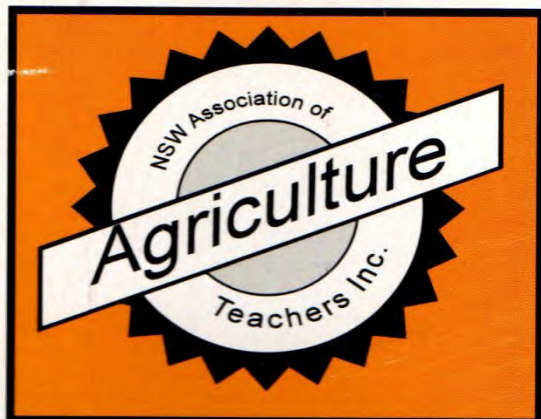




Bulletin of the NSW Association of Agriculture Teachers



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N.S.W. Association of Agriculture Teachers Inc



www.nswaat.org.au

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AAAAAA



TeamPoly

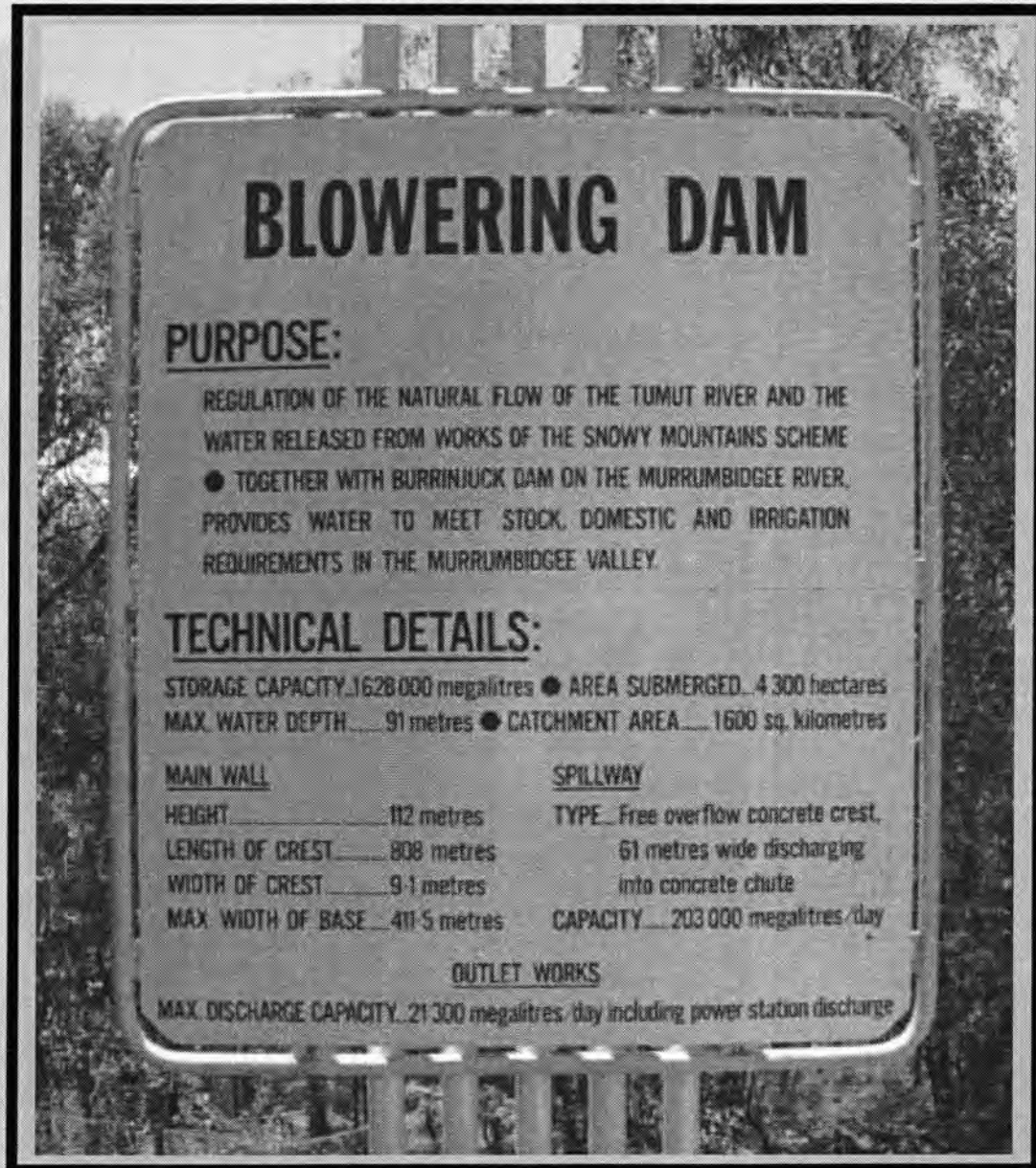
NSWAAT's Water Tank is sponsored by....

(Photo Front Cover: Blowering Dam: Tumut)

BLOWERING DAM NSW

Snowy Hydro

(The Blowering Dam is located 10 km south of Tumut in the South West Slopes)



BLOWERING DAM

PURPOSE:

REGULATION OF THE NATURAL FLOW OF THE TUMUT RIVER AND THE WATER RELEASED FROM WORKS OF THE SNOWY MOUNTAINS SCHEME

- TOGETHER WITH BURRINJUCK DAM ON THE MURRUMBIDGEE RIVER, PROVIDES WATER TO MEET STOCK, DOMESTIC AND IRRIGATION REQUIREMENTS IN THE MURRUMBIDGEE VALLEY.

TECHNICAL DETAILS:

STORAGE CAPACITY 1628 000 megalitres ● AREA SUBMERGED 4 300 hectares
MAX. WATER DEPTH 91 metres ● CATCHMENT AREA 1600 sq. kilometres

<u>MAIN WALL</u>		<u>SPILLWAY</u>	
HEIGHT	112 metres	TYPE	Free overflow concrete crest,
LENGTH OF CREST	808 metres		61 metres wide discharging
WIDTH OF CREST	9.1 metres		into concrete chute
MAX. WIDTH OF BASE	411.5 metres	CAPACITY	203 000 megalitres/day

OUTLET WORKS

MAX. DISCHARGE CAPACITY 21 300 megalitres/day including power station discharge

SNOWY MOUNTAINS
renewable energy

Blowering
Power Station

BLOWERING DAM

ON 8th OCTOBER 1978, ON THIS MAGNIFICENT WATERWAY, KEN WARBY DRIVING HIS JET POWERED BOAT "SPIRIT OF AUSTRALIA" SET THE WORLD WATERSPEED RECORD OF 317.6MPH (511KM/H). THE RECORD STILL STANDS.



ERECTED BY



TUMUT ROTARY



Jan from the organising committee presenting Luke with his conference bag.

1

"FROM THE DESK"

1. **EDITORIAL:**
.....JANS THOUGHTS
2. **SECRETARY:**
.....ALLANS OUTLOOK
3. **PRESIDENT:**
.....TONYS POINT of VIEW
4. **TECHNOLOGY & COMMUNICATION**
.....IAN BAIRD
5. **TREASURER**
.....STEPHEN TRICKETT
6. **CORRESPONDENCE:**
.....Board of Studies

^ More than 20% of traumatic deaths occurring on Australian farms are associated with mobile and fixed plant & machinery.

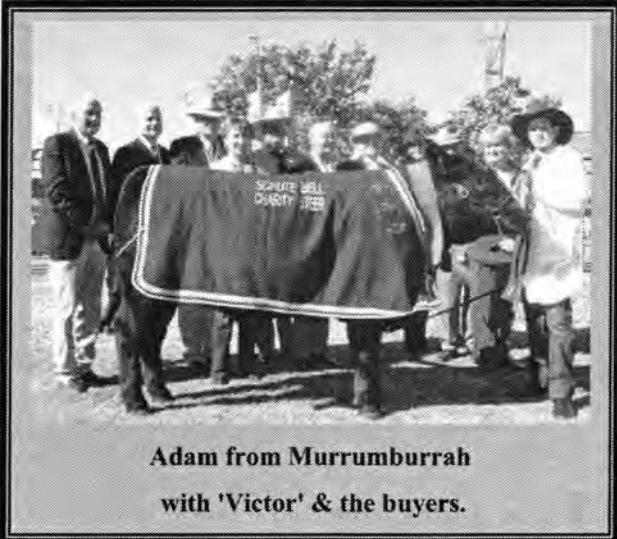
^ There are between 4000 & 4500 workers compensation claims each year relating to injury associated with machinery and equipment on Australian farms.

Section 1 sponsored by:



E_{ditorial}....

J_{ans} thoughts



Adam from Murrumburrah
with 'Victor' & the buyers.

- ~ Can our terms get any busier?
- ~ For those who attended the biennial conference at Wagga Wagga, it was a great way to let our hair down after a hectic term.
- ~ The photos that accompany this edition show how much we packed into a highly successful conference.
- ~ Great applause was received by the organising committee and the enormous effort put in by our President Tony Butler.
- ~ Tony set a cracking pace and we kept to the timetable, regardless of Professor Jim Prately's comments that we couldn't. He obviously hasn't hung around with our Tony Butler.
- ~ We wish the incoming team from Western Riverina a great term in office and are sure they too will experience the great comradery (opps spelling) that we did.
- ~ Networking is what keeps us all sane and enjoying teaching.
- ~ Keep in mind the huge strain many of our students and their families are under in this most devastating drought.
- ~ Enjoy your regular income and security in your job.
- ~ May 'good' rains come soon for so many parts of the state and warm soils to remain for growth.
- ~ It is frightening to see the lack of stock in the Western District and the amount of dry sown crops.
- ~ Here's to terms 3 and 4 going smoothly.

Yours in BAAT
Jan.



Proud students from Murrumburrah High School &
'Victor' who raised \$25000 for the Victor Chang
Cardiac Research Institute.
First school in the state to prepare & show a steer for
the Victor Chang Charity Auction.



Emma (Murrumburrah student) leading 'Victor'
at Canberra.

'Victor' was a 486 kilogram Angus steer prepared &
shown by Murrumburrah High School to raise funds
at a charity auction.

SECRETARY.....

ALLANS

OUTLOOK



Wagga Wagga High School
Agriculture Farm

~ I have summarised most of the key issues and initiatives of the NSWAAAT executive in the Secretary's Report of the Biennial General Meeting Minutes in Section 3: *{page 3.19 of this BAAT.}* The meeting of course was held at our recent Conference at CSU Wagga Wagga in April.

~ The Riverina's Executives has met regularly over the past 2 years at the Wagga Wagga High School farm classroom. Our meetings were always pleasant with plenty of food, fun and specific things for members to contribute or chase up. This tended to build up a culture of teamwork which came in handy when the Conference finally started.

~ Our invitation of John Kent from CSU to one of the earlier meetings proved to be start of a great collaborative relationship between the NSWAAAT executive, CSU and the Graham Centre. With the addition of John Harper from CSU in the last 8 months we were able to fine tune our organisation of the workshops which were a critical part of the Riverina conference.

~ There were lots of other spin-offs of having the executive in the Riverina. We were able to get more local contributors to the BAAT magazine through farm, show and teaching resource reports. People felt more at ease at contacting some other people and networking has increased. There is even talk of reforming the Riverina Ag. Teachers Association.

~ Locally we tackled the loss of chemical training in the PI course. We held training courses for teachers across the Riverina with a ChemCert Instructors Course which did show the VET in Schools Directorate we were serious about the loss of SMARTtrain from the PI Syllabus. Our moves to teach SMARTtrain out of hours through TAFE to benefit our students, is likely to be replicated around the state.

~ I would like to take this opportunity to wish our new executive in the Western Riverina all the best over the next 2 years in their role as the new NSWAAAT executive. By the time this edition of BAAT is released Robert should have a very strong and enthusiastic team behind him.

~ On a personal note, I would like to thank the members of the organising committee for their support, professional attitude and friendship over the past two years. When Tony asked me for my support after the Armidale Conference, I could not help being impressed with his vision, energy and enthusiasm. His example motivated us all to do that little bit more and in Tony's words "bring a lot of other people on board". Great leadership Tony.

~ Tony, your years of support to the Association topped off by your efforts over the past 2 years make you a worthy recipient of a Life Membership. In the same vein, congratulations also to Phil Hurst for being a Life Member recipient and Robyn O'Leary for being awarded the J R Sutherland award at the 2006 conference.



Presidents... Point of View



~ My time as President of the NSW Agriculture Teachers Association has been a great privilege. A professional challenge marked with some great successes and others with less so for Ag & PI teachers, Ag students, Farm & General Assistants at our schools.

~ As with all important voluntary roles that we take on; be it for the community or professional organisations; it is a great pity I could not have started my term as President with the knowledge I have now.

~ Two years ago while waiting for a plane from Armidale after the last biennial conference I had time to identify the areas that I felt were important to fellow Agriculture teachers & students across the state.

~ Having just left a conference at which Ivan Gant had informed delegates that there were to be no more chemical training programs offered to our students in schools; I along with many others found this decision to be both frustrating & disappointing. I felt strong about this; as one of our key roles is to educate & prepare our students with something tangible that can equip them with an advantage in future employment, be they returning home on the farm or joining the rural workforce in a capacity that requires industry certification.

~ I decided then that the Association needed to tackle the Chemical training issue in schools, & ensure that students gained maximum benefit from us as Ag teachers. Over the last two years the Association investigated avenues for the possibility of student training in chemical application & after many letters & meetings we now have a model that is workable throughout the state. This was possible through the support of TAFE NSW & in particular Graeme Anderson who developed the chemical training model that we can access for our students.

~ Over the years, the training of school staff in the safe use of tractors has been ad hoc. Recognising this, the Association in conjunction with DET & TAFE NSW have developed a tractor training course which is workable state wide to ensure that Ag & PI teachers/Farm & General Assistants are adequately trained for the safe use & maintenance of tractors in schools. The Association recognised that a state wide tractor training program for staff in school was long over due.

