching the economic and environmental potential of alley farming, using forage shrubs, in a mixed farming system.

At Condobolin Agricultural Research and Advisory Station, a large trial is underway to investigate the benefits of integrating old man saltbush (OMSB) alleys into conventional cropping paddocks.

Previous research has found that, with appropriate management, OMSB is capable of supplying a consistent feed source over a long period of time due to its persistent leaf. Also, feed utilisation of OMSB is high as stock can't foul or trample the plant; and it is high in protein, but low in energy.

This positions OMSB as an excellent complement for the high energy, low protein dry feed available over summer from senesced annual pasture and crop stubbles – something which is being explored in the Condobolin trial.

There are 30 ten-hectare paddocks in the trial and each paddock is paired with a similar, adjacent paddock. For each pair, the stage in the rotation is the same however, one paddock has saltbush alleys planted on 20 per cent of the area; the other does not. Paddocks will be in a three-year-pasture, two-year-crop rotation. Two flocks of Merino ewes (which will be joined to terminal sires in summer) will be rotationally grazed through the

paddocks. One flock will only graze paddocks which contain OMSB whilst the other will only graze paddocks without saltbush.

Throughout the trial each paddock will be monitored for animal, crop and pasture production as well as any effects on soil health, deep drainage and biodiversity. At the end of the four-year trial the economic and environmental benefits of each system will be assessed.

Grain & Graze research agronomist Richard Maccallum said he anticipated there would be an increase in sheep productivity, and therefore profitability, in the paddocks with saltbush. "With a secure feed supply over summer, farmers should be able to produce not only wool, but prime lambs as well in the autumn period," he said.

Mr Maccallum said the reduction in cropping area in the paddocks with saltbush may reduce grain yield. However, "the farm system overall, we are hoping, will be more profitable."

Alley farming should not only prove more profitable, but more sustainable as well said Mr Maccallum. He said the saltbush could help address soil drainage issues and increase biodiversity.

"We are planning to monitor paddocks for biodiversity," he said, "as we suspect there may be more invertebrates in the alleys due to the litter that forms under the saltbush plants."

Mr Maccallum said there had been a lot of hype about saltbush in recent years. "It's been thought of as a living haystack – you just put it there and use it when you need it," he said. "We are hoping to show with appropriate management, there's a much better way to utilise it. By grazing it at least every twelve months, and grazing the leaf when it's young, you can get much more out of it than first thought."

The Central West - Lachlan Grain & Graze project, due to conclude in 2008, involves 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.

Farmers who want to get involved in their regional Grain & Graze program should visit the website at www.grainandgraze.com.au or email libby.roesner@dpi.nsw.gov.au with their details to be on the distribution list for the Central West / Lachlan region.

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.

In the know about local Grain & Graze

Do you like to be kept in touch with what is going on in your region? Do you want to know what courses, workshops and field days are coming up? The Central West/Lachlan Region Grain and Graze group and their partners are producing a unique email distribution list to ensure that all those who are interested are kept up to date with news, activities, training and field days as they occur in our region. Of course you will be kept up to date with results from research projects and what is happening though regular articles in this Grasslands newsletter. However, to ensure you receive timely information about any news events, activities or training opportunities, please send us your contact details:

Name: _____
Company: _____
Role: _____
Producer? Yes / No
Email address: _____
Postcode (required): _____

This is an electronic service **only**. 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.

Send to: Libby Roesner, CW/L Grain and Graze Coordinator
P.O. Box 300, Condobolin, 2877
Or email: libby.roesner@dpi.nsw.gov.au with the above information.

Conference Report 2005

We have benefited from another very good conference in Orange this year. We are all grateful for the hard work of the Conference Committee headed by Michael Uttley and the efforts of Frank McRae in oganising the conference proceedings.

The pre-conference bus trip was the 'Mine and Wines' tour. We went to Newcrest's Cadia Valley operations where they are extracting gold and copper from large scale open pits from massive low-grade orebody. This is the first time that I have ever seen such an operation. This is a massive enterprise but the general message of 'respecting the environment' permeates the planning of the company and it states that the huge excavation would eventually be refilled and re-vegetated with indigenous species.

