

Registered by Australia Post:

No PP 242028/00004

NEWSLETTER

VOLUME 21: NUMBER 4, 2006

Sadly, the first matter I wish to mention is that pasture research has lost three outstanding contributors during the last year. Firstly, at the Wagga Conference there was the announcement of the unexpected death of Alan Kaiser, the internationally recognised outstanding leader of silage research in Australia. Then there was an ‘In memoriam’ in ‘Grass and Forage Science’ to Professor ‘Willy’ Holmes, who held the Chair of Agriculture at Wye College, University of London, for 32 years. He published 150 papers on pasture/animal interactions in international journals and he wrote the standard textbook “Grass its production and utilisation.” Sadly, also in August we lost Dr Larry Satter, who directed the US Dairy Forage Centre, Madison, Wisconsin, USA from 1987 to 1998. He was one of the world’s foremost dairy nutrition scientists and like Alan Kaiser was a world expert on silage.

CONTENTS

Editorial (Haydn Lloyd Davies).....	1
Conference Report (Haydn Lloyd Davies).....	3
Report on Poster Submissions at the 21 st Annual Conference.....	9
Bus Tours of 21 st Annual Conference.....	12
Branch Reports.....	13
2006 Grassland Society of NSW Sponsors.....	17&18
Alan Kaiser Memoriam (J. Piltz).....	19
Notes on survival feeding in drought (Haydn Lloyd Davies).....	20
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.

In the previous Newsletter we remarked that 60% of New South Wales was drought declared. Unfortunately, the figure is now 90% drought declared and we seem to be headed for the worst drought year ever recorded. We fervently hope that it will end soon.

On a more cheerful note we had a very good Annual Grassland Conference at Wagga Wagga, where the emphasis was on the control of weeds in pastures. The Proceedings of the 21st Conference, excellently edited and produced by Belinda Hackney and colleagues, will be the most complete and up-to-date account of “Waging War on Weeds”. As usual there were some outstanding and stimulating papers by producer members.

We are hoping that the 2007 Conference will be in Yass. The convenor, who has already outlined some of his plans to the committee, is the very well known and highly respected district sheep and wool officer in Goulburn – Colin Langford.

We welcome on to the 2006-2007 committee the return of John Ive, and as new members we welcome Nigel Phillips and Steve Exton. Col Langford, in his role as Conference Convenor is ex-officio on the committee. We farewelled and thanked Belinda Hackney (she is now concentrating on her Ph.D) and Peter Johnson who has gone to the Falklands for two years.

This will be the final Newsletter for 2006. The committee extends to members and sponsors the very best wishes for the next season and hope, in particular, for some rain.

Haydn Lloyd Davies
Editor



CONFERENCE REPORT 2006

The theme of this year's conference was "Waging war on Weeds - Battle Plans and Winning Strategies". It was held at Joyes Hall, Charles Sturt University in Wagga Wagga. Generally fighting weeds in pastures is a greater challenge than dealing with weeds in crops.

Members who were not at the conference will have received the Conference Proceedings. The Society is particularly grateful to Belinda Hackney and her co-workers on the 2006 Conference Committee for a very well organised conference and to Belinda, Kristy Bailes, John Piltz and Helen Burns for the great job in editing the papers and preparing the proceedings for publication.

The conference was opened and everyone present welcomed by our President, Mick Duncan. In his opening he particularly stressed how grateful we were to our sponsors – without the support of our sponsors we could never put on the quality conferences we have enjoyed. The official opening on behalf of the E H Graham centre was given by Deirdre Lemerle, the Director.

The first paper was given by Peter Jacobs, head of Agribusiness of ANZ Banking group on "Setting the scene – 'Farming – a great means of wealth creation, but who is managing it?'. Among key aspects of business performance he mentioned 'As well as farming better and acquiring more land use the asset – rich farm balance sheet to invest in other sectors.' Simply put – the farmer must farm the farm and farm the farm capital.

The next paper by Randall Jones and Jack Sinden was on "The economic cost of weeds in pasture systems". They pointed out that the estimated cost of weeds to livestock industries based on pasture systems was 2,404 million dollars. The authors (as did later contributors) pushed for Integrated Weed Management (IWM) including grazing management as well as herbicides and fertilisers. They suggested an IWM strategy could improve economic returns by 70% over a 20 year period.

The final paper before morning tea was by Lynley Stone on "Weed introductions- what has been learned from the past that can help stop future weed problems". She pointed out that of the 27,000 introduced plant species, approximately 3,480 are considered weeds, and 954 of these are weeds of agriculture. The speaker also pointed out that the globalisation of commodity trading brings with it inherent risks of importing undesirable plant species.

After morning tea, which gave attendees their first opportunity to inspect the posters, Professor David Kemp gave a paper on "Weed management principles for permanent and ley pastures". He stressed that a pro-active approach to weed management in permanent pastures is far more productive than simply reacting to weeds with herbicides. He suggested that where possible producers should aim at having 1.5 tonnes per hectare of pasture on offer. He also

considered that when possible, producers should aim at 60% of perennial grasses in the herbage mass. He also mentioned that, because of the cropping phase, weed control in ley pasture was simpler than in permanent pastures.