~ Gone are the days where our employers provide professional days for our benefit. The funds are in schools, we need to strengthen the networking amongst our peers & become smarter in providing opportunities for our students be they one day specialised courses or 3 day expos providing a wide range of skill development for our students.

~ The dimension we must add to this equation is the need to involve industry in the widening of our students educational experience. This may simply involve industry providing students workplacement, employment expos, or the provision of transport for an industry &/or Ag based excursion or may be a traineeship leading to full time employment. If we don't think out of the square, we stifle our own development along with the progression of our students. This involvement will add a new dimension to your profession, develop & foster an interest by your students wishing to undertake agriculture & future employment opportunities. Agriculture is a unique subject in the curriculum, it is the vehicle to educate our students beyond the classroom walls & develop many varied experiences to increase the depth of your student's educational development. We must put Agriculture ahead of the pack by capturing the minds & hearts of our future students.

~ To ensure that the professionalism in agriculture & the bar for agriculture teaching is raised beyond the school fence; & the subject is maintained at a prosperous level in our school system; it is critical to involve industry in a way that has a mutual benefit for all concerned.

~ Industry will recognise the important value Agriculture in schools has to offer; but for this to happen we must be out there selling our best asset for all it has to offer & doing the hard yards to optimise the opportunities that exist. Agriculture & industry do not work in isolation & we must be there to open the door for our students.

~ Over many years of the Association, BAAT has been an integral tool to inform & resource agriculture teachers across the state. The bulletin took a dramatic turn with the inclusion of industry sponsored articles which informed members of the resources & contacts available for the teaching of agriculture. The inclusion of current scientific reports on a wide range of agricultural topics also added to the depth of BAAT. The new format with the addition of colour has raised the level for Association journals. I wish to acknowledge & extend a vote of thanks to all those who have contributed to BAAT over the last 2 years by adding to its depth & variety of material for our professional needs.

~ As with most organisations there is someone that is a good back stop for many discussions & that person is Allan McMillan who has been a great advocacy for the many issues that have come the Associations way. Thanks to Allan.

~ The Associations web site continued to develop & saw a significant revamp with the addition of industry sponsored articles & links to their web page. Special thanks are extended to Ian Baird for his ongoing commitment to the Associations website. Ian ensured that the site was regularly updated & relevant to our teaching requirements.

~ Looking forward to the future, there will always be challenges that will face the Association. A dedicated team with its strong membership base will ensure that this professional body works hard for not only its members but for all agriculture teachers & their students across the state.

~ So, after the last two years the time now has come to say thank you to all those who have assisted throughout my Presidency.

~ Special mention must be made of two groups which are paramount to our teaching of agriculture in schools. Firstly, to the State Agricultural Advisory Group (SAAG); under the leadership of Peter Crick & formerly Jim White, this group is significant to the resourcing of agriculture in schools. I acknowledge the ongoing support of this group for all agriculture teachers. Also to Sally Bannerman who has continued to support all agriculture teachers in her role as School Animal Welfare Officer. Both groups have reported regularly through BAAT their immediate issues that concern agriculture teachers. For this we are very grateful.

~ I wish to congratulate and sincerely thank the outgoing Riverina branch executive of the NSW Association of Agriculture Teachers for the consistent effort and commitment given to the many issues that have confronted the Association over the last two years. These varied issues have been outlined extensively in the previous 3 BAATs.

~ These people have been a fantastic group to work with; all of which have made my job both professionally rewarding and enjoyable. Thanks to:

^ Ian Baird:	Murrumburrah High School	^ Rod Francis:	Charles Sturt University
^ Dave Gillard:	Wagga Wagga High School	^ John Harper:	Charles Sturt University
^ John Kent:	Charles Sturt University	^ Ilka Klepper:	Cootamundra High School
^ Judy Lawson:	Lockhart Central School	^ Allan McMillan:	Wagga Wagga High School
^ Stephen Trickett:	Billabong High School	^ Jan Young:	Murrumburrah High School

~ To both John Kent & John Harper at CSU; the Association acknowledges the fantastic support you both have given in the organising of the Agricultural workshops & the finer arrangements of the conference agenda at CSU. This assistance & support has been significant in ensuring the success of this biennial conference.

~ The executive has worked very hard over the last two years to ensure that this Biennial Conference was professionally stimulating, socially satisfying and fabulous value for money; while highlighting the significance of "Environmental Sustainability" in both industry & agriculture.

~ This of course can only have been possible by the outstanding financial support by the sponsors for the conference. I might add that each delegate was subsidised by around \$200 each. This is outstanding sponsorship for the conference.

~ To the following people & organisation the Association sincerely thank you for your valued interest and commitment in Agriculture education throughout NSW.

- Visy Pulp & Paper: Mr Lex Kingma, Manager
- Visy Pulp & Paper: Mr Ben Casauria, Environmental Engineer
- Forests NSW: Mr Bob Germantse: Manager Hume Forests NSW
- Forests NSW: Mr Duncan Watt: Planning Manager
- Team Poly: Mr Geoff Rosenberg: Business Manager
- John Deere: Mr Leigh Reisley, Manager Government Sales
- Yates Australia: Mr Robert Hartog, Regional Sales Manager NSW/ACT
- Incitec Pivot Fertilizers: Mr Witold Petruszewicz, Area Sales Manager
- CRT: Mr Simon Hellams, Business Manager CRT
- Tumut Council: Mr Rob McMillan: Manager Corporate Services
- Wagga Wagga City Council: Sally Nolan Executive Officer: Wagga Tourism

~ To conduct a conference of this magnitude it can only have been possible by the great support of the following organisations:

- DET, CSU, E.H.Graham Centre for Agricultural Innovation, Cargill Beef,
- NSW Agriculture, Batlow Apples, Tumut Mensland, Tumut Racecourse & Gilmore Agricultural Bureau Hall.

~ Felicitations to the many guest speakers, workshop presenters, caterers, bus drivers, the many organisations who supplied materials & resources for delegates.

~ To the people behind the scenes who have assisted in ensuring that the conference was a success for everyone concerned; we are all very grateful for your efforts.

~ To the incoming executive I wish to congratulate you on your appointment & can I suggest that the time you spend on Association matters is both rewarding & fulfilling.

~ Lastly I would like to thank my wife Fran & family for their endurance & patience over the last 2 years while I spent many hours at the computer or at Association meetings.

~ Aggies have & always will be; as a group, a force to be reckoned with.

Tony Butler:

President

NSW Association of Agriculture Teachers

2004-2006

Technology & Communication

- ~ The NSWAAAT website, initially set-up by Graeme Harris, has been expanded over the last 2 years to meet the needs of members.
- ~ The biggest change involved using the website to promote the 2006 Biennial Conference, to communicate information to members and to acknowledge the sponsors.
- ~ New links to websites have been added to increase resources for teachers. Webpage layout has been changed and graphics in various forms have also been added to web pages to provide more attractive presentations for members.
- ~ In 2005 we had a change of web host with Spherious, the former host providing our web server, being bought out by Connected Hosting. This brought with it a number of technical issues which caused the website to become unavailable to members on a number of occasions. Many internal links to our webpages no longer worked and access to web mail was no longer available. The Help Desk has also been slow to rectify problems that couldn't be fixed at the Webmaster level of access. It raises the question of whether there is a better web host for us to seek out and employ.
- ~ Our website is a resource that needs regular input from members for it to continue to be useful for communication and teaching purposes. Hopefully when all the faulty links are identified and fixed, the process will be made easier. It is then up to members to make use of this great association resource.

Ian Baird

\$\$ Treasurer \$\$

Comments.

- Accounts will be audited at the end of financial year.
- Problems in 2004 – 2005 of having two treasurers operating account.
- Bank signatures and mailing address issues during 2004-2006 need to be settled upon early to reduce mailing problems.
- Electronics Funds Transfer is now apart of our banking procedures. How long will it be before all schools are electronic banking?
- Thank you to Tony Butler for his efforts in recruitment at Conference, Professional development meetings and through the Professional Teachers Association.
- Problems in contacting teachers in independent schools.
- Membership numbers have increased with no increase in fee for some time. There is a cost to recruiting which the association can afford to bare.
- Recommendation from previous audit may need to be addressed. How do we constitutionally distribute funds in the association if and when it folds.
- There is a need to either run down or invest surplus funds? Recommendation to not increase fees in the foreseeable future. That if expenditure does not in future exceed income that we lower fees.
- This has been a high spending period also associated with high income. Net increase in savings of \$2,731.26. since December 2004.
- In the two year period there has been a large turn over of members. We have lost to the association and /or to teaching a number of teachers. This due to retirement, lost contact, left the association. New membership largely coming out of the independent system.
- Membership list is on 'XP Microsoft Excel' and is updated by the treasurer. Copies kept by treasurer and president. Easily emailed. Membership has been processed once a term and receipts have been emailed to members where an address has been provided. Saving in postage.
- Membership of the national body has not been paid for two years and could cost us some \$4,000.00. when an account is provided.
- Question about a deposit made on 01.12.03 of \$10,341.11. by previous executive. *Stephen Trickett*



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Dr John Bennett

General Manager

Office of the Board of Studies NSW

GPO Box 5300

SYDNEY NSW 2001

23rd May 2006

Dear Dr Bennett

I write on behalf of the NSW Agriculture Teachers' Association regarding two matters associated with the Agriculture Stage 6 syllabus and the associated Higher School Certificate (HSC) examination for Agriculture, in particular Paper 2 of this course examination.

As background, can I advise that in 2004, the then Chief Examiner of the Agriculture HSC examination committee, Pr Rod Francis, approached members of the association at our biennial conference in Armidale to canvass views on a proposal being made by the examination committee to make a slight alteration to the structure of Paper 2 of the examination. This minor modification had the full support of all present and was seen to better assess students in the new standards referenced framework of the "New HSC" and avoid some possible unnecessary possible repetition in candidates responding to a question addressing a particular syllabus outcome.

I am advised that following this informal consultation, submissions were made by the examination committee to the Office of the Board of Studies to suggest this new approach be implemented as soon as possible. I am aware that a sample specimen paper was prepared ready for publication of the new paper structure, given there was no change in any syllabus content or teaching required.

I understand that this has still not come about some years on, mainly due to a need for a very minor change in the examination specifications section of the syllabus, which I believe based on other changes (many more major), would simply have required a Board Bulletin notice.

Most recently at our conference held late April 2006 in Wagga, it has come to our attention that the current reason for not progressing with this change to the examination, is that due to it requiring a 'syllabus change' (be it very minor), an impending possible review of Stage 6 syllabus documents, may impact on any current change requests.

I am not aware of any formal processes the Board may be considering for syllabus review; however, I would like to take this opportunity to request that, should a syllabus review become a reality that Agriculture Stage 6 is given some sort of priority for the following reasons.

Firstly, this would allow students sitting Agriculture Paper 2 to have the concerns raised above, over a significant period of time by previous examination committees and Board assessment officers, addressed as soon as possible.

Secondly, upon introduction of the "New HSC" Stage 6 syllabus documents, Agriculture was one of the first documents to be done and was done so on the basis of "minimal review" at the time. Consequently, this involved rolling the then 3 Unit course, into a 2 unit package (hard to consider minimal), including incorporation of a small number of outcomes under a new syllabus development process.

What resulted, it is fair to say, when being able to compare to other new Stage 6 syllabus documents, is a syllabus that lacks description of content depth and has a number of anomalies, in terms of what we now know is the importance of key verbs in defining depth for the purpose of examinations.

I would also like to take this opportunity to put forward the view of our members that it is paramount that the Stage 6 syllabus in Agriculture be maintained in the future and that any syllabus revision ensure that the optional research project is maintained.

It would be appropriate that any such future revision not be considered a "minimal" change but that such a process be well enough resourced to allow the Stage 6 Agriculture syllabus to be appropriately addressed in terms of contemporary content (particularly given the dynamic nature of this technology-based industry) and improved layout in line with other Stage 6 syllabus documents.

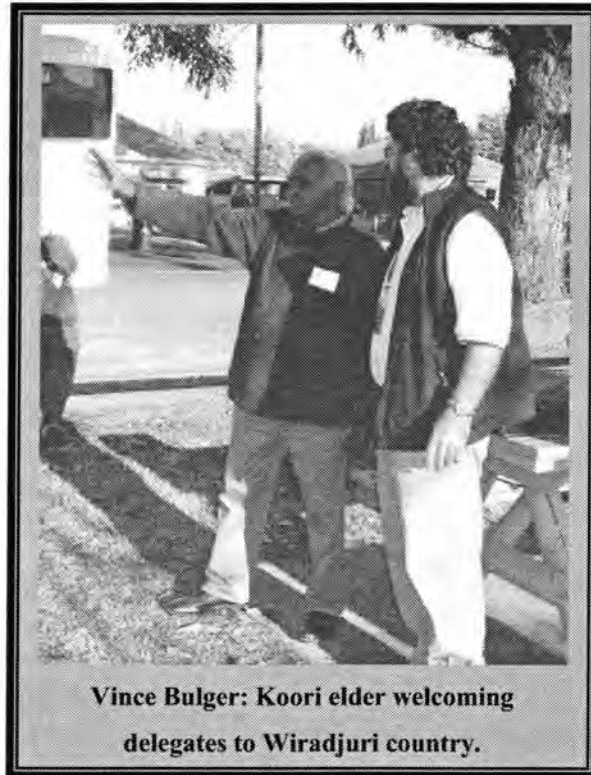
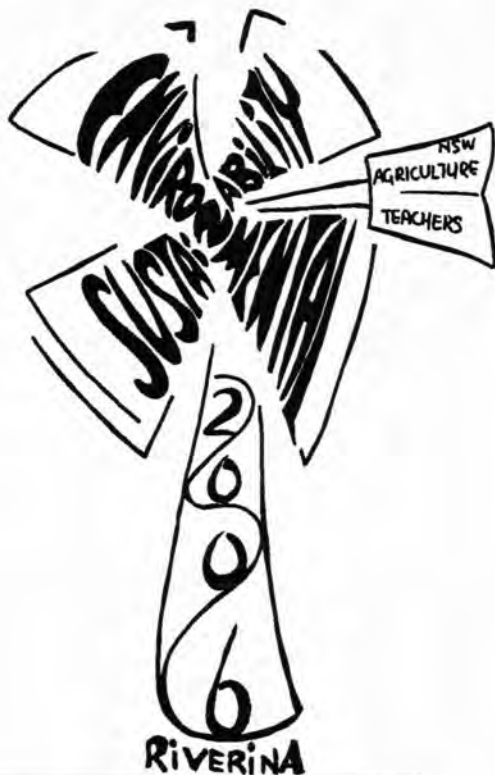
So while we would not consider it advantageous to be "first cab off the rank" as per the last process, where many of the constraints placed on the writing team at the time, were apparently lifted for syllabus teams that followed, and given that it appears it has not been easy to achieve any minor changes to date (by Board Bulletin), unlike some other courses, the sciences for example, we would request that Agriculture Stage 6 be considered in the first round of any such revision processes.