The mine visit was followed by a visit to Ibis Wines close to the Orange Botanical Gardens. There we had the privilege of a free tasting of excellent red and white wines. A great start to the conference!

The Annual General Meeting was held at Hotel Canobolas. We were welcomed by President Mick Duncan. The minutes of the 2004 AGM were read by Dianne Smith and accepted by the meeting. The President's report commented on the excellent Gunnedah Conference, on the improved number of current members (570) and thanked the organising committee of the current conference for the excellent job they had done.

The Treasurer's report was read by Dianne on behalf of Greg Condon. It stated that there was $33,500 in the current account and $50,000 invested at 5.8%. Sadly this is Greg's last report. Pressure of his work has meant that he has had to resign from the committee. Thank you Greg.

In addition to Greg we are losing the very good services of Rosemary Sweet, John Ive and Katrina Watson. We welcome Di Smith as our Secretary, Linda Ayres as our Treasurer and new committee members David Harbison, Peter Johnson and Belinda Hackney. Mick Duncan who has done a really great job remains as President. Members remaining on the committee are: - Rob Eccles as Vice-President, John Coughlan as immediate Past President, Haydn Lloyd Davies (editor), Frank McRae, Hugh Dove and Richard Bloomfield.

My wife, Helen, and I thank the local committee very much for the beautiful flowers, gifts and wine for our combined effort in formatting and editing papers to conference practices. At the end of the AGM we all enjoyed the opportunity to fraternize over drinks and the very good nibbles.

On Wednesday morning, at The Orange Ex-Services Club, Mick

Duncan as President opened the ***Conference.***

The first paper of ***Session 1-Life under the soil*** was a particularly relevant presentation by Bruce Clements, District Agronomist at Bathurst, on 'Landscape Indicators – "What your country is telling you" '.He discussed, with appropriate presentations, the role of climate, topography, aspect, geology, soil, vegetation (trees, native pastures, introduced pasture species and weeds) and finally human influences.

The next speaker was Dr V V S R Gupta and the topic was 'Life under the soil surface in pasture systems'. Dr Gupta and his co-authors M H Ryder and K Roget are all from CSIRO Land and Water at Glen Osmond in South Australia. I urge those who could not attend the conference to read what he said are the major constraints on soil biological activity. In his oral presentation he gave further information on rhizoctomia. I will try to get a contribution on this for the newsletter.

The next paper was a very good producer paper on 'Operating a grazing property in a high rainfall tableland environment' by Bruce Gordon of 'Oatleigh' Millthorpe. The paper contains a great deal of valuable information, particularly on fertilizer practice and his actual dry sheep equivalents per hectare. He details his productivity over more than a decade, his profit per hectare and his future objectives.

Morning tea gave us a chance to look at the poster presentations and the demonstrations by our generous sponsors.

Session 2-Life under the soil began with a presentation by Dr David McKenzie of Precision Land Management, Orange on 'Soil assessment for pasture production that considers both physical and chemical factors in the topsoil and the subsoil. He showed there was a need to go deeper than 10 cms when soil sampling for pasture production. He stressed that despite the extra cost a depth of one metre should be considered. David also stressed that soil samples should not be bulked.

He carried out a case study on Ben Watts' who is the manager of property 'Belgravia' near Orange. Very appropriately the next presentation was by Ben Watts on "Using soil assessment for pasture production that considers both physical and chemical factors in the topsoil and subsoil. Ben watts stressed that sampling to only 10 cms, missed at least two factors affecting plant growth. These were (i) sub-soil acidity and low levels of sulphur preventing plant roots from penetrating this layer where a large amount of moisture and soil nutrients were stored and (ii) compaction in the upper subsoil (30-60cm) was preventing root and water penetration into the sub soil. A paddock by paddock improvement plan had been developed to allow continuing pasture improvement,

increasing carrying capacity. By reducing input costs on low productivity soils with a high cost of repair and focusing on soils with high production capability, the return per dollar invested in pasture improvement was significantly increased.