The theme for the next session was “New and existing threats in southern and northern New South Wales”. The first paper on this theme was “New and existing weed threats in Southern New South Wales” by Birgitte Verbeek. She gave a very useful list of four categories of weeds in the southern grazing lands of New South Wales: - 1) Difficult to control weeds with limited distribution eg Chilean needle grass, Coolatai grass, Blue Heliotrope and Silver Leaf Nightshade; 2) Trees or shrubs with relatively small infestation - eg Gorse and Scotch Broom; 3) Weeds already widely distributed but expanding –Serrated tussock, St. John’s Wort, African lovegrass and blackberry; and 4) Weeds present and with potential to have a negative impact - eg – Nassella species, Stipa and Knapweeds. She lists weeds in each of those categories and who to contact for weed management information.

The Northern New South Wales situation was outlined by Andrew Storrie. He outlined the weed species that producers can learn to accept and use eg African Lovegrass, Coolatai grass, Chilean Needle grass and Giant Parramatta Grass. He then outlined weed species that can never be used eg serrated tussock, Espatillo and some other needle grass species

The next paper was an outstanding producer contribution by Alison Nicholls of ‘Yellangallo’ Gunning on “Conquering serrated tussock at Yellangallo”. She and her husband bought a serrated tussock infested farm in 1989. They started their attack with a spraying programme of Frenock (fluprofonate) at 2L/ha. The result –control of the tussock but what grew back were thistles and dandelions! They then formulated a new plan of attack including putting in a crop of triticale followed by sowing a cocksfoot/phalaris/subterranean clover pasture. They endeavoured to keep the pasture on offer at never lower than 800 kg/ha D.M. They planted tree-lots on the western edges and thereafter used spot spraying with careful choice of chemical. Their control methods have increased the carrying capacity of their pastures from 2-3 DSEs per ha to 7 even in drought. A great paper.

The next paper was also from a producer - Stephen Hunt of ‘Pineview’, Coolatai on “Utilisation of pastures dominated by Coolatai grass (*Hyperrhenia hirta*) in Northern NSW”. Most of us would regard Coolatai as a grass weed. Stephen, rather than attempt eradication found ways to utilise the Coolatai on his 1207 hectare property (450 ha are used for cropping). The Coolatai is grazed heavily in spring, summer and autumn. A dry supplement containing urea, ammonium sulphate and copper sulphate, mixed on farm is offered in open troughs. Cows are also supplemented with up to 1 kg/head of white cottonseed.

A special concern of producers, particularly in the Southern part of the State is the extent of serrated tussock resistance to fluprofonate. This issue was addressed by D.A. McClaren and co-workers. There was a national mail survey on resistance to 5,000 land managers with serrated tussock infestation. They found that 15 out of 400 respondents reported resistance and required further investigation. The survey also showed that tussock was costing between \$15,000 and \$20,000 in control and lost production. The authors stressed that land managers should NOT rely solely on herbicide type to control serrated tussock.

The last paper before afternoon tea was by one of the most consistent contributors to our society and the industry – Dr Brian Dear. His paper summarised glasshouse screening studies of the selectivity of pre and post emergent grass herbicides on cocksfoot, fescue and phalaris seedlings. All the grass herbicides caused moderate to severe phytotoxicity. Dr Dear suggests that because of the lack of suitable selective herbicides, other weed control strategies should be employed such as removal of weeds in the cropping phase or delaying sowing until early spring following a winter fallow.

The next paper was by Peter Lockley on “Herbicide tolerance of pasture legumes and herbs” His group evaluated the feasibility of using several pre-emergent, post sowing, pre-emergent and post emergent herbicides. Trifler X and Stomp both incorporated by sowing were found to cause minimal damage. None of the post sowing, pre-emergent was found to be acceptable except atrazine and simazine on woolly vetch. Peter’s paper emphasises that it is important to choose species with similar herbicide compatibility. The tables provide an outstanding guide.

The final paper of the first day was by Michael Moerkerk on “Are you importing weeds onto your property?” The short answer is “Yes”. Michael gives a valuable list of strategies to minimize the risks of introducing weeds starting off with “Know your weeds and potential threats” and then gives good advice on minimizing weed spread around the farm.

The first paper on Wednesday morning was by Royce Holtkamp who gave an update on current research on biological control of pasture weeds. He listed the target weeds and the biological control agents being tested including insects and plant pathogens. He stressed that although biological control can reduce weeds to minor components they will not eradicate a weed species.

The next paper was a producer paper by Max Cowie of “Koornong” Tarcutta on his experience in the “Successful biological control of Paterson’s curse”. He and his family tell an outstanding success story of bringing into control 225 hectares (initially 18 hectares!) of the weed. Working with Mathew Smyth they introduced the Paterson’s curse flea beetle. By 2004 with the use of the flea beetle Max had the Paterson’s Curse under control. Since ceasing

spraying they have noticed an increase in the return of beneficial insects and worm activity.