Should there be delays with this however, given how the Board and the Government ultimately deals with this syllabus revision process in the current climate, we would request that the simple changes to examination specifications, which I understand will only change wording in a couple of sentences on one page of the syllabus, continually requested by the examination committees be allowed to proceed as soon as possible under existing Board processes.

I trust that this information adequately informs you of the requests of our members in relation to the valuable Stage 6 Agriculture course in the NSW Higher School Certificate program.

Yours sincerely

Tony Butler
President
NSW Association of Agriculture Teachers



Vince Bulger: Koori elder welcoming delegates to Wiradjuri country.

^ AWI has developed plastic clips, about 10 centimetres in length to be an alternative to mulesing. The clips are attached to the same flap of skin that would be removed through the mulesing process on either side of the breach of the sheep.

^ The pressure of the clip prevents blood flow to the flap, which withers and falls off within a few days, leaving a bare area around the breech of the animal and a thin scar line.

^ Clips are attached to lambs at about 120 an hour, which compared to mulesing at about 150 an hour

^ The clip has a number of advantages, including the lack of an open wound, reduced stress for the animal and minimal cost.

Section 2 sponsored by:



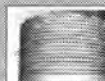
JOHN DEERE

2

"Aggie Awards"

AWARDS

1. **J.A. Sutherland:**
.....*Robyn O'Leary*
2. **Life Membership to Association:**
.....*John Lee*
3. **Professional Teaching Council:**
.....*Media Award*
4. **Top Agriculture & Primary Industries Students:**
.....*2005 HSC*



Team Poly

"J.A. Sutherland Award"

Congratulations



Robyn O'Leary
Finley High School

i. Criteria for Award:

- ^ The award is presented to an Agriculture teacher who is judged to have made a significant contribution to the teaching of Agriculture.
- ^ The recipient is a member of the NSW Association of Agriculture Teachers

ii. Presentation:

- ^ The J.A. Sutherland Award was presented to Robyn at the conference dinner on 27th April by members present at the NSWAAAT Bi-Annual Conference at Wagga Wagga.

Citation: Robyn O'Leary

- o Attended Wagga Wagga Public School and then Wagga Wagga High School.
- o Attended Riverina Institute of Higher Education/Charles Sturt University 1983 -1986 completing Diploma of Applied Science (Agriculture) and Diploma of Education.
- o Appointed Finley High School 1987 and been there ever since.
- o Married Michael 1989, who is now Head Teacher Science. They have four children. Robyn had some time off to have and care for the children. Ended up resigning when she found out that twins were on the way. Back at work quicker than expected to fill a long term void left by a science teacher on sick leave and not enough casual staff.
- o Returned to teaching and was asked to undertake Primary Industries training by the Principal. Currently has 0.8 permanent part-time status.
- o FHS now has record numbers of students studying Agriculture/Primary Industries. The school population is 525 and there are 60 Yr 9 Ag students, 59 Year 10 Ag students and 18 Year 11/12 students. Agriculture is now seen as a draw card for FHS. All students are catered for no matter what their ability. This phenomenal increase has come about due to the huge amount of work that goes into providing the students with quality education and real life situation experiences. Students often go on to work in the industry or undertake further education at University or TAFE.
- o Individual needs of students have been catered for through the development of individual programs, such as extension courses to allow interests and skills to be developed and formally recognised. Robyn has had to spend many hours of her own time liaising for the course to run, writing the course and assessing the student.
- o Robyn has been an outstanding contributor to the School Based Traineeship program. Over the last 4 years there have been 12 trainees. 11 of these trainees have been awarded the Kids Start Farms scholarship.
- o Students are encouraged to think outside the square when it comes to workplacement positions in order to experience situations that they are really interested in.
- o The availability of resources at school has come about as a result of the very strong links and tremendous rapport that has been established with the broader local community. Robyn has worked closely with local businesses, service clubs, feed supply companies and farmers. This has allowed the development of a Poll Dorset Stud and Shorthorn stud, contribution of show poultry, transport of stock to and from shows, the availability of workplacement positions etc. To maintain this level of support and confidence Robyn attends meetings and speaks to many service clubs during the course of the year and communicates on a regular basis with the entire community through the local newspaper. An open day is also held to allow students to interact with industry members and industry members and the community to see what goes on in the Ag plot at FHS.

- As a result the school's Show Team was nominated by a community member for the Australia Day Team of the Year Awards in 2005 and where successful in winning the award.
- Robyn has been involved with the local show society and has helped to develop the classes for the show and assisted by providing equipment. She has attended meetings with Melbourne Royal Show Co-ordinator of the Beef Carcase competition in order for the competition to meet the needs of schools and industry alike.
- The FHS show team has had many successes since its inception and during the latter part of the year there is rarely a weekend that sees Robyn at home as she travels with students to regional and interstate shows.
- Robyn has on average one prac teacher from CSU or Armidale University per year. She is currently working /mentoring an accelerated trainee who will be working at FHS for 2 days/week in term 3 and as an intern in term 4. Robyn has already spent a lot of time guiding the student and helping him to select units of competency for study/assessment as he works towards gaining his Certificate IV in Workplace Training and Assessment.
- Robyn also plays a very active role in the mentoring of beginning teachers or teachers just starting to implement Primary Industries into their schools curriculum. Teachers travel to FHS to work with Robyn and look at the facilities that are available at FHS and how to access funds and resources. They leave with lots of information and resources on programming, sequencing, assessment, teaching aids and record keeping that make them feel more confident about the task ahead of them. Just recently a teacher, his assistant and three students spent the day working with Robyn and her students. This activity is to be followed up with the teacher and students spending three days with Robyn and her students at the National Beef show in Bendigo. Robyn is participating in a mentoring system that is available to the teacher and will provide ongoing support.
- The sharing of materials and the desire not to keep reinventing the wheel has led to Robyn being a great sharer of the resources that she has developed. Robyn has often presented at local and regional network meetings, providing ideas about programming, resources, assessment and school based trainees.
- Robyn was a participant in the QTP VET Best Practice Pedagogy Project in 2003. This involved travelling to Sydney participating in group work sessions, sharing ideas and experiences and writing a case study on Best Practices in VET teaching.
- In 2004 Robyn worked with the South Western NSW regional Poll Dorset committee to develop and run the Young Poll Dorset Ambassador of the Year Competition. One of Robyn's students participated in the event and was successful in moving on to the final of the event, which was held at the Royal Melbourne Show.
- In 2002 Robyn received a letter from the Minister for Education and Training thanking her for her involvement in the schools agriculture programs.
- In 2004 Robyn received a letter from the School Education Director, Deniliquin Region congratulating her on the excellent results that her students achieved in the HSC.
- In 2004 Robyn received the Deniliquin School Education Award for her service to education.
- In 2005 Robyn was nominated by a community member for the Minister's Award for a VET in Schools Teacher. Robyn was interviewed at region for this award but unfortunately did not progress any further.
- In 2005 Robyn was nominated by her Principal for a Minister's Award for Service to Public Education and Training and proudly received this award in Sydney at the end of last year.
- In 2005 FHS received a Minister's Award as a Centre of Excellence for Education in Agriculture.
- Robyn is totally committed to the teaching of agriculture and promotes it whenever possible. She works tirelessly to provide the best possible experiences for her students.



Robyn O'Leary sharing
resources at a PI day

L i f e M e m b e r s h i p

**John Lee
Glen Innes
High School**

Congratulations



THE AWARD:

THIS AWARD IS PRESENTED TO:

- A FINANCIAL MEMBER OF THE ASSOCIATION WHO HAS PROVIDED
 - OUTSTANDING &
 - LONG SERVING CONTRIBUTION TO THE ASSOCIATION &
 - TO THE TEACHING OF AGRICULTURE IN NSW

John Lee, the

- **Agriculture teacher,**
- **Primary Industries facilitator,**
- **Educator,**
- **Person,**
- **Leader,**

o **is a very unique person**

~ His progression from the village of Urbenville to one of the most outstanding Agricultural educators and leader is a credit to the character and personality of this genuinely soft, caring & thoughtful person.

~ His style, that is, his leadership style is incredible. He will always 'walk along with you' with any problems at all, eventually leading you to a satisfactory solution.

~ He is quiet, unassuming, humble & one of the most fair-dinkum blokes you would ever want to meet in life.

~ Whether a student, a teacher, a community member, an individual or a member of a group; if you have ever worked with John Lee he will have certainly left a very positive impression and have quietly & subtly influenced your knowledge, your understanding skills & attributes about agriculture & life.

~ He is an unselfish person who has always been a tireless worker, mostly for other people.

~ Congratulations John on many, many years of dedication to the Association & the teaching of Agriculture throughout NSW.

TEACHING INFORMATION:

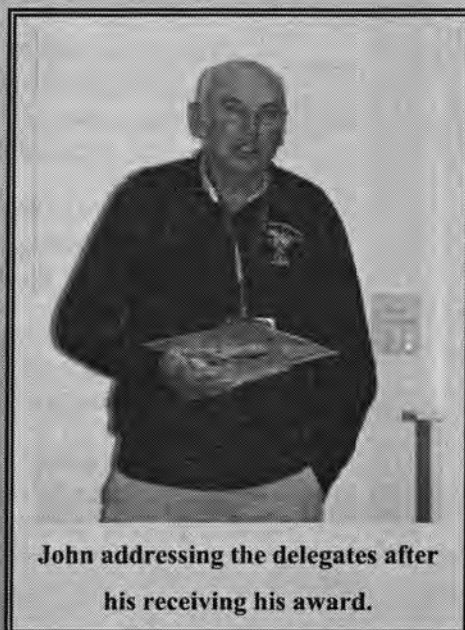
1964-65	Teacher Training (Armidale Teachers' College).
1966	Monaro High School – Cooma.
1967-68	Tumut High School.
1969-74	Narromine High School.
1983	Farrer M.A.H.S. (relieving).
1975-2006	Glen Innes High School.
1974	Degree by correspondence: Macquarie University.
1996	Retrained & qualified Primary Industries Teacher.

N.S.W. AGRICULTURE TEACHERS ASSOCIATION (NSWAAT):

1969-2003	Member of the NSW Agriculture Teachers Association.
1981-83	Treasurer of the NSWAAT.
1993-95	President of NSWAAT.
	Organised 2 Biennial Agriculture Teachers Conferences
1993-2000	NSWAAT representative on both the Junior & Senior Agriculture Syllabus Committees.
1994	Represented NSWAAT at the National Agriculture Teachers Conference in Adelaide.

LEADERSHIP ROLES:

1968	Attended the inaugural NSWAAT conference at Sydney University Farm, Camden & has attended most conference since that time.
1978-1990	North West Agriculture Curriculum Committee.
1984	Initiated & still current organiser of the Northern Schools Livestock (Steer) Competition.
1990-2006	Initiator & current organiser of the Northern Schools Prime Competition.
1995-2006	Initiator & participant in the Northern Schools Property Planning Competition.
1990-2002	Initiator & current leader of the Armidale District Agriculture Teachers Network.
2001-2006	Assessment Validation Network Facilitator/ Primary Industries.
2001	Primary Industries HSC Senior Marker.
2002-2005	Agriculture HSC Marker.



John addressing the delegates after his receiving his award.

"NSW Professional Teachers Council"

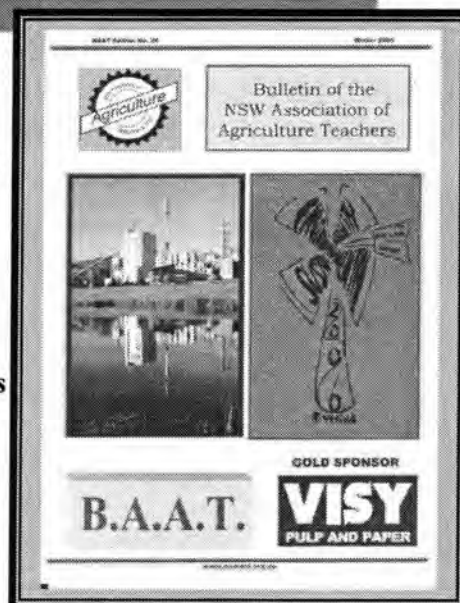
CATEGORY: Major Media Award

MATERIAL NOMINATED:

June 2005: Bulletin of the
NSW Association of Agriculture Teachers
[BAAT]

REASON FOR NOMINATION:

- ~ The NSW Association of Agriculture Teachers publishes 250 copies of this bulletin twice a year for its members, business sponsors & contributors.
- ~ This bulletin is an important vehicle for informing and networking agriculture teachers across the state, on such issues as educational policy, teaching and learning methodology.
- ~ Current agricultural trends, conferences, relevant professional reading and notification of relevant courses and competitions, are all important aspects that feature in the bulletin.
- ~ These aspects of the bulletin are reinforced on the Associations website and via regular circulars.
- ~ BAATs unique format ensures a positive perception is developed in the community by highlighting educational excellence in student achievement, from outstanding HSC results in Agriculture and Primary Industries to individual and team efforts at both local and royal agricultural shows.
- ~ The NSWAAAT teaching awards such as J.A Sutherland Award and Life Membership reflects and recognises teaching excellence in the agricultural profession by the Association.
- ~ Agricultural industries, by being a sponsor to the NSWAAAT biennial conference; demonstrate their commitment to education. This sponsorship provides an opportunity for agriculture teachers to develop a collaborative partnership with industry to benefit our students.
- ~ Profiling various schools, demonstrates to members' alternative teaching programs, professional contacts and the importance of linking and involving the community in the teaching of agriculture.
- ~ Agriculture resources such as programs, worksheets, assessment tasks, research articles and industry involvement provides professional support and establishes good networking amongst teachers.
- ~ The bulletin aims to be pertinent for agriculture teachers by supporting their deliverance in the teaching of the subject be it in the classroom, on the school farm or during work placement.