In the afternoon we had the choice of three ***Bus Tours***. We chose the tour that gave us the opportunity to look at Olive farming (a complete new world to me), Boer goats and a well-farmed Angus stud., Merino sheep and crops property.

We had no regrets about our choice. Ross and Angus Bragg at Daylesford fully explained the whole system of olive production for the gourmet market from their three thousand olive trees. The next visit was to see Marie Barnes' Royal Show prize-winning Boer goats. Boer goats have been imported from South Africa are a very docile breed (or the ones we saw were!) bred specifically for meat production. They are also used for crossing with Australian feral goats.. The final visit of Tour 1 was to Des and Sue's Balcomb's property "Frisby Park", Cudal. Thanks to the June rains and the skill and knowledge of the owners we saw some of the best young, weed-free pastures that were ready for grazing.

The other tours both looked very interesting - 'Central slopes grazing systems' and 'Tablelands grazing systems' Many thanks to the organising committee for offering such a wide-ranging and interesting choice of trips with an excellent Bus Tour Booklet and to the property owners for being such great hosts and clear exponents of their enterprises.

The ***dinner*** was conveniently held at the Orange Ex-Services Club.. The guest speaker, who kept us amused (not unexpectedly), was Kerry O'Keefe who reminisced about his ashes career and the drinking exploits of some of his colleagues.

The first session on Thursday morning-***Session 3 Endophytes and Grass*** was on an important topic that has risen to prominence (particularly in the Northern Tablelands) in the last few years. The first paper was presented by Dr David Hume (co-author Dr GP Cosgrove) from the Palmerston North (New Zealand) Grasslands Research Centre on 'Endophyte- what is it and its significance in New Zealand pastoral agriculture. David defined 'endophyte' as a fungus that may live within the grass plant. There are many species of endophyte with both benefits and disadvantages. The benefit in ryegrass and tall fescue is when infection may result in increased herbage and root growth. The disadvantage is that it may cause ryegrass staggers and a slight effect on milk production in dairy cows.

Warwick Wheatley talked on 'Endophyte infected perennial ryegrass and tall fescue for New South Wales?'. The benefits of endophytes were found to include greater seedling vigour, establishment, production and

persistence. The disadvantages were that in some strains endophytes would produce perennial ryegrass and tall fescue staggers. Pasture seeds may be bought infected with an appropriate beneficial endophyte.

Session 4-Natural Sequence Farming was addressed by Prof David Goldney describing holistic land management practice specially designed to address land degradation and repair biodiversity loss. He illustrated his presentation with photographs of interfering in the floodplain to create (i) appropriate small scale leaky structures to slow down water flow and (2) additional channels running parallel with the stream.

Peter Andrews, on whose property, 'Barramul Stud Widden Valley' where most of the work on 'natural sequence farming' was done, discussed the ideas involved in the system, based on his own experience.

The first of the C***oncurrent Sessions*** I attended was by R E White on 'Lamb feeding – a simple and efficient system'. This was a guide to lot-feeding for prime lamb production. A particular advantage of high–energy feeding was the very high efficiency of feed to bodyweight gain.

The second presentation I attended was a very clear presentation by Brian Dear of the Department of Primary Industry, Wagga on the effect of time of cutting subterranean clover on yield, feed quality and seed set. He and his co-workers studied the effect of cutting on 22 Sept. (early silage), 9 October (late silage) and 25 October (hay) in two successive years on forage yield, feed quality and seed set on Seaton Park, Junee, Goulburn and Clare sub clovers. They found forage yields increased with the late silage cut but declined with the hay cut; the later the cut the lower the digestibility and protein%, seed set and subsequent seedling regeneration.

The first speaker for ***Session 6 - Grazing Management –changes ahead*** was Karl Behrendt on 'Grazing management systems –what's best for your farming systems'. He stressed the importance of knowing the economics of your paddock system. The broad array of investment alternatives for the development of the farm, such as grazing management and pasture improvement demands a need for managers to improve their knowledge of how the different options interact, their cost and the effect on profit.