Returning to more mechanical control of weeds, Annabel Bowcher presented a paper on “Timing pasture cutting for weed management”. She discusses the effect of silage and haymaking to manage weeds in pastures. Details of the effect of cutting timer on botanical composition of a phalaris, cocksfoot, and sub clover pasture are given in the paper. The feed quality of the cut material was highest in early spring. There was no significant difference in the total amount of dry matter produced in the spring. The growth stage of the pasture weed at the time of cut will determine the impact strategic spring pasture cutting has on future pasture composition.

John Piltz and Burns then gave a paper on “Making quality silage and hay from pastures containing weeds.” They defined forage quality as encompassing: - metabolizable energy (ME), crude protein, minerals and vitamins. They point out that weeds may reduce silage or hay quality by having a lower ME content, lower crude protein than the desired grasses and clovers. In their conclusion they give the following advice – have a maximum of 25-30% broadleaf weeds and timing the harvest to occur with maximum forage quality and regrowth potential.

The final paper on Wednesday morning was by a producer member - Frank Austin of “Mundarlo”, Adelong. On his experience with fodder conservation and weed control he started making silage after the 1967 drought, determined to drought-proof his property. He bought his own machinery to make fine-chop silage and has remained with that form of silage. He found that with the silage making he had drought-proofed the farm, kept the breeding stock intact, allowed cheap and easy production feeding of their sale stock and virtually eliminated drought-induced financial pressure. He gave valuable advice on silage contracting, both from the farmer’s and the contractor’s viewpoint.

The guest speaker at the annual dinner was Geoff Auricht, pasture leader of the South Australian Research and Development Institute. He gave a fascinating account of the search for pasture species from China, travelling through Russia and on to Western Europe. He showed an outstanding range of slides of Asia and Europe photographed on their return trip. Also at the dinner two new life members were announced by President Mick Duncan – they were Warren McDonald and Haydn Lloyd Davies.

The first paper on Thursday morning was a report of a grazing experiment at Broadford in NE Victoria by Kate Sargeant, Lisa Warn and Gary McLarty. The work was carried out on a phalaris/sub clover pasture. There were three grazing treatments –set stocking, 4-paddock rotation and an intensive rotation each with a high and low phosphorus treatment. There were no significant differences in annual grass content between grazing or fertilizer treatments. Phalaris availability

was significantly greatest on the two rotational grazing treatments. Subterranean clover availability was generally higher on the high phosphate treatment and was significantly higher on the set-stock treatments compared with the two rotational treatments.

The next paper was a producer paper, given by Christopher and Margot Wright, 'Yerra Binda', Wollomombi, Armidale on "Attacking weeds through effective grazing". The Wrights were impressed by Allan Savoury's book "Holistic Management". Twelve years ago they changed their grazing management to utilising short grazing periods with high stock density and a long recovery period. They found that planned grazing played an important role in controlling weeds. Since adopting planned grazing they have not used any herbicides and have found no need to drench for internal parasites. The only weed which worries them is the woody weed - blackberry.

The next paper was also a producer paper. It was presented by Bryan Corrigan, 'Old Renny Lea', Bowna. He gave an account of his experiences on "Shifting from sheep to cattle and its effect on pasture weeds". Since 2002 he sold all his sheep and his pastures have been grazed totally by cattle. He has property in Holbrook and in Culcairn. On the Holbrook improved pasture country he found that he could control erodium, silver grass, barley grass, and to a lesser extent Paterson's curse. He still has problems in the rough hill country, but is intent on building up soil fertility. He has had more problems in the Culcairn property since removing sheep. The major strategy has been winter cleaning or spring topping – generally grazing pressure is the key.

The next paper was by Luzia Rast on "Problems in livestock grazing weeds". In an excellent coverage she pointed out that toxic plants cause three major syndromes in grazing livestock: - (i) staggers; (ii) sudden (or almost sudden) death and (iii) photosensitisation and hepatopathies. She gives three comprehensive tables covering these syndromes and discusses in depth the plants that cause them. She mentions that for severe poisonings to occur a number of factors need to interplay – growth stage of the plant, soil type, season and species of livestock and production stage of the animals.

The final presented paper of the conference was prepared by David Michalk, Warwick Badgery, Geoff Millar and Randall Jones and was presented by Warwick Badgery on "Balancing enterprises on a whole-farm basis for economic viability and improved weed management. The authors stressed the importance of increasing the proportion of perennial species to at least 60%. The strategies used in Integrated Weed Management are basically boosting pasture productivity – including fertiliser application and appropriate grazing management. They conclude by stating '—the key is not to over utilise pastures and maintain them in a competitive, productive state'.

The Proceedings of this conference is likely to be the outstanding guide to controlling weeds in pastures for quite some time.

The Annual General Meeting

This meeting was held at Joyes Hall, CSU, Wagga Wagga on Tuesday 25 July where we were welcomed by our President Mick Duncan. The previous minutes were accepted as being true and accurate.

President Mick Duncan presented his annual report. In it he commented on the excellent annual conference held in Orange. Membership was still about 500 but he said we must be constantly on the alert for new members. Changes to our administration have brought our banking in particular, to the IT age. Our treasurer, Linda Ayres has done a great job. The Society has made contributions, both technical and financial towards the recently released Pasture Varieties and the new Weed Seedlings in Pasture books.