NSWAAT: Nominated the Winter BAAT No 25, 2005 for a Professional Teaching Council Media Award in Nov 05.

Top Achievers in 2005 HSC

NSWAAT:

- # *Congratulations to the top student achievers in the 2005 HSC for:*
 - 2 Unit Agriculture
 - 2 Unit Primary Industries
- # *Congratulations to these students & a special mention to the students' teachers & their schools.*
- # *The NSWAAT presented each achiever with a trophy & certificate in recognition of their fine achievement.*

Charles Mullarvey Awards

Top Student: 2 Unit Agriculture

Lap-Pui Cheng
James Ruse Agricultural High School



Top Student: Primary Industries 2 Unit

Alyce Worboys
Hurlstone Agricultural High School

2005 Agriculture Research Project
No student was deemed to have submitted an Agriculture project in the 2005 HSC of the quality deserving of the award.

Top Student in HSC Agriculture 2005

Lap-Pui Cheng

James Ruse Agricultural High School

Lap-Pui Cheng

~ The top student in 2 Unit HSC Agriculture 2005 was a year 11 student from James Ruse Agricultural High, Lap-Pui Cheng. His teacher was the very able Gail Roberts. Gail has taught the last three students who have topped the state in Agriculture.

~ Lap-Pui was born in Australia. He came to James Ruse into year 7 from the Opportunity Class at Beecroft Primary in 2001. ~ In year 7 he was in the top ten students but it was not until year 11 that he again began to show his true ability and once again be near the top of the year. He has enjoyed the study of Agriculture and has put what he has learnt to good use in the family garden.

~ Lap-Pui chose to do the Plant and Animal Production electives rather than the research project for the HSC. Currently he is in year 12 studying 2U English, 4U Maths, Chemistry and Physics for the HSC. Like many year 12 students he is unsure of where his career path lies after James Ruse; medicine, accounting and engineering are possibilities. Whatever he finally chooses will be pursued with single-mindedness and purpose.

~ The Charles Mullavey Award is sponsored by the NSW Association of Agriculture Teachers. It will be formally presented to Lap-Pui at the James Ruse Awards Day in September where the school will recognise the achievements at the HSC of the class of 2005.

~ The presentation will be made by Charles Mullavey's daughter Robyn Borkovic who is always very interested in who has won the award. The trophy is a copper art picture of draught horses pulling a mouldboard plough and is hung in the school whose student topped the state. The student receives a smaller engraved trophy to keep for themselves.



Gail Roberts (Agriculture Teacher) & Lap-Pui Cheng

Charles Mullavey Memorial Award

^ The Charles Mullavey Award is sponsored by the NSW Association of Agriculture Teachers.

^ It will be formally presented to Maggie at the James Ruse Awards Day in September where the school will recognise the achievements at the HSC of the class of 2004.

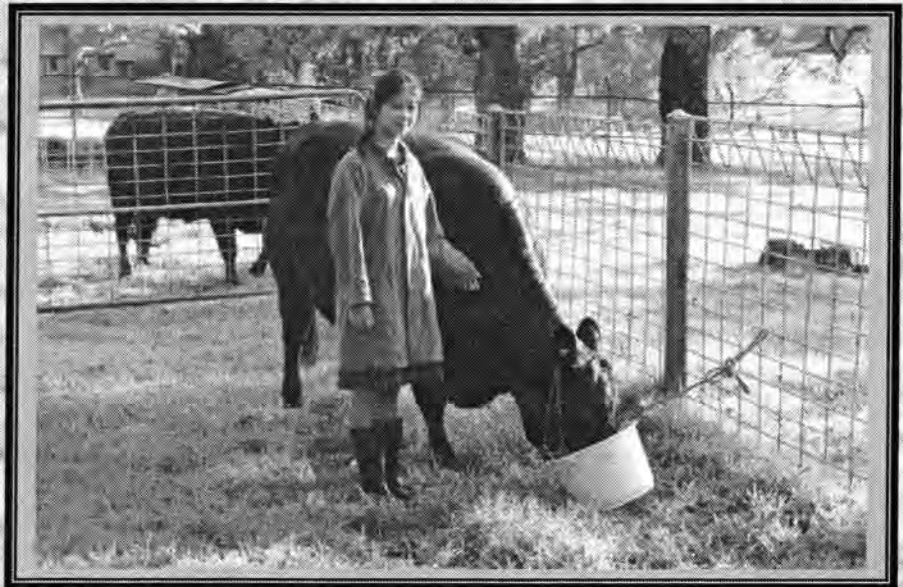
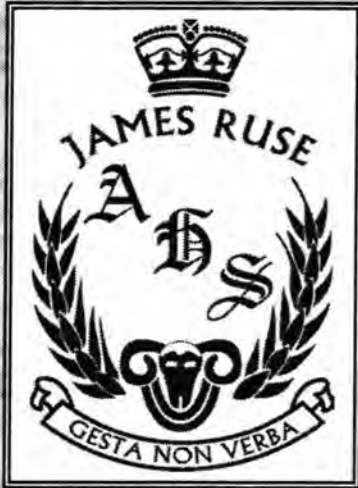
^ The presentation will be made by Charles Mullavey's daughter Robyn Borkwic.

^ The trophy is a copper art picture of draught horses pulling a mouldboard plough and is hung in the school whose student topped the state.

^ The student receives a smaller engraved trophy to keep for themselves.

Congratulations to Gail for your great work.

JAMES RUSE AGRICULTURAL HIGH SCHOOL AGRICULTURE



Agriculture at James Ruse is alive and well. All students study Agriculture from year 7 to the end of year 10. By the end of year 10 students have completed the Preliminary 2U HSC course and one term of the 2U HSC course. Students elect to complete the 2U HSC course in year 11.

This year there are 57 in year 11, 138 in year 10, 131 in year 9, 120 in year 8 and 120 in year 7. Unfortunately we lost the battle to keep Agriculture compulsory to HSC a few years ago. Another backward step has been the relinquishing of the requirement of new students entering the school at year 11 to do Agriculture. We now have students who attend a specialist Agricultural High school and never do any Agriculture.

The teaching of agriculture is centered around the 10 ha school farm. We have an Angus stud (six breeders), a prime lamb enterprise (10 first cross ewes), egg layers, broilers, 10 bee hives, peaches, oranges and vegetable plots. We are in the process of putting a hydroponic vegetable growing unit into production with the aim of producing Asian vegetables for the school community. (The student population is 95% of Asian origin. They must have Australian citizenship or permanent residence status to attend the school). We have been concentrating on putting sustainable practices in place on the farm by reducing the amount of cultivation done, reducing stocking rates and using organic fertilizers.

The Agriculture staff are; Ms Katie Graham, Mr Andrew Arnison, Mr Richard Grant, Mrs Gail Roberts and Mr Lisle Brown (Head Teacher Agriculture and TAS).

Students are involved in a number of extra curricular activities that relate to the farm and Agriculture. These include a Rural Youth club, cattle showing group, poultry squad, weather watchers and a Water Watch group.

Where do James Ruse students end up after school. 100% attend university and the favored courses seem to be medicine, law (often combined degrees with science or something else), actuarial studies, commerce and business. This year 3 gained entry to Veterinary Science and one Resource Economics so there is still some connection to Agriculture.

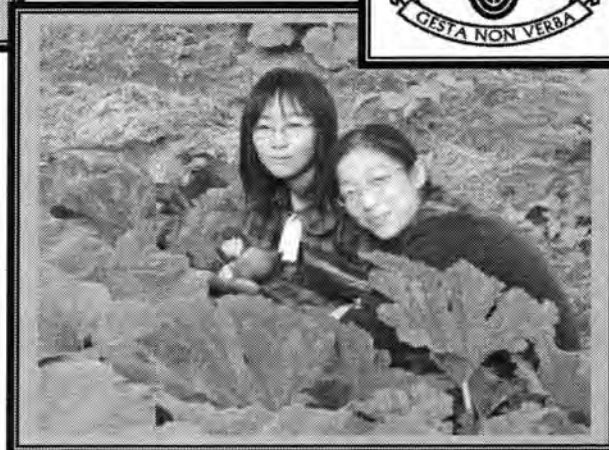
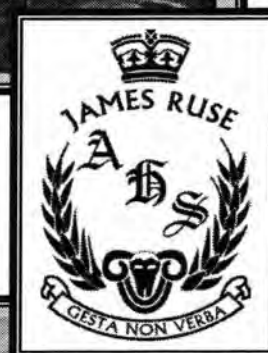
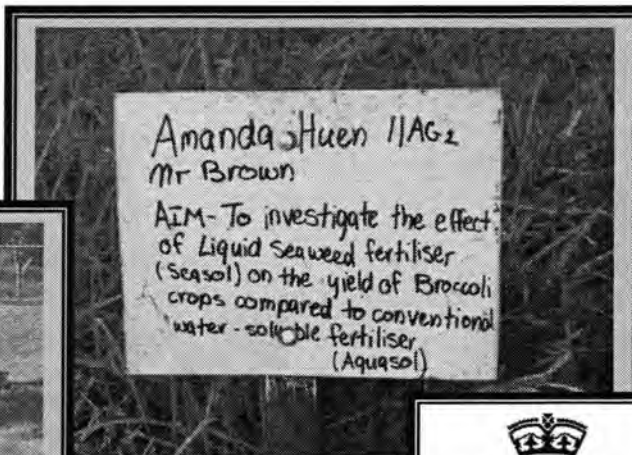
Many medical students from James Ruse report that Agriculture was the best subject in preparing them for medicine because of its holistic multidisciplinary nature.

Lisle Brown
Head Teacher Agriculture/TAS

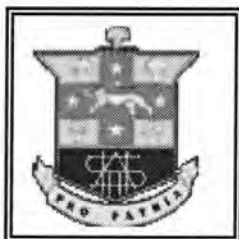
Thanks to Lisle for his report on Agriculture at James Ruse Agricultural High School.

JAMES RUSE AGRICULTURAL HIGH SCHOOL

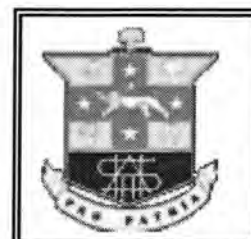
AGRICULTURE



~ ~ Alyce Worboys ~ ~



Hurlstone Agricultural High School



~ Alyce lives at: "Mullingar" Gunnedah a family farm comprising the following: cattle, sheep, wheat, sorghum, cotton, & barley.
 ~ She attended Hurlstone Agricultural High School Glenfield for 6 years and was a Member of the Hurlstone Rural Youth Club
 ~ Alyce was involved with steer preparation, parading & judging at Dubbo steer show.
 ~ She was awarded the Reserve Champion in junior state grain judging at Royal Easter Show
 ~ During her PI course Alyce spent 70 hours work experience with Southern Livestock Coordinator with Landmark for the Qld Dept. Primary Industries involving the buying, selling and monitoring of cattle.
 ~ Alyce's future plans are:
 * to attend the University of Queensland in Brisbane to complete a Bachelor of Arts followed by a Bachelor of Physiotherapy.
 ~ Congratulations to Alyce's PI teacher, Paul Rae for your efforts towards Alyce's success.



Alyce Worboys
Top PI student in the 2005 HSC

Hurlstone Agricultural High

^ Stands proud as one of the state's finest schools. The school's rich culture underpins its success. At Hurlstone you find a culture based upon pride, striving for personal excellence, caring for and supporting fellow students and valuing community service.

Academic Excellence

^ The emphasis at Hurlstone is on the pursuit of academic excellence and the school's record in this area is outstanding. Hurlstone is regularly ranked in the top 20 of all schools, public and private, in NSW in the Higher School Certificate with more than 50% of its students being placed in the top 10% of the state and 85% in the top 25%. As well as this, the number of students who earn recognition in state and national academic competitions is quite remarkable.

2005 H.S.C.

Development of Student Skills

^ The school has more to offer than just the academic. Students can develop skills in a wide range of sports, public speaking and debating as well as in the creative and performing arts by joining one of the schools art clubs, bands, vocal ensembles or drama groups. There is also an emphasis on school and community service through membership of the school's Interact club and its involvement in several charity drives and environment improvement projects.

Development of Leadership Skills

^ Students value the emphasis the school places on leadership development. Prefects, two student councils, a senior leadership group, the Rural Youth club, and cadets provide both character and leadership development opportunities.

Student Qualities

^ There is no doubt that the greatest source of pride at Hurlstone lies in the overall quality of the students it produces. Over many decades the students have earned the school its great reputation. Wherever they go, Hurlstone students receive accolades for their personal qualities. They demonstrate wholesome values, initiative and independence.

^ They are proud, confident and articulate young men and women but at the same time are caring and very supportive of each other.

^ They provide proof that while there is an emphasis for striving for individual excellence, the development of the whole person is never forgotten at Hurlstone.