The next presentation was by John and Jan Powell of "Woodvale", Old Gap Road, Yass on 'The Shift from wool to meat – implications for conservation of tableland native grasses'. From the late 1980s they had improved their pasture, trebling their carrying capacity of Merino sheep with 16 micron wool.. In 2004 disappointed (like many members) in the lower wool prices they changed to an all ewe flock and introduced 18-19 micron rams. They intend to further subdivide, put more super on the wether paddocks to convert them into lambing and growing out paddocks.

Direct drilling of Phalaris into paddocks that have had more than 10 years of super. is also a possibility.

The final two papers did not arrive in time for publication but copies were available to attendees. One of the papers was by Stewart and Alison Osborne of Lawarra, Koorawatha on "Implementing a low-input, high profit grazing system." They decided to redesign their business after seeing worrying wind erosion in the drought of 2002/3. They have sown nearly the whole property to perennial pasture, sold all breeding stock and eventually all sheep and using bought-in steers they are using their version of Time Control Grazing (TCG). They have subdivided their paddocks (currently 80 targets 120.) and aim to match stocking rate to feed supply and resting some paddocks. They are pleased with their animal performance -0.85 kg/day. They are also aiming for 100% ground cover.

The other of the two final papers was by Robert Stanbridge of "Trelawarren", Blayney 2800 on 'A simple grazing system for productive and persistent pastures: still working10 years on'. The Stanbridge property obtains 60% of income from lamb production, 25% from beef production and up to 15% from grain and hay production. A decade ago Robert won the NSW Grassland Society Pasture competition. He has successfully maintained a productive and persistent ryegrass/clover pasture despite some bad droughts. As with the Osborne papers I urge members who did not attend to obtain copies of these two very good papers either directly from the authors or from "The Grassland Society, PO Box, 471, Orange NSW 2800.

Our president Mick Duncan closed this very good conference with many thanks to Mike Uttley and his hard working and very effective committee; to our generous sponsors without whom we could not have put on a conference the great effort put in by all the contributors and in some cases those who helped them. This conference was really outstanding. Thank you everybody.

Haydn Lloyd Davies.

Hawkesbury Nepean Catchment Management Board

Wollondilly and Upper Nepean Catchment Inspection

TREES AND PASTURES – FINDING A BALANCE

PART 3

Peter Simpson

former Regional Director of Agriculture, NSW Agriculture, July 2003

ECONOMIC REALITY

The grazing industry on the Tablelands has been going through a very difficult period since the early 1980s, and the current drop in market prices for wool and associated poor seasonal conditions, is an incredible hurdle to overcome. The structure of the grazing industry in the higher rainfall areas does not help, with up to 70% of farms being either at risk or structurally non-viable and many having to rely on off-farm work to keep their head above water.

I believe, for many, the sad reality is that medium to long term investment decisions, eg. correction of soil acidity, pasture resowing and/or fertiliser programs, revegetation and agro forestry, will be put on the back burner unless there is a significant range of incentive schemes put in place that recognise there is a clear off-farm benefit for agreed programs, minimising or progressively overcoming landscape degradation issues.

GREENHOUSE GAS EMISSIONS AND AGRICULTURAL IMPLICATIONS

Australia has not signed the Kyoto agreement committing us to reduce greenhouse gas emissions to 1990 levels or below by 2005. Suggested strategies for reduction include:

a) Carbon tax ranging from $10 to $60 per metric tonne pa.
b) Improved energy efficiencies.
c) Better land management practices.

In the short to medium term (next 20 years) agriculturally, the bulk (about 80%) of the projected reductions in greenhouse gas emissions are projected to result from more sustainable land management practices and, in particular, better pasture management, revegetation and agroforestry (40-60 metric tonnes pa).

There is a strong possibility that a world market will emerge for trading carbon credits in the 21st century and, if so, this will provide a strong stimulus for corporate and private investment where agroforestry has a commercial reality. In non-

commercial locations vegetation incentives may have to be created where catchment or on farm vegetation is required for conservation reasons.