Later in the year the committee will be discussing the possibility of organizing and supporting a study tour to inspect tropical pastures in Northern NSW and southern Queensland.

The President made a particular point of thanking our commercial sponsors, the NSW Dept of Primary Industries, and other government agencies for tremendous assistance during the year. He also thanked all the committee for their dedicated work throughout the year.

Linda Ayres presented the financial report - The Society had \$40,556.28 in the Westpac cheque account and \$52,859.35 in The Landmark Term deposit. The total income for the year was \$36,214.80 and the total expenditure was \$29,333.71. [Editor's note- the full financial report is available from Linda at DPI, Orange. I have never seen a clearer or better financial report].

Election of Committee

President - Mick Duncan

Vice President - Rob Eccles

Secretary - Dianne Smith

Treasurer - Linda Ayres

Editor - Haydn Lloyd Davies

Committee - Richard Bloomfield, Frank McRae, Mike Keys, Lester McCormick, John Coughlan, Hugh Dove, David Harbison, Nigel Phillips, Steve Exton, John Ive.

General Business

Next year's Conference will be in Yass. The Conference Convenor will be Col Langford, Sheep and Wool officer in Goulburn.

Haydn Lloyd Davies



Report on Poster Submissions at the 21st Annual Conference

The poster contributions could be subdivided into four main categories: -

- 1) Weed Control,
- 2) Pasture Species and Grazing Management,
- 3) Pasture Plant Nutrition, and
- 4) Other Issues.

1) Weed Control

B.S. Grace and co-authors (pps112, 113) had a poster on controlling saffron thistle with grazing management. They found that pasture with a good ground cover of perennial grasses had very few saffron thistles. C.M. Griffiths, (p.114) poster stated that the Best Management Practices of the Murrumbidgee Catchment Authority are an up-to-date and user-friendly tool for achieving control of great brome and fumitory. Belinda Hackney and colleagues (pps 117,118) found that there were very few herbicides available to control broad-leaved weeds that will not cause unacceptable damage to sown plantain. The problem of wireweed in spring-sown pastures was the subject of a poster by R.C. Hayes and colleagues (pps121, 122). They suggest that growers intending to sow pasture in the spring need to be aware of the threat of wireweed (*Polygonum aviculare*) and implant an integrated weed control involving herbicides and grazing management. L.J. Iaconis (p125) warned members that Chilean needle grass is posing a significant risk to pasture in many regions of Australia. P.L. Jessop and J.H. Howie (pps128, 129) that Angel medic provides a greater level of seed and dry matter production than other medics where there are residual amounts of sulfonylurea herbicide (eg Logran) residues. M.J. McDonald and co-authors (pps 135,136) warned members that lippia (*Phyla canescens*) is an invasive herbaceous ground cover of flood plain pastures and wetlands and increases after a flood-event. A.C McCaffey (pps 137,138) informed members that the NSW DPI will have communications servicing extension staff, local government Weeds Officers and Catchment Authorities on the recent information (distributed as bulletins) on Weed Control. L. McWhirter and four colleagues (pps 139,140) reported a range of treatments at Goulburn and Glen Innes on Chilean

needle grass and a range of herbicide treatments and grazing methods for its control. K.C. Moore (pps 141,142) discusses a holistic approach to the control of weedy *Sporobolus* species in S.E. Queensland. The property owners in conjunction with council and departmental staff have developed an excellent programme to minimise the impact of weedy *Sporobolus* species on their property. J Powells and L. Pope of DPI Cooma (pps145,146) determine the effect on pasture production, animal performance and weed control under three fertilizer treatments –nil, low (125 kg/ha gypsum) and high (125 kg gypsum/ha plus 125 kg/ha of superphosphate). Legume production and animal production increased with increasing fertility. The proportion of serrated tussock was not affected by any treatments. Another pasture weed causing concern is cane needle grass (*Nassella hyalina*). D.G. Read and A.S. Craig (p 147) invite institutions to use the North Wagga Flats as a study site for control of this weed and others. K J Schulze and J Unwin (pps 150,151) explain how to control blue heliotrope (*Heliotropium amplexicaule*) using the herbicide Graslan in association with tropical grasses. B. Verbeek (pps 152 -155) discusses the latest noxious weed legislation.

2) Pasture Species and Management

V.I. Davis (p105) reported a study on existing dryland farming management within the mid and lower Murrumbidgee catchment. G. Duddy and Belinda Hackney (pps105, 106) reported on the result of a grazing trial on the value of saltbush for finishing prime lambs in the summer. They found that using saltbush as a supplement was no additional financial advantage compared with a stubble/supplement treatment. Belinda Hackney and co-authors (pps 115,116) compared pasture grasses and legumes for the Monaro region.. Several of the legumes were superior to subterranean clover in the first year. The productivity of short-term ryegrasses, mountain rye and several perennial bromes exceeded 2.5 tonnes/ha over the winter-spring period in the first year. R.C. Hayes and co-authors (pps119,120) investigated a selection of alternative “lucerne”. *Medicago falcata* and *Medicago caerulea* in particular have more prostrate growth habits and may have superior grazing tolerance than the traditional *M. sativa*. P.J. Jessop and J.A. Gittings (pps126, 127) studied the establishment of wallaby grass (*Austrodanthonia caespitosa*) compared with annual rye- corn as a mid row cover-crop. Annual rye-corn rapidly outgrew the wallaby grass and provided seven times the biomass of the *Austrodanthonia*.