Agriculture Resources

^ Hurlstone's **120 hectare farm** provides the perfect resources for one of the state's largest Agriculture faculties.

^ The **seven faculty staff members** help the school operate a wide range of farm operations and these enable a very practical approach to the teaching of Agriculture.

^ Outside the classroom, students take advantage of the many exciting extra-curricular activities the school's farming operation is able to offer them.

^ The **school's stud cattle** have been shown at local shows and the Royal Easter Show with great success; students have been able to nurture cattle which earn the school a host of ribbons including

^ Champion Ayrshire and most successful Ayrshire Exhibitor at the 1999 Sydney Royal. There is also a Hereford stud which supplies the local meat market as well as steers for students to exhibit at the Dubbo Steer Show each year.

^ On the **sheep** front, there are studs of Merinos and Poll Dorsets for the school's student Sheep Group to help look after.

^ Students and staff are also in the process of breeding up a herd of **boer goats**, while in the **piggery** pregnant sows are bought and allowed to farrow over a period of several months, with piglets being sold as porkers or baconers, depending on demand at the local market.

^ There is also a **commercial poultry** operation consisting of around 450 birds in a barn system to system to supply eggs while a purebred poultry flock is also kept.

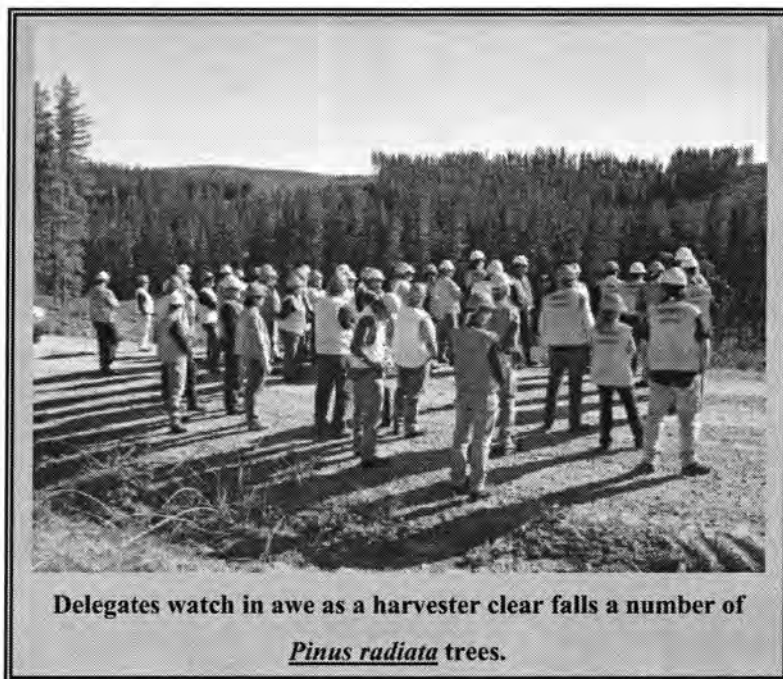
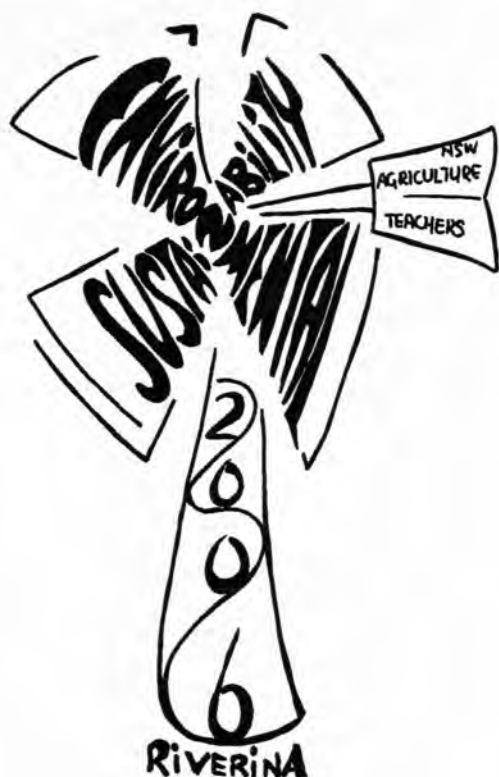
^ Lastly, there is a **horticulture unit** consisting of shade houses and glass houses which produces plants for sale and which allows students to become involved in propagation techniques and hydroponics.



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Delegates watch in awe as a harvester clear falls a number of *Pinus radiata* trees.

^ The Native Vegetation Act 2003 allows farmers to clear noxious weeds, cut firewood, clear vegetation to control pests and vegetation for stock fodder all without approval.

^ However farmers will need approval to clear invasive scrub that pre-dates "regrowth dates" of 1 January 1983 for the Western Division, or 1 January 1990 for the rest of the State.

Section 3 sponsored by:



Because the land is your life

3 "NSW Ag.Teachers Conference"

Report

NSW Agriculture Teachers Conference

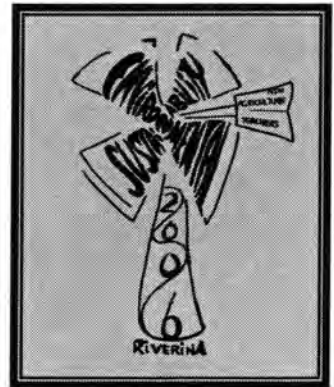
**CHARLES STURT UNIVERSITY
WAGGA WAGGA**

**TUESDAY 25TH – SATURDAY 29TH
APRIL 2006**





NSW ASSOCIATION OF AGRICULTURE TEACHERS



BIENNIAL CONFERENCE 25TH ~ 29TH APRIL 2006

CHARLES STURT
UNIVERSITY



Tuesday 25th April



2-6pm

Registration

Convention Centre

6-6.15pm

Conference
Welcome

Professor Jim Pratley
Convention Centre

6-11pm

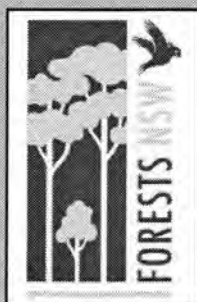
BBQ &
Camaraderie

Convention Centre

Yates

Incitec Pivot

Wednesday 26th April 2006



5.45-6.15am

Breakfast: CSU Dining Hall

6.30am

Depart for Tumut

7.40am

Welcome to Wiradjuri Country:
Mr Vince Bulger

8am

Depart for Bondo State Forest

8.40-9.10am

Morning Tea: In the forest

9.10-10.40pm

Forest NSW: Pine Processes
(Pine planting/harvesting/logging)

10.40-11.30am

Transit to Forest NSW Nursery

11.30-12.15pm

Forest NSW Nursery

12.30-1.30pm

Lunch: Tumut Racecourse

1.45-2.15pm

Tumut Broom Factory

2.40-2.50pm

Welcome: Visy Pulp & Paper, Gilmore

2.50-4.15pm

Group A: Pulp & Paper Plant

Group B: Visy Farm

4.15-4.35pm

Afternoon Tea

4.35-6pm

Group B: Pulp & Paper Plant

Group A: Visy Farm

6.30-9.30pm

Dinner: Gilmore Agricultural Bureau Hall

9.30pm

Depart for CSU

11pm

Arrive at CSU

Thursday 27th April 2006


VISY
PULP & PAPER
PAPER MAKING FOR
A BETTER WORLD.

5.45-6.15am	Breakfast: CSU Dining Hall
6.30am	Depart for Cargill Beef
6.45-8.45am	Cargill Beef: Objective Measurement in Beef Cattle
9.15-9.45am	Morning Tea: CSU Convention Centre
10-10.15am	Welcome to E.H.Graham Centre Professor Deirdre Lemerle
10.15-11.15am	Wool Research & Mulesing developments Dr Scott Williams: Australian Wool Innovation
11.15-12pm	Greenhouse Accounting/ National Plant Biosecurity & Agrifood Awareness: Dr Simon McKirdy
12-1pm	Lunch: CSU Convention Centre
1-1.40pm	Ag Workshops (rotation style) Microbiology/Botany + Hort/Olives/Lavender + Soils & Salinity
1.40-2.20pm	BioTech/Wheat quality & Bread Prod/ + Plant Breeding
2.20-3pm	Soils & Salinity + Microbiology/Botany + Hort/Olives/Lavender
3-3.30pm	Afternoon Tea: E.H.Graham Centre
3-30-4.10pm	Ag Workshops: as above on rotation
4.10-4.50pm	Ag Workshops: as above on rotation
4.50-5.30pm	Ag Workshops: as above on rotation
7-11pm	Conference Dinner: CSU Convention Centre

Friday 28th April 2006

JOHN DEERE

5.45-6.15am	Breakfast: CSU Dining Hall
6.30am	Depart for Cargill Beef & Wagga Selling Centre
7-9.15am	Cargill Beef: Carcase Assessment in Beef Cattle Group 1: 7-7.30 2: 7.30-8 3: 8-8.30 4: 8.30-9 Wagga Selling Centre Group 1 & 2: 8.15-9 Group 3 & 4: 6.45-7.30
10-10.30am	Morning Tea: CSU Convention Centre
10.30-11.30am	Murray - Darling Basin Commission: Laurie Kirk
11.30-12.30am	NSWAAT Biennial General Meeting
12.30-1.30pm	Lunch: CSU Dining Hall
1.30-2.15pm	Ag Workshops: (rotation style) Animal Nutrition/Silage + Soil Water & Rhizolysimeter
2.15-3pm	Soil Water & Rhizolysimeter + Animal Nutrition/Silage
3-3.30pm	Afternoon Tea: CSU Equine Centre
3.30pm	Transit: CSU Winery & Cheese Factory
3.45-4.25pm	Group 1: CSU Winemaking Group 2: CSU Cheese Factory
4.35-5.15pm	Group 1: CSU Cheese Factory Group 2: CSU Winemaking
6.30pm	Depart for CSU Staff Club Via "Hill Walk"
7-11pm	BBQ at CSU Staff club

Saturday 29th April

TeamPoly

7-8am	Breakfast: CSU Dining Hall
8.30-9.30am	Ag/ PI examination technique/ VET Tracker/RAS
9.30-10.30am	Animal Ethics/ Research Projects/Ag Enrichment
10.30-11am	Morning Tea: CSU Convention Centre
11-12.30pm	Weeds CRC: Resources & DPI: Salinity Resources Australian National Field Days: Bruce Carroll Riverina EEC: Resources SMARTtrain AQF3 training for PI students SMARTtrain Resources Tractor training: school staff/ Ag/PI teachers - Farm & General Assistants David Gregor NSW DPI: Stubble Star Jarrod Stoll: Chemical unit
12.30-1.30am	Lunch: CSU Dining Hall
1.30pm	Depart for home

Where did the Conference Aggies come from?

Number	NAME	SCHOOL	LOCATION
1	Allan McMillan	Wagga Wagga High School	Wagga Wagga
2	Dave Gillard	Wagga Wagga High School	Wagga Wagga
3	Dale Chadwick	Gundagai High School	Gundagai
4	Craig Bourne	Singleton High School	Singleton
5	Sue Challacombe	The Cathedral School	Grafton
6	Peter Napier	Orange High School	Orange
7	Graeme Anderson	Nth Wagga TAFE	Wagga Wagga
8	Steve Langman	The Riverina Anglican College	Wagga Wagga
9	Susanna Greig	UNE Armidale	Armidale
10	Stuart Hemmings	Prof Support Officer to Regional Director	Tamworth
11	John Harper	Charles Sturt University	Wagga Wagga
12	Belinda Henderson	Tumbarumba High School	Tumbarumba
13	Tony Butler	Tumut High School	Tumut
14	Judy Lawson	Goulburn High School	Goulburn
15	Mick Melino	St Johns College Lismore	Lismore
16	John Lee	Glen Innes High School	Glen Innes
17	Bob Anderson	Knoxs Grammar School	Wahroonga
18	Anita de la Motte	Bomaderry High School	Bomaderry
19	Robyn O'Leary	Finley High School	Finley
20	Stewart Grimmett	Woodenbong Central School	Woodenbong
21	Sue Hope	Goulburn High School	Goulburn
22	Sally Bannerman	Curriculum Support Unit	Sydney
23	Craig O'Brien	Moss Vale High School	Moss Vale
24	Luke Butler	Ryam Logging Pty Ltd	Tumut
25	Ilka Klepper	Cootamundra High School	Cootamundra
26	Jan Young	Murrumburrah High School	Murrumburrah
27	Ian Bishop	The Scots School Albury	Albury

Where did the Conference Aggies come from?

Number	NAME	SCHOOL	LOCATION
28	Robert Cain	Hay Memorial High School	Hay
29	Graham Quintal	Pennant Hills High School	Pennant Hills
30	Nicolet Westwerhof	Elizabeth Macarthur High School	Narellan
31	Phil Armour	Yass High School	Yass
32	Maryann McRae	Hennessy Catholic College	Young
33	Attila Babos	Mount Carmel School	Yass
34	Greg Fulljames	Yanco Agricultural High School	Yanco
35	Wayne Whale	St Paul's College	Walla Walla
36	Georgina Bolam	Coleambally Central School	Coleambally
37	Stephen Trickett	Billabong High School	Culcairn
38	Ian Baird	Murrumburrah High School	Murrumburrah
39	Caroline Coleman	Northholm Grammar School	Arcadia
40	Mark Hopkins	Monaro High School	Cooma
41	Phil Hurst	Hawkesbury High School	Hawkesbury
42	Jade Smith	Trangie Central School	Trangie
43	Ian Thompson	Yanco Agricultural High School	Yanco
44	Gary Webb	Student Ag. Teacher CSU	Deniliquin
45	Peter Humphries	Deniliquin High School	Deniliquin
46	Johana McCarthy	Hillston Central School	Hillston
47	Rick Buckley	Trinity Catholic College	Goulburn
48	Joan Keiger	Karabar High School	Queanbeyan
49	David Crick	Barham High School	Barham
50	Tony Barnett	Walcha Central School	Walcha
51	Sheree Burke	Menai High School	Menai
52	Paul Withers	Willyama High School	Broken Hill
53	Lyn Downes	Erina High School	Erina
54	John Harper	Charles Sturt University	Wagga Wagga
55	Richard Said	Nth Wagga TAFE	Wagga Wagga

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Registration & BBQ



Jan & Ilka hard at it, during registration.