I believe it is the high rainfall areas of Australia (above 600mm pa) where the environment and freight/infrastructure requirements are likely to be compatible. There is also the added flow-on benefits, eg. reduction in dryland salinity, erosion, noxious weed control, clean water, etc. that will occur to urban and rural Australia. In fact, when you consider that over 80% of **all water** harvested in NSW comes from the high rainfall Tablelands areas of NSW (less than 10% of NSW) then catchment and whole farm management practices that protect ground cover and clean water become paramount.

CONCLUSION

My priorities for action would be as follows, and these focus on those areas where the benefits from trees are clear cut and the costs involved in revegetation are minimal.

- Realigning fences to maximise the benefits from existing aspect and topography on-farm and, where possible, realigning those to protect remnant timber.
- Protecting remnant timber where there is likely to be a natural recovery and/or linking that to the overall objective of maximising livestock benefits and creating wildlife corridors.
- Retiring those non-arable areas of the farm where there is a legal responsibility and associated costs with noxious weed control and/or where pasture development is uneconomic (ie. carrying capacity is estimated to be well below 5 DSE/ha).
- Consider an integrated plan combining both native and exotic vegetation that is going to enable diversity of benefits, with the possibility of long term selective harvesting of some of the trees by your children's children.

LOOKING TO THE FUTURE

It was sobering to re-read the key recommendations from the first National conference on the role of trees in rural landscapes in 1980 (over two decades ago!), ie. the creation of incentives, better coordination and planning/implementation etc. and to note that these are still key issues needing to be solved today. One could not accuse policy makers of hasty decision making.

Farmers are well aware of the on and off farm benefits of maintaining perennial species and ground cover. The sad reality is, when you're battling for economic survival, short term cash flow decisions dominate resource allocation.

Issues that have medium to long term on-farm benefits (6 to 10 years or longer), eg. topdressing lime on acid soils, pasture renovation and

vegetation programs will be placed on the back burner unless significant incentives are created. Australia has one of the most urbanised societies in the world expecting and getting clean and cheap water, food, energy etc. with minimal or no pollution problems.

Agricultural producers can and have provided these basics in a variable and challenging climatic, soil and economic environment.

The long term effects of increasing agricultural efficiency has (and will continue to do so) place ongoing financial and structural pressures on both producers and some landscapes.

Solutions will have to be based on a partnership between urban consumers and producers, and this means an ongoing capital injection outside of farm cash flow and a serious review of tax and land laws.

These could include:

REVEGETATION INCENTIVES

- Tourist environmental tax $X per head.
- Carbon tax on industry creating greenhouse gas emissions.
- Refund of carbon tax credits to revegetation programs
- Water users tax per litre (ie. envionmental levy).

Provided the funds are usually primarily for on ground work I believe these taxes would be politically acceptable (urban surveys confirm this) and would enable a catchment approach that could be linked to approved on-farm work.

TAX AND LAND LAWS

The current tax systems does not encourage private investments into vegetation be it for conservation or agroforestry.. Similarly, local government consent laws, the right to harvest, native vegetation etc. need updating and linking to meet agreed State and Commonwealth goals.

Editor's Note. This is an updated version of a paper presented to a Bushcare Seminar at Goulburn 1998 when Peter Simpson was District Agronomist with NSW Agriculture.

Further reading (If original papers are not available ask at your local Department of Primary Industries' Office for copies).

* Greenhouse Gas Implications on Sustainable Land Management Practices. 1997. Hassall Report for DPIE, Canberra

* Plantations for Australia – The 2020 Vision. 1997 Ministerial Council on Forestry, Fisheries and Aquaculture, Canberra.

* Focus on Farm Trees. 1980. proceedings of National Conference, University of Melbourne.

* Focus on Farm Trees. 1984. Second national Conference, University of New England.

* Serrated Tussock Workshop Papers – Goulburn. NSW Agriculture. 1997.

* Managing High Rainfall Native Pastures on a Whole Farm Basis. NSW Agriculture. 1996.