3) Plant Nutrition and Fertilisers

R.C. Hayes and co-authors (pps123, 124) discuss the effect of lime on persistence and production of two chicory cultivars –Puna and Lacerta, on an acid soil. Lacerta yielded more than Puna at five of the seven harvests. Fiona Leech

(pps 130,131) discusses the profitability of liming and fertilizing native pastures in the Yass district. Profitability was higher when superphosphate was applied annually; increasing pasture production and enabling stocking rate to be increased. Topdressing native pastures with lime may not be a sound economic practice. G.D. Li and co-authors (pps 132, 133 and 134) prepared two posters on the long term lime effect on pasture (paper1) and sheep performance (paper 2). On perennial pastures there were increased proportions of lucerne, subterranean clover and barley grass. On the annual pasture liming increased the proportion of barley grass, silver grass decreased and sorrel was eliminated. In 2005 the limed treatments carried 20% more stock than the unlimed pasture, perennial pasture carried more stock and sheep on the perennial pasture gained more weight than those on the annual pasture. J. Powells and L Pope (pps 143,144,145 and 146) produced two posters on pasture production, animal performance and weed population changes under three fertiliser treatments –nil, low and high superphosphate on (1) granite derived soil and (2) basalt derived soils on the Monaro. In (1) there was no obvious effect of treatment on weed control. There was increased liveweight and fat score on the fertilised paddocks. On the basalt derived soils legume production was increased in the treated paddocks. There was no effect of treatment on serrate tussock population. S. E. Roberts and co-authors (pps 148,149) reported on the distribution of phosphorus levels across “healthy” soils. Analysis of soil P levels displayed a wide range of P values; a large proportion appeared to be under critical Colwell P levels. There was another group well in excess of critical Colwell P levels.

4) Other Topics

Edwards and co-authors (pps 108,109) presented a poster on Paddock Plant field days –helping landholders to recognise and manage common plant species. Pilot field days held in late 2005 in the tablelands area received very positive feedback from participants. The evaluation indicated that all respondents had improved their plant-recognition skills and gained useful information. M.G. Elliot (pps 110, 111) gave an animal health poster on “Grass tetany –property risk diagnosis”. Identifying the relative proportions of potassium compared to calcium and magnesium levels in the plant-root zone can provide a critical indicator to beef producers of the risk of grass tetany on their farms.

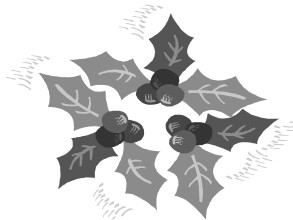


Bus Tours of 21st Conference - Wagga Wagga

There were two bus tours – a Northern and a Southern tour. I went on the Northern tour. The first visit of the Northern tour was to the animal house of the Wagga Wagga Agricultural Institute. I have never seen better facilities for measuring the nutritive value, including voluntary feed intakes, apparent digestibility of ruminant feedstuffs. The recent, very welcome, July rains restricted the bus trips. The next visit was to see the research on wide rows and the new equipment designed for weed control in various wide row systems. Our next visit was to the Murrumbidgee Grain and Graze where the role of grazing the new winter wheats as an option to help fill the winter feed gap. The final Northern visit was to observe the evaluation of engineering solutions to improve planting technologies for weed suppression and optimal crop yields and quality. We also saw the “Stubble Star” openers – a preferred alternative to tines.

The first visit of the Southern tour was to Max and Jenny Cowie’s property “Koornoy” near Tarcutta. They found that despite using MCPA and chipping weeds the area infested with Paterson’s Curse continually increased. In 1994, ’96, ’97 and ’98 they released Paterson’s Curse flea beetle on their property. They found that the flea beetle effectively controlled the Paterson’s Curse. This tour’s next visit to see the plots where new perennial pasture-based systems were being investigated to discover whether they will provide an increase in productivity over traditional systems and reduce whole farm groundwater recharge. The final visit of the Southern tour was to S.C and C.T Strong & Sons property “Somerset”, Ladysmith to investigate managing weeds in a mixed farm enterprise. *Vulpia* was a major problem in the unlimed upland paddocks. Their improved perennial pastures received 200 kg per hectare of single superphosphate per annum. The weed they were most concerned about was St. John’s Wort.

Haydn Lloyd Davies



BRANCH REPORTS

[These reports were presented to the AGM in July 2006]

North West Branch

The northwest branch has been quite active again this year, with the majority of the activities occurring in the spring of 2005. The hot, dry autumn meant there was little pasture growth and a return to drought conditions.