Luke receiving his conference bag from Jan



Nicolette, Joan & Ilka shaing a joke!



Professor Jim Pratley welcoming delegates to CSU



NSW map identifying the location of conference delegates



55 delegates attended the biennial conference at CSU



Phil & Dave exchanging a few yarns!

Forest & Visy Visit

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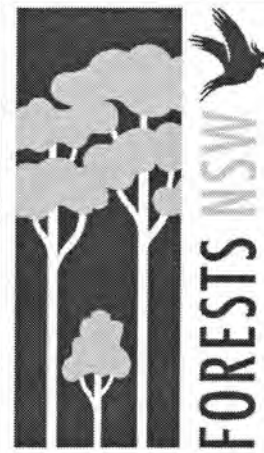
Pine planting demo.



Discussing 'on site' preparations for pines.



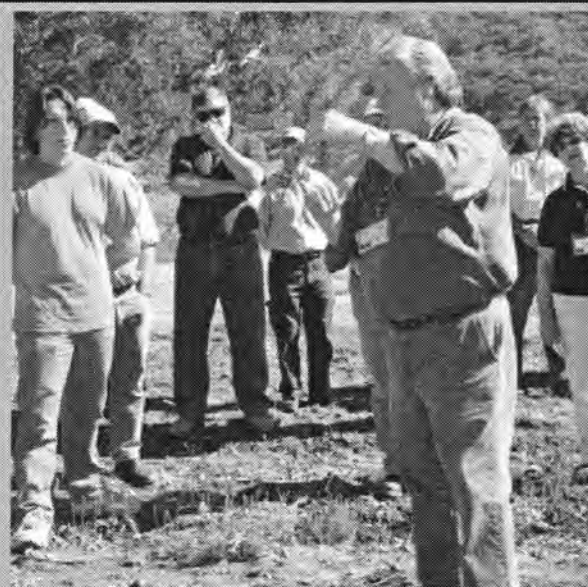
Delegates witnessing the pine harvesting process.



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Forests NSW nursery at Tumut.



Dean Page Forests NSW highlighting the mycorrhiza on the seedlings roots.





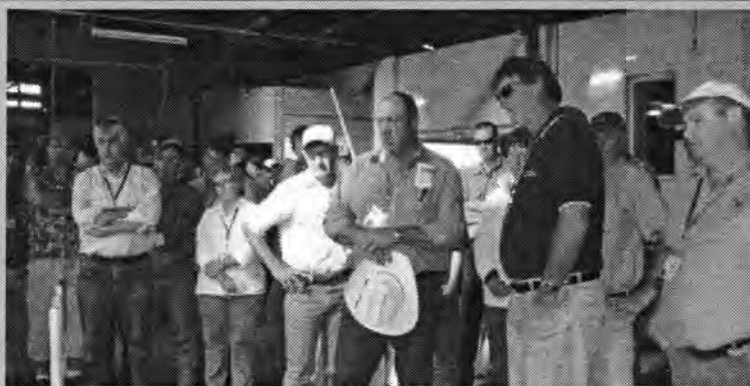
Ilka being silly!



Luncheon at the Tumut Racecourse.



Di & Marea added the "rural theme" to the luncheon area.



Much interest was generated at the Broom Factory.





Radiata Pine seedling beds.



Delegates visited the Visy Pulp & Paper mill & Gadara property at Tumut.



Grapple 'grabs' one truck bay at a time; capacity: 35-40 tonnes.



Demonstration in the art of broom making.



Wood Yard.



Kraft Paper rolls storage area.



Control Room.



Evaporators.



Reclaimer.



Kraft Paper machine.

Gilmore Valley



Discussion of pasture & stock management.



The Visy property is beyond the administration area.

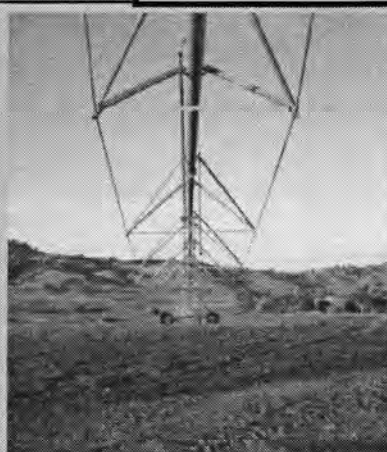


Jan thanking the Visy personnel.

VISY
PULP & PAPER
PAPER MAKING FOR
A BETTER WORLD.



Anthony Barr; Visy farm manager discusses the functions of a control box of a centre pivot.



Visy has 5 centre pivot irrigators; used to dispose of the waste water.



David McMahon discusses Agronomy with Mick & Sheree.



Mark enjoying another bottle at the
Gilmore dinner.



Maryann & Georgina at it again!



Craig, Phil, Anita & Sheree enjoying the ambience at the
Gilmore Hall.



Tuckin' in: Charlie, Dale, Al & David.



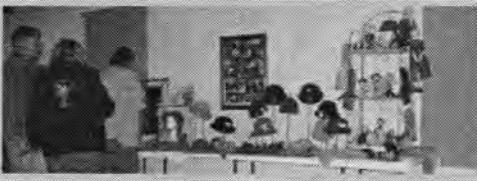
Allan the mechanic checking
the progress of repairs to
the bus.



Ilka & Dave using a 'wine bottle'
to assist in filling the bus radiator
after a small hiccup.



A long term resident of the Gilmore Hall!



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Conference Welcome & Ag Workshops.



**Professor Deirdre Lemerle
welcoming the delegates to the
E.H.Graham Centre.**



**Dr Scott Williams: AWI addressing the
delegates on the current research in the
wool industry & mulesing.**



Tony tasting the CSU Olives.



Scott, Deidre & Tony after their presentations.



**Judy cooking up some
dough.**



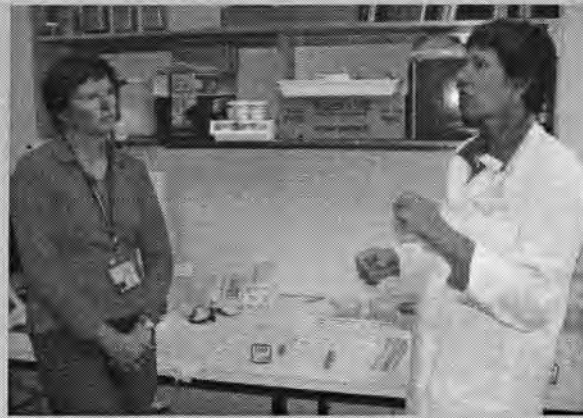
Not sure what Sue is trying to do!!



**Anita joining in on the
Olive tasting!**



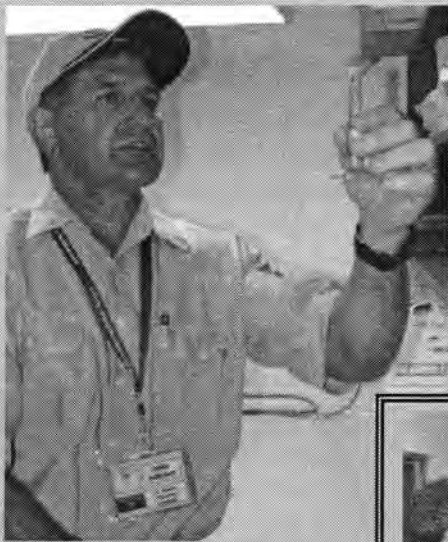
Craig & Helen enjoying the wheat practical.



Intensity of Robyn in the workshops.



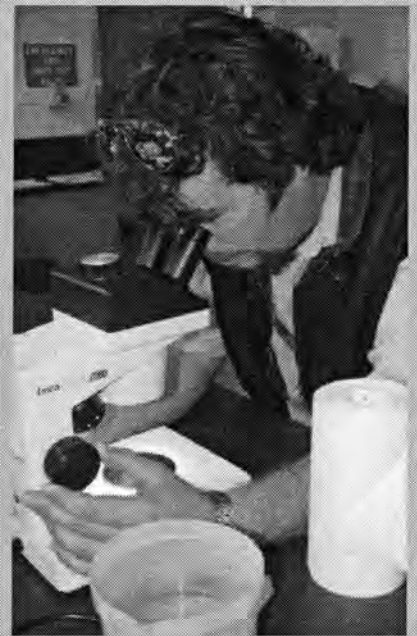
Get it right Sue!



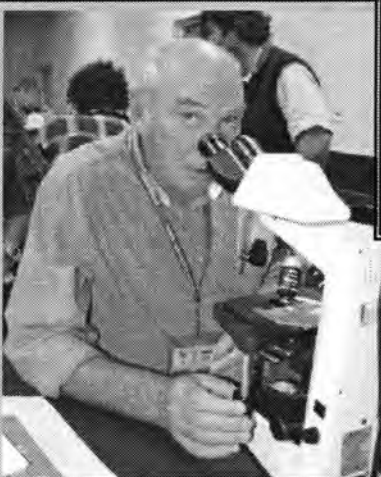
Mick the cereal chemist.



Jade & Kate in the cereal workshop.



Luke investigating fungal spores.



John checking for nematodes.



Gary, Ian, Luke & Phil fixed on Rogers every word.



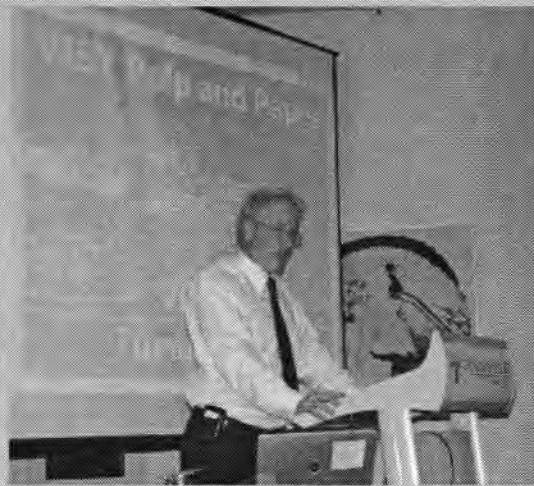
Craig, John, Mic & Luke succeeded at the computer game.

Luke & Stewart investigating soil salinity under the guidance of expert Deb Slinger.

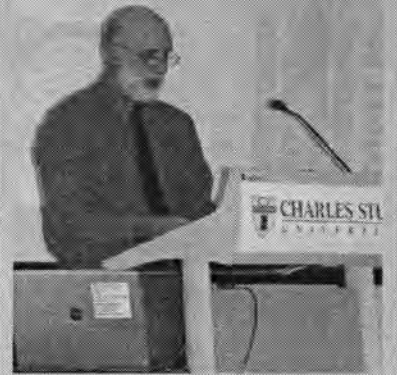




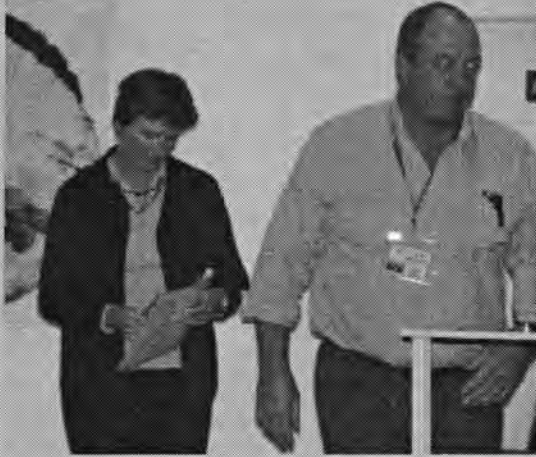
Professor Margaret Alston addressing the delegates on rural social issues.



Lex Kingma: Visy Manager addressing delegates at the conference dinner.



Stephen reading the citation for the J.A.Sutherland Award recipient Robyn O'Leary.



Tony Barnett (previous recipient of J.A Sutherland Award) presented Robyn O'Leary with the prestigious award.



Congratulation to Robyn on her outstanding achievements in the teaching of Agriculture.

The Assoc. commends both Robyn & John on their many years of commitment to the teaching of Agriculture to their students. Well done.



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Congratulations to John Lee for receiving Life Membership to the Association.



Craig, Laurie & Susanna enjoying the conference dinner.

Workshops/ Winery/Cheese Factory/BBQ



The Association thanks Brett Littler Mudgee DPI & Steve Exton Wagga DPI for conducting the beef cattle live assessment competition at Cargill Beef.



YATES

- ^ Donated a Tuscan pot full of Yates products for this competition.
- ^ Association thanks Yates for their valuable gift.



Harry Waddington & Cargill Beef

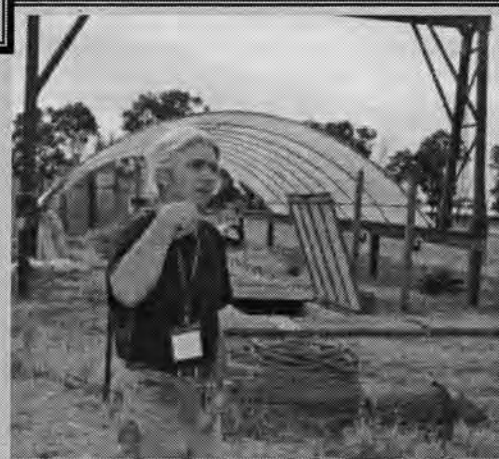
- ^ The Association expresses its gratitude to Cargill for providing the 12 steers for the live beef cattle assessment & carcass appraisal during the conference.
- ^ A highlight for delegates.