* Field Day Notes – Pines on Farms. Department of Primary Industry & Energy. 1998.

* Yass Region Farm Forestry Conference Papers 1996. Yass & District Landcare Committee.

* Sustainability Indicators for Agriculture 1997. Rural Industries Res. & Devel. Corporation No. 97/72.

* Islands of Bush in a Sea of Pines. D. Lindenmayer, Aust. National University. Land & Water Research Report 6/00 PR000342.

* Conservation Hindered, C. Binning, M. Young. CSIRO Wildlife & Ecology. Land & Water Research Report 3/99 PR990338.

* Plantations, Farm Forestry and Water. Proceedings of National Workshop 2000. RIRDC Publication no. 01/20.

* An Assessment of the Potential for Plantations Development in NSW ABARE and BRS report 2001.

* Trees, Water and Salt. JUAP Research Update No. 1, RIRDC 2000. Publication no 00/170

This is the final part of Peter Simpson's report

From the President's desk

Greetings to all members. I trust you all received the very welcome rain of early September. Great for winter cereals, pastures and early fallows for northern summer crop preparations.

As most members would be aware, the July conference in Orange was a great event. The organizing committee with Michael Uttley as convenor, put together a stimulating collection of speakers and topics that would have been of interest to all those who attended. With divine assistance, they also organized the best weather I can remember for Orange in July. As a result, the bus tours were not only very informative, but enabled us to enjoy delightful, clear skies as we listened to speakers or ate our picnic lunches.

Grassland conferences regularly combine new technology with good, farm proven practice. Such was the case at Orange where we were able to hear of developments with endophyte in pasture grasses, dual purpose winter wheats, new fescue varieties, grazing management of saline lands and many more. Posters were of a very high standard once again and they too covered a diverse range of topics.

Members who were not able to attend will be able to look through the conference proceedings and perhaps follow up by contacting the authors.

Next year's conference will be held at Wagga, a very good location with plenty of scope for topics and speakers. More details of the theme and topics will appear in later newsletters.

Thank you to members attending the AGM for my re-election as president for a second term. Once again I look forward to the challenge of working with the state committee to provide even better services to members. In this regard, your suggestions would be very welcome. I would also like to welcome some new members to the committee – Belinda Hackney (Wagga), David Harbison (Molong) and Peter Johnson (Orange). Fresh ideas and people are important to the Society and I thank Belinda, David and Peter for accepting their nominations.

A quick reminder to anyone who has neglected to pay the 2005/06 subscription of $50.00. Remember, non financial members will not receive a Proceedings, which in itself is well worth the annual sub, so please check on your financial status and if it has lapsed please send a cheque to PO Box 471, Orange 2800. If in doubt contact the secretary Dianne Smith at the same address or call 02 6362 6150.

Best wishes to all for a bumper spring.

Mick Duncan,
President

Australian Society of Animal Production

A group of us are trying to revive the Sydney branch of the Australian Society of Animal Production. It is completely dead in Victoria and South Australia (total Federal membership – 128!).

Members of the Grassland Society may be interested to attend ASAP's next meeting on Wednesday 16 November at Tocal. The topic is Pasture Toxicities. The first speaker will be Dr Ian Lean, Camden, on Perennial Ryegrass Toxicities; Assoc. Prof Peter Windsor, Sydney University Camden on Phalaris Staggers and Carol Harris, Glen Innes Research Station on Fescue Staggers.

All Grassland Society members are particularly welcome.

The probable time of start will be either 10.00 am or 11.00 am. Lunch will be provided at a reasonable cost. When we have more details we will contact you again. We hope to see you there.

Haydn Lloyd Davies

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

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Mick Duncan (President)
Rob Eccles (Vice President)
Dianne Smith (Secretary)
Linda Ayres (Treasurer)
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Committee: John Coughlan, Hugh Dove, Haydn Lloyd Davies, Richard Bloomfield, David Harbison, Frank McRae, Lester McCormick, Belinda Hackney, Peter Johnson, Mike Keys

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APPLICATION FORM

Name: ……

Address: ……..
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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