The activities held for the financial year were:

1. Tuesday 25 October “Apsley” Willow Tree - Jim Harris & Family

- Grazing & Grain Variety trial – inspection of a NSW DPI trial which contained oat, winter wheat, triticale and barley varieties currently available plus some experimental lines.

- Grazing Management for winter forages & Grazfeed – how to use it to manage your available feed

This field day attracted around 30 participants

2. Friday 11 November - Barraba Pasture Tour

Trials on “Banoon”, “Mayvale” “Bareela”

- Site 1 “Banoon”

Managing water in our pasture and farming system. Three issues are being addressed at this trial site, a salt scald, pastures on area that gets water logged and increasing water use with perennial pastures.

- Site 2 “Mayvale”

Extending the Tall Fescue zone. This trial features a large range of new and commercial fescue lines.

- Site 3 “Bareela”

Lucerne in your farming system. Choosing lucerne varieties and their management.

This field day attracted around 40 participants.

3. Thursday 3 November “Leaholme” owned by The Faulks Family

This field day offered a unique opportunity to view the persistence of the temperate and tropical species in this environment. Three sites were visited:

- Site 1 “Leaholme”

- Evaluation of grasses & legumes
- Pasture mixes and sowing times
- Commercial, experimental Chicory & Plantain
- The effect of pastures on soil moisture

- Namoi CMA - Pasture & Ground Cover Strategy
- Site 2 “Towri”
 - Heritage Seeds lucerne demonstration
- Site 3 “Marathon”
 - Inspect commercial planting of tropical grasses
 - Establishment and management of tropical grass.

This field day attracted around 100 people.

4. Tuesday 18 October - Tamworth Agricultural Institute

- Annual legume species - 48 species including arrowleaf, biserrula, serradella, rose, purple clovers, sub clovers, medics, gland clover and sulla.
- Lucerne Varieties & Breeding progress
- Weed control in seedling & established lucerne pastures

5. 11 April, 2006 - Liverpool Plains Land Management Committee & NSW Grassland Society

Reclamation of scalded red soil sites, including grazing management.

Utilising a landcare trial site.

Approx 100 people attended.

There are also preliminary plans for a tropical grass tour of Queensland in late 06 or early 07, and a post grasslands conference workshop in northern NSW utilising speakers from the annual conference, proposed for late august 2006.



Southern Tablelands Branch

The branch remains essentially in recess following the retirement of inaugural secretary and driving force behind the Southern Tablelands branch, Peter Simpson. The inability of myself and other members to devote sufficient time and/or resources to this key position has meant that no Grasslands activities have been held during the last year.

However Chris Houghton and myself as signatories have been managing the funds for three continuing Acid Soil Action projects for which, since July 2003 the Southern Tablelands branch holds accounts to facilitate their completion.

“Brushy Hill” grazing project: Drought conditions during most of last year at the replicated grazing site at Braidwood, prevented its use to fatten lambs and despite good rain in summer, the return of drought conditions this autumn resulted

in the lambs being grown out on the limed and unlimed paddocks, losing too much weight and the trial had to be de-stocked yet again. This account has sufficient funds for the continuation of this work for 2 more years and we have just recently been successful in attracting funds from the Southern Rivers CMA to employ someone one day a week to assist at the site and re-commence writing up the results.

At the same site, the species evaluation trial sown in 1998 has lost many cultivars, all the ryegrasses and most of the fescues. All phalaris and most cocksfoots have persisted well. The local Landmark business approached us to rejuvenate the trial and has commenced site preparation with the intention of sowing next autumn. New cultivars, particularly the summer dormant fescues and cultivars with endophytes, will be sown and evaluated.

Education a/c: this ASA account was set up specifically to assist develop the workshop series LANDSCAN, dealing with landscape and soil test interpretation. Most of this development work is currently being funded by NSW DPI and the Education a/c is now being used to cover small items like printing of a conference poster and for soil testing to complete the ASA data set on movement of topdressed lime from two sites that did not receive additional funds post 30.6.2003. The journal article dealing with the movement of topdressed lime by Sari Glover & Dr Brendon Scott was deemed to have insufficient data and by collecting further data and including data from two other ASA projects, it is hoped we can overcome this objection by the referees.

Herbage Quality a/c: this is used to support the on-going work on native pasture at Newbridge, now in its twelfth and final year. Attached is a flier that promotes the final field day and paddock walk at the site on Thursday 26th October. I would hope the Grasslands Society will be able to be involved and help promote the day.

Michael Keys
Agronomist (Special Projects)
NSW Dept of Primary Industries
Queanbeyan



Northern Tablelands Branch

The Grassland Society on the Northern Tablelands has been quiet in 2006 with no significant activities. This is due to dry seasonal conditions over autumn as well as work commitments of the committee members. However, despite the lack of activity interest in the Grassland Society on the Northern Tablelands continues with a number of requests for membership forms.

The Northern Tablelands committee is hopeful of a good spring and will meet over winter to plan a number of events for late spring/early summer. To coincide with these activities, a newsletter highlighting local pasture trials will be printed.