Brett Littler & Steve Exton presenting Mark with first prize in the Live Cattle Objective Assessment competition.



Laurie Kirk: Murray Darling Basin Commission
Enlightening presentation on the Murray Darling.



Phil Eberbach discussing soil water research at the CSU Rhizolysimeter.

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Jan & Ilka at it again!



Phil explaining the function of the optic fibre probe at the Rhizolysimeter.



Where's our bus Allan?



The 'High 5s' given to Phil at the Rhizolysimeter (you guessed it) lead by Ilka & Jan.



Helen & Alan discussing the animal nutrition & silage trials.



NO. Johana is not being sick!



Johana is giving her lungs a good work out with silage!

Peter decided to have a go & by the look of him, seemed to have enjoyed the silage smell!





No. Maryann you can't eat it!



Tony hooking in at the wine & cheese tasting.



**Mic & Sue checking out the wine selection
at CSU.**



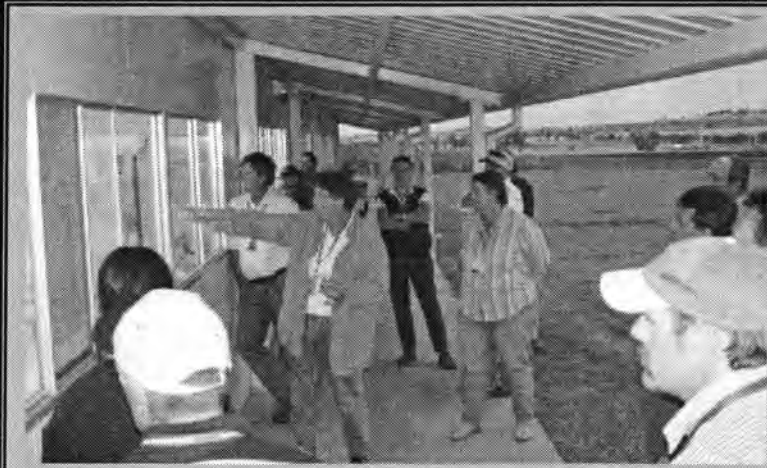
**The boys contemplating on how to get a barrel or two
out of the place.**



Caught red handed Sally; trying to do a bunker!



**Barry the Cheese Maker, had everyone enjoying
his session.**



Barry in full swing on the processes involved in Cheese Making.



Barry receiving his Ag wine glass
& stubbie holder from Jan.



Delegates listening to Allan & John after the BBQ at the
CSU staff club.



Allan & John at the BBQ.



Broom Winners:
Luke, Georgina, Peter & Peter
for their efforts in their colour
groups throughout the conference.



Wayne, Richard & Craig enjoying a quiet drink.



Ag. Presentations

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Annabel Bowcher presenting her session on 'Weeds CRC'



Nicolette taking notes on a Saturday morning!



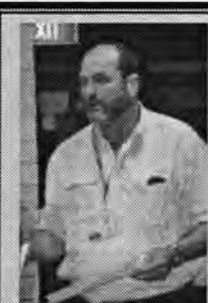
A very attentive audience for the Saturday morning sessions.



Sue: Now come on Nicolette is that necessary?



Annabel discussing her weeds resources.



**NSWAAT
BIENNIAL GENERAL MEETING
FRIDAY 28TH APRIL 2006
CHARLES STURT UNIVERSITY**

Meeting opened at 11.45am

Minutes

1. Welcome & Opening of Meeting:

Tony Butler welcomes all who attended the meeting.

2. Apologies:

Atilla Babos and Graham Quintal

3. Secretarys Report:

i. Allan McMillan touched on some key issues and initiatives of the NSWAAT in 2004-2006. The majority have been recorded in BAAT during the last 2 years.

- a. A cheque for \$3,493.84 was passed on to the Riverina executive by Tony Barnett left over from a surplus from the Armidale conference. This became a seeding grant and was deposited in an account formed at the Wagga Wagga South branch of the NAB. The account was called the NSWAAT BIENNIAL CONFERENCE 2006. Signatories for that account were Tony Butler, David Gillard Allan McMillan. Any surplus from this account will eventually be passed onto the next executive.
- b. Membership of the Association was a concern. Efforts made by the executive to turn that around have had positive results.
- c. Communication amongst members has been an issue. It seems to be improving but some feedback tells us that some members are not receiving some of the regular term mailouts through PTC. This seems to be a School problem where it is not passed on to the Ag teachers.
- d. Communication was made with the Vet in Schools Directorate re the withdrawal of the SMARTtrain course in PI. They are very aware that we are not happy. TAFE are helping to address this need by enrolling PI students into TVET SMARTtrain courses.
- e. Tony informed the ABC that Ag teachers were devastated by their decision to reduce Landline be half an hour. A positive letter was received and no change was made.
- f. The Riverina Director Colin Parker was informed re the lack of formal tractor training of some school staff. The result was that a Pilot course was started at Wagga TAFE last December where a number of teachers had either a one day or 2 day course based on their experience. We hope to extend this program around the Riverina and hopefully other regions can use the same model around the state.
- g. NSW Farmers were contacted and gave us a positive reponse for future collaboration.
- h. An inquiry from a member re Farm Assistants pay and classification was followed up by the Association. A positive outcome was received.
- i. Kondinin were approached late in 2004 to see if they could provide discounts to Association members for publication material. The NSWAAT Association joined Kondinin in 2005 and 2006 as a Special Member and provides our members, Kondinin member's discounts on all publications.
- j. The organising committee for the conference has developed a collaborative relationship with the E M Graham Centre for Agricultural Innovation, Wagga Wagga (CSU and DPI) which has expressed its interest in being involved with future educational pursuits which would benefit Agriculture teachers.

ii. Minutes of the last meeting held Thursday 6th May, 2004.

Report accepted, Moved: Phil Armour

Seconded: Ian Bishop

Carried

iii. Business Arising:

Nil

(Allan's report appears in Section 1: {1.2} of this BAAT.)

4. President's Report:

Tony tabled his report

(Tony's report appears in Section 1: {1.3-1.4} of this BAAT.)

Report accepted, Moved: Sheree Bourke

Seconded: Peter Napier

Carried

5. Treasurer's Report:

Stephen Trickett tabled his report.

(Stephen's report appears in Section 1: {1.5} of this BAAT.)

Report accepted, Moved: Stuart Hemmings

Seconded: Ian Bishop

Carried

6. Technology Report:

Ian Baird summarised the main points of his report:

- I. Our website has continued to be a resource for teachers.
- II. It has used to promote the 2006 Biennial Conference and to acknowledge the sponsors.
- III. We had a change of Web Host with Spherous being bought out by Connected Hostings. We have experienced technical problems in the process.
- IV. New links have been added along with images and graphics.
- V. Continued input from teachers is needed to make our website a useful resource.

(Ian's report appears in Section 1: {1.5} of this BAAT.)

Report accepted, Moved: Peter Napier

Seconded: Wayne Whale

Carried

7. Election of Office Bearers 2006-2008:

Tony told members of the importance of the NSWAAAT to continue and have leadership from a newly elected executive. Discussion was invited from the floor and Tony called for nominations for President. Robert Cain volunteered to be President for 2006-08.

Other office bearers will be appointed when Western Riverina teachers meet in the near future.

8. 2008 Biennial Conference:

Conference venue and date to be advised.

9. State Agricultural Advisory Group (SAAG)

Tony outlined what this group was and there role. There were 2 members to be elected from the Association at the BGM.

Craig O'Brien from Moss Vale high and Phil Armour from Yass currently hold the position on SAAG as representatives of the Association. Tony asked both Craig and Phil if they were willing to continue. Both agreed to continue their important work in this group.

Moved: Allan McMillan

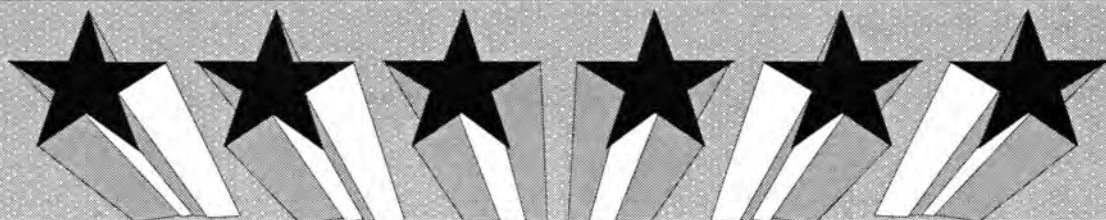
Seconded: Jan Young

Carried

~ The outgoing 2004-2006 Executive would like to wish Robert Cain & his team all the very best over the next 2 years with the Association.

~ The Association has many issues to be addressed & Robert will ensure this occurs.

~ This is the first time that the Association has been formed in Western Riverina & we look forward to supporting Robert in his new position. Congratulations Robert.



CONGRATULATIONS



Robert Cain
Hay Memorial High School

PO Box 266
Pine Street
Hay NSW 2711

Ph: 6993 1408
Fax: 6993 1223

haywarmem-h.school@det.nsw.edu.au

2006-2008

Agriculture Teachers Association
to be formed in the

Western Riverina

under the leadership of

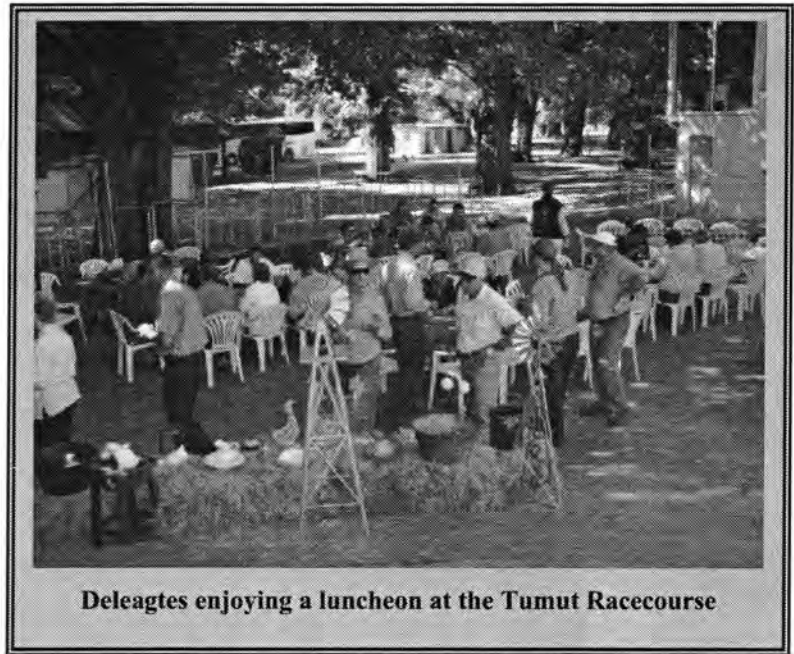
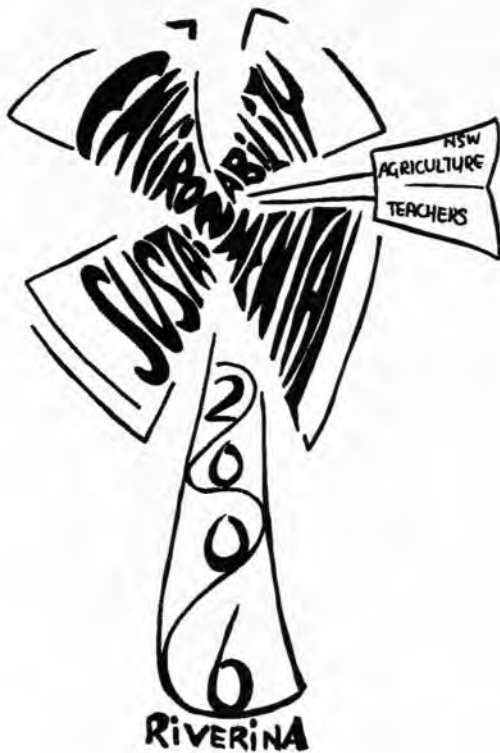
Robert Cain

Hay Memorial High School



The 2006-2008 Executive of the Association will be formed in June.

Details of the new executive will appear in
BAAT Summer Edition 2006



Delegates enjoying a luncheon at the Tumut Racecourse

4

Conference Sponsors

^ The Murrumbidgee River has over 400,000 tonnes of salt pass Wagga Wagga each year, with sub catchments such as Yass, Jugiong, Muttama, Tarcutta and Kyeamba contributing the greatest amounts of salt.

^ Amelioration work to reduce this salt in the River includes rehabilitation of salt affected paddocks, fencing along stream banks, provision of alternative watering points for stock, weed & pest control, revegetation, structural erosion control works, and innovative riparian & restoration techniques.

^ Gold Sponsor:

✓ Visy Pulp & Paper

^ Silver Sponsors:

✓ Forests NSW

✓ John Deere

✓ TeamPoly

^ Bronze Sponsors:

✓ CRT

✓ Incitec Pivot

✓ Tumut Council

✓ Wagga Wagga City Council

✓ Yates

^ Some Images from April:

Section 4 sponsored by:



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A BETTER WORLD.**



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A BETTER WORLD.**



VISY PULP AND PAPER, TUMUT

Gadara Park

Welcome to Visy Pulp and Paper Mill, Tumut

As a major investment in its commitment to sustainable manufacturing, Visy Industries has built the Visy Pulp and Paper Kraft Linerboard mill at Tumut in New South Wales. The mill, which commenced operation in May 2001, uses plantation timber sourced from sustainably managed softwood plantations and waste paper collected from major city centres to produce unbleached 'Kraft' paper for the packaging industry. The mill has been designed and built to the very latest in technology and automation and incorporates the very highest environmental standards.



Figure 1: Visy Pulp and Paper, Tumut

The Visy mill is set in a pastoral landscape on a 1,400-hectare site approximately 8 kilometres west of Tumut and 7 kilometres east of Adelong. Much of the land is located on the valley floor that has been cleared of all but a few trees and shrubs.