The committee will also be discussing a number of activities to celebrate our 10th birthday in 2007. In 1997 the Northern Tablelands branch (then known as Northern Branch) of the Grassland Society of NSW was formed at the NSW DPI Research & Advisory Station, Glen Innes. The branch was established to facilitate improved liaison among local agri-business, producers and Government agency staff on all matters relating to grasslands.

Carol Harris
Publicity Officer



**The Grassland Society is very grateful to CRT and Dow AgroSciences for their sponsorship for 2006.
More of our sponsors will be featured in future newsletters.**



NSW GRASSLAND SOCIETY SPONSORS List for 2006

The NSW Grassland Society is very grateful to its sponsors for their generosity. Without the support of our sponsors we would have very restricted activity. Premier sponsors have donated \$3,000 (sometimes also in 'kind'). Major sponsors have donated \$1,500 and Corporate sponsors have donated \$750.

Sponsors	Classification
Combined Rural Traders (CRT)	Premier
Australian Farm Journal	Premier
Meat and Livestock Association	Premier
NSW Department Primary Industries	Premier
Dow Agrosiences	Major
Wrightson Seeds	Major
Heritage Seeds	Major
ANZ Rural	Major
PlantTech	Major
Australian Wool Innovations	Major
Hi-Fert	Major
Auswest Seeds	Corporate
Progressive Seeds	Corporate
PGG Seeds	Corporate
Summit Agro	Corporate
Graham Centre	Corporate
The Land	Corporate

Alan George Kaiser
In Memoriam by John Piltz

NSW farming community has lost a great supporter.

Many NSW Grasslands members were saddened to hear of the passing of Dr Alan Kaiser at only sixty years of age. Alan was a highly respected animal nutrition and forage conservation researcher with the NSW Department of Primary Industries.

Alan commenced his career as a cadet with the NSW Department of Agriculture in 1965 and soon after began his research into animal nutrition as a Livestock Research Officer at the Wollongbar Agricultural Institute.

From Wollongbar, Alan spent three years in Hurley, England on a Meat and Livestock R&D scholarship and then returned to take up a position in Wagga where he worked on a range of projects that contributed greatly to our understanding of ruminant nutrition.

Alan's work has been acknowledged in Australia and internationally. His work and enthusiasm are largely responsible for the upsurge in popularity of silage as a conservation option. He has been instrumental in bringing science to the farming community. He was the driver of the TopFodder program which commenced in 2003

One of the highlights of his career was the publication of the "Successful Silage" manual which contained everything you ever needed to know about growing, making and feeding silage. The United Kingdom Milk Development Board asked for excerpts to be used in their extension programme.

Professionally Alan was recognised as being a pleasure to deal with, approachable and a great contributor to Australian agriculture. He was a loving husband to Bonnie, father to Gavin and Tara, and grandfather to Ryan, Tyler, Isabella and Hannah.

He will be greatly missed.



Notes on survival feeding in drought

(These notes are abstracted from a chapter on drought in a book I am writing HLD)

Survival feeding can involve either supplementary feeding or complete hand feeding. Supplementary feeding assumes that the animals are still securing a proportion of their requirements from the pasture. The usual supplement is a grain supplement to provide energy. The well mixed addition of 1.5-% urea to grain offers a nitrogen supplement with the energy source. In areas where molasses is readily available the provision of a urea/molasses solution in roller-licker drum is a frequently used form of drought feeding.

Feedstuffs suitable or commonly available for hand feeding.

- 1) Grains – wheat, oats, barley, sorghum lupins, triticale and canola.
- 2) Hays, lucerne, pasture cereal hay and stubble.
- 3) Silage – made from a variety of sources but usually pasture species or cereals.

When complete hand feeding for survival the principal requirement is for energy.

Grain

A survival feeding system based on grain has several advantages. Cereal grains (particularly wheat) are produced nationally in quantities necessary to meet the demands of drought feeding. They can be moved easily using bulk-handling techniques. The only negative against survival feeding of sheep and cattle on grain is that the stock should be introduced to it carefully or *d* lactic acidosis or laminitis can occur. At least 10 days should be allowed for the stock to come on to a high grain ration. If possible there should be 15-20% roughage available with the grain. The grain should also be supplemented with 1% calcium carbonate and 1% sodium chloride.

Frequency of feeding

No advantage is gained by feeding daily. In some of the original classic drought feeding work there were fewer losses among sheep over a year with feeding once a week compared with daily feeding. The present consensus in the industry is to feed twice weekly, so that any problems can be noticed and acted upon.

The amount of grain to be fed for liveweight maintenance is a disputed topic with various authorities suggesting different amounts. From my assessment of the various recommendations and personal experience using both private and public

funds for drought survival I have used a simple guide. I call this the 3,4,5 guide for cereal feeding applied as follows: -

Sheep –Weaners – 300grams per head per day

Wethers and dry females – 400 g/h/d.

Lactating ewes –500g/h/d.

Cattle-Weaners –3 kilograms per head per day.

Steers and heifers – 4kg/h/d.

Cows with calves at foot – 5k/kg/h/d.

One option for survival feeding on grain when no roughage is available is to thoroughly mix 2% sodium bicarbonate, 1% sodium chloride and 1.5% urea with the grain. The cost of the sodium bicarbonate would be prohibitive for prolonged survival feeding.

Appropriate treatment of the grain has not been entirely resolved. Cattle will often defecate a proportion of whole grain. There is an increase in dry matter digestibility following crushing of the grain. But there is also some evidence that the incidence of digestive disorders is higher on milled grain. Probably lightly cracked grain is the most appropriate compromise to minimise wastage and reduce the incidence of digestive disorders.

Hay

Hay is often made on the property and is often used as a supplementary feed for weaner sheep in dry summers and sometimes to ewes in late pregnancy. As a drought fodder it is a perfectly safe feed, is usually of good nutritive value and is easily transportable. Rarely is sufficient hay made and stored on the property to meet the requirements of months of survival feeding. Soon after a drought is declared the price of hay from produce merchants rises sharply and sometimes becomes more expensive per megajoule than grain.

Hay plays a further role in survival feeding as a means of correcting any *d* lactic acidosis (grain poisoning) that may arise from sheep and cattle consuming an excess of grain before becoming sufficiently adapted to grain feeding. Also, in some rare cases some sheep will stubbornly refuse to eat grain. This leaves the producer with one of three options for those animals – sale, slaughter or hay feeding.

Amount of hay to be fed

The range of nutritive value of hay makes it difficult to prescribe a set amount for all hays. Like the 3, 4, 5 rule for grain a roughly comparable rule for good quality hay is 5, 7, 9. For example:-

Merino sheep – weaners-500g./h/d

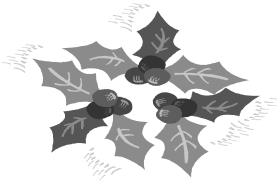
wethers 700g /h/d
lactating ewes 900g/h/d

Hereford cattle-calves 5kg/h/d
steers and heifers 7kg/h/d
lactating cows-9kg/h/d

Hay like grain and silage may be fed on a twice weekly basis.

My very best wishes to all members coping with drought.

Haydn Lloyd Davies



**The Management Committee of the
Grassland Society of NSW wishes all
members and their families a happy
Christmas and best wishes for good
seasons in 2007.**



From the President's desk

Plenty has already been written and said about the very successful conference in Wagga Wagga, with some further reports in this newsletter. Belinda Hackney and her team are again to be congratulated on putting together a comprehensive program covering many aspects of weed control in pastures and crops. In addition, the field trips added value and gave “out of towners” a glimpse of agriculture in the Wagga district, despite the welcome rain on the previous day.

The conference proceedings will serve as a most valuable reference for years to come for various weed control strategies including pasture management, the role of fodder conservation in reducing weed problems, biological control, herbicide use and the integration of a range of control options for more efficient weed management.

The conference also provided opportunities for industry and government agency people to meet and discuss topics of mutual interest. The Grassland Society provides this unique platform for the exchange of ideas and new technologies across all sectors of our livestock industries in an informal environment.

It was great to see so many agribusiness representatives at the conference. As has been stated many times before, the Society is ever grateful for the valued support of those companies, listed in this and previous newsletters.

One of the highlights of the very enjoyable conference dinner was the awarding of life memberships to two of our long standing members who have both contributed so much to the Society. Haydn Lloyd Davies and Warren McDonald were both suitably surprised with their richly deserved awards. They join a small group of people, all of whom have made similarly significant contributions to the Society.

The posting out of conference proceedings has been delayed owing to the run out of the new “Pasture Varieties used in NSW” book. As soon as this highly regarded publication is received from the printers, mailing of both books will recommence. Our apologies for this delay.

I don't intend to comment much on the season as plenty has been said elsewhere. Needless to say, the extended dry spell is apparent over most of the state. I do hope for an improvement in the current pattern and trust at least some of the predictions prove to be wrong. It has happened before.

I thank the members who attended the AGM for re-electing me as your president. Many thanks also to those members who agreed to serve on the state committee. A full list of committee members appears on the back cover of this newsletter. I look forward to working with you to enhance the activities of the Society and seek ways to improve benefits to our members.

Best wishes to all members.

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 approx. 500 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 - 2006-2007

STATE EXECUTIVE

Mick Duncan (President)

Rob Eccles (Vice President)

Dianne Smith (Secretary)

Linda Ayres (Treasurer)

David Harbison (Sponsorship)

Committee: John Coughlan, Hugh Dove, Haydn Lloyd Davies, Richard Bloomfield, Frank McRae, Lester McCormick, Steve Exton, Nigel Phillips, John Ive, Mike Keys

BRANCH REPRESENTATIVES

North Western Slopes

Loretta Serafin

Central

John Coughlan

Southern Tablelands

Mike Keys

South Western Slopes & Riverina

Belinda Hackney

Western Slopes & Plains

Northern Tablelands

Mick Duncan

APPLICATION FORM

Name:

Address:

.....

.....

..... Postcode.....

Subscription for 12 months (July to June) is \$50. This entitles you to copies of the Newsletters and a copy of the 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*