The processing area of the mill covers approximately 70 ha. The remaining property, known as Gadara Park, is managed and operated as a farming business. This property is an integral part of the development that is carefully managed to protect it and to ensure the long-term sustainability of the mill operations.

The Farm (Gadara Park)

Pratt Pastoral operates and manages the farming business at Gadara Park. This farm consists of 100 ha of wastewater irrigation, dry land pastures, preserved areas of remnant vegetation and newly planted native vegetation. Since the property was purchased in 1999, a native vegetation management plan was prepared and implemented to control weeds and preserve and re-establish native vegetation on the property. Over 6,000 native trees have now been planted and mostly all of the creek and badly eroded gullies fenced off to exclude stock. Further to work undertaken on the Visy property, which has served to establish corridors linking the riparian creek zone in the valley floor with existing woodlands on the hills and slopes, Visy works closely with the Riverina Highlands and Gilmore Landcare Groups to provide assistance in promoting and supporting Landcare initiatives within the Gilmore Valley.

Pratt Pastoral's main produce is high quality prime beef production. The farm currently stocks 1,500 Prime Angus steers and 800 breeding cattle. It plans to build the breeding numbers up to 1000-1500. The bulls are sourced from Victorian stud "Lawsons" and steers are sold to the Certified Angus Beef Group.

Wastewater Reuse Scheme

The wastewater re-use area incorporates five Centre Pivot irrigators and a Soft Hose traveller as shown in figure 2 below, applying wastewater treated to the highest quality from the mill. The total area under irrigation is approximately 100 ha, with the largest pivot covering 28 ha. Typically each irrigation season, which extends over spring/summer/autumn from November to May, approximately 500 to 600 ML of water is applied over the entire area.

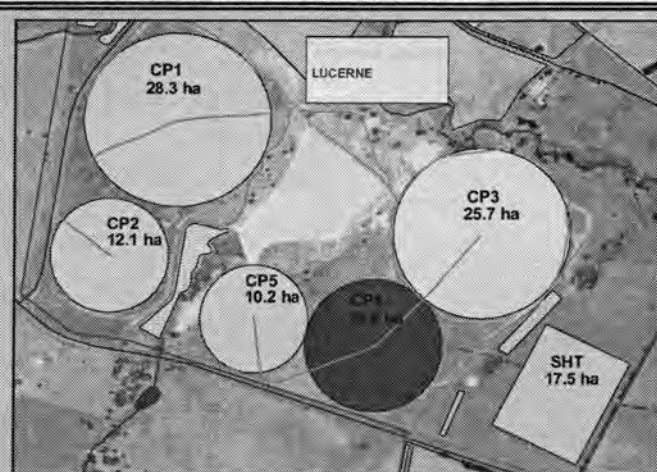


Figure 2: Waste water re-use area layout

During the winter months, 1.0 ML/day of treated wastewater is gravity fed from the mill to the 480 ML capacity Winter Storage Dam. The Winter Storage Dam has been constructed with a 500 mm thick compacted clay liner on the base and geo-textile composite liner on the sides to prevent any leakage into the local watercourses.

Each centre pivot can be controlled independent from one another with application rates set dependent on soil type, soil moisture levels, atmospheric conditions and crop type. Pivots can also be controlled to irrigate either full circle or partial circle over any chosen arch. This ensures even within each pivot area the correct amount of water can be applied to cater for poor drainage soils and low-lying areas.

Soil Moisture Sensors

Soil moisture probes similar to that shown in figure 3 are located in each of the pivot areas and are used as part of the irrigation scheduling management. These probes operate to continuously monitor soil moisture levels in the root zone to 1.0 metre in depth. This data is downloaded on every 15 minute interval onto a secured website where it can be represented graphically similar to as shown in figure 4.

Each soil moisture probe measures soil moisture as a percentage of the volume of soil at depths of 10 cm, 30 cm, 50cm and 100cm.

Irrigation Scheduling

Irrigation scheduling is an important part of ensuring the long-term sustainability of irrigation management. The primary function is to ensure the correct amount of water can be applied to maximise water uptake and crop productivity, prevent salts from accumulating in the root zone and to ensure no adverse impacts on the groundwater aquifer.

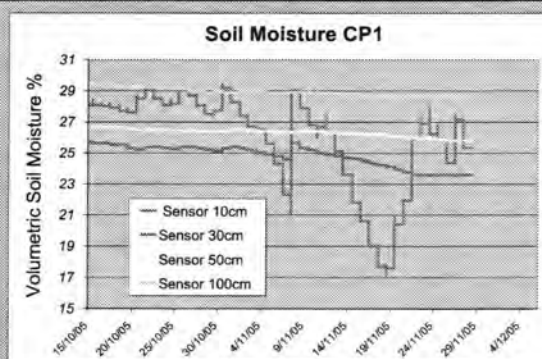


Figure 4: Soil Moisture levels at CP1

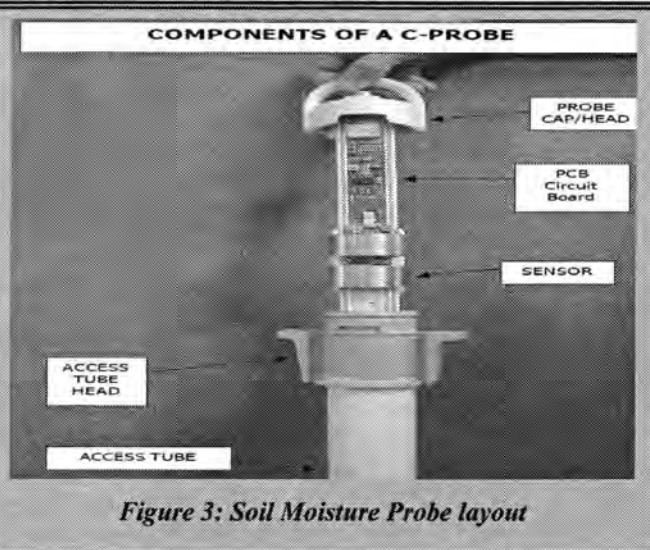


Figure 3: Soil Moisture Probe layout

Soil and climate based methods are the recognised methods used for irrigation scheduling. The soil based method uses soil analysis to determine the Field Capacity, Available Water Capacity and Wilting Point of the soil profiles and data from the soil moisture probes to determine soil water deficit under each area of irrigation.

The climate based method uses evapo-transpiration data, which is calculated from meteorological data collected from the site weather station, to calculate how much water the crop will need on a daily basis. The quantity of water applied is based on this quantity required by the crop less what is already available in the soil profile.

Crop Management

Crops grown at Gadara Park are triticale, ryegrass, wheat and oats during winter, and maize, ryegrass, millet and forage sorghum through the summer. Crop rotation is selected to suit the overall farm management so as to include both high protein and high dry matter production crops to provide a balanced feed ratio for cattle. Some crops such as wheat and triticale are chosen for other purposes such as control of weed burden. These crops allow a greater range of herbicides to be used allowing the broadest spectrum of weeds to be controlled. Growing these crops for at least two years provides necessary weed control to allow the establishment of other crops.



Figure 5: Harvest time

Lucerne is the main high protein crop, which was grown for the first time this season. As it is also a large water user it makes it an ideal crop for irrigation. The soils at Gadara Park have not been suitable to grow Lucerne until now. The soils at Gadara Park have quite shallow profiles, low in organic matter and inherently acidic. A program to improve the soil conditions was implemented over the last two to three years.

This mainly involved application of lime-by-products and fertilisers. In its first season, Lucerne has been an exceptional crop providing an excellent feed for cattle, producing up to 20 tonnes per hectare of high protein and fibre hay/silage. The other advantages of Lucerne is as a perennial crop it will perform at least three years under intensive production not requiring re-seeding or planting over that time.

Ryegrass is the other main crop grown this season. It is a perennial crop persisting up to two years before re-seeding. Grown typically as a winter crop, due to its high water demand, it has also been planted over dry-land pasture areas. Under the irrigation areas this year each cut has produced in the order of 8 to 12 tonnes per hectare.

Environmental Monitoring Program

A comprehensive Environmental Monitoring Program has been prepared in consultation with the Department of Environment and Conservation, Department of Natural Resources and Department of Primary Industries. The monitoring is undertaken on a routine basis and results from monitoring are reviewed by a consulting Agronomist and included in the sites Annual Compliance report submitted to the relevant agencies.

The monitoring is undertaken on the treated wastewater, from over 18 groundwater monitoring bores located upstream and downstream of the irrigation area, from five surface water monitoring sites, from seven soil monitoring sites located within the irrigation area, along with plant and animal tissue samples.

Wastewater Monitoring

Wastewater is treated to a quality suitable for river discharge. The quality must meet the limits specified in the Environmental Licence. The results of analysis are typically well below the Environmental Protection Licence limit. Table 1 below compares the wastewater quality from sampling undertaken in the 2004-2005 reporting period with the Licence Limits.

Analyte	Units of Measure	License Limit	Mean of samples	% of Limit
Manganese	mg/L	na	0.034	
pH		5.5 – 9.5	7.3	na
Sodium Absorption Ratio		na	3	na
Total Dissolved Solids	mg/L	na	489	na
Nitrogen	mg/L	20	<2	10
Phosphorus	mg/L	5	0.37	7.4
Zinc	mg/L	na	0.178	na
BOD	mg/L	40	2	5
Total Suspended Solids/	mg/L	45	15.7	35
Total Organochlorines	mg/L	na	<1	na
Oil and Grease	mg/L	5	3.2	65

Table 1: Waste Water Quality from July 04 to June 05

Ground Water Monitoring

Depth to groundwater and groundwater quality are monitored to ascertain if the plant and irrigation operations have any impact on local groundwater conditions. Groundwater levels are taken from locations upstream and downstream of the irrigation area on a monthly basis. Similarly groundwater samples are taken from upstream and downstream bores every three months and analysed to establish any impacts from irrigation. Groundwater levels tend to be from 1.0 to 8.0 metres below surface level. The levels tend to vary up to 2 metres mainly due to seasonal rainfall.

Surface Water Monitoring

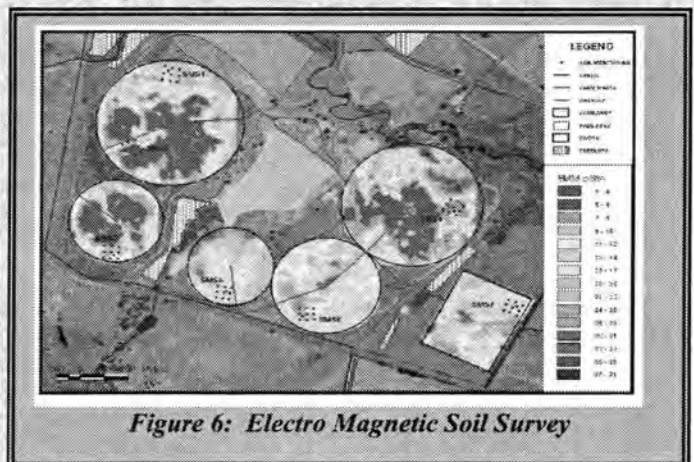
Surface water monitoring is undertaken from five sites located in Sandy Creek and its tributaries at both upstream and downstream of the irrigations areas. The samples are taken on a monthly basis during the irrigation season to assess if there are any impacts on the water quality in Sandy Creek. Run-off from the irrigation area into the creeks is very minimal, as drains located around each of the irrigators diverts all run-off to a collection dam, which is transferred back into the Winter Storage Dam.

Soil Quality Monitoring

Sampling of topsoil is undertaken twice a year and subsoil once every three years from seven sampling points located under each irrigation area. Samples are tested for a list of parameters to assess if there are any environmental impacts on soils from irrigation. Other additional parameters are included to aid in decision making to assess the nutrient status at the start of every summer and winter cropping program. This can then be used so that nutrient budgets can be matched to crop type and efficiency. A nutrient budget forms part of the 15-year forward management plan.

Intensive Electromagnetic (EM) soil surveys have been undertaken on the soils under the irrigation area to enable mapping of soil types. The EM survey measures the apparent electrical conductivity of the soil down to a depth of 1.5 metres, which is the effective root zone of most irrigated crops. The main purpose of the EM survey is to identify different soil types that may influence crop performance so that farm management can cater for varying soil properties.

Figure 6 graphically represents results of the EM survey undertaken in December 2003. The red colour represents soils with low electrical conductivity located on higher elevations, which characterises soils that are well drained with substrates of coarse fragments and decomposed rocks. The darker green colours represent high electrical conductivity, which indicates soils in low-lying areas characterised by poorly drained alluvium overlaying clay subsoils.



Animal Tissue Testing

Tissue sampling and testing has been undertaken on cattle that have been raised on the Gadara Park property. Samples have been collected from cull cattle that have been on site for a minimum of two years. Samples from kidneys and liver have been used for heavy metal testing and fat tissues samples were taken for testing of Organo-phosphates and Organo-chlorides. This testing supplements other types of monitoring as any concerns with residue levels of pollutants would initially be identified during the routine testing of wastewater, soil or plant tissue.

Fauna, Landscaping and Native Vegetation Management

Prior to the commencement of operations, Visy prepared a Landscape Plan in consultation with Council, DLWC, NPWS and the Gilmore Landcare Group, and a Native Vegetation Management Plan in consultation with DLWC. During the EIS, detailed studies were conducted on the flora and fauna on the Visy property.

Fauna, Landscaping and Native Vegetation Management

As part of the Native Vegetation Management Plan, Visy has undertaken to fence off all major creeks and drainage lines to exclude stock.

Revegetation has also been undertaken in these areas for the purpose of connecting remnant vegetation on the hills and surrounding Tabletop Mountain to riparian zones along Sandy Creek. Once established, these plantings will provide abundant shelter and wildlife corridors between these areas.



Fig 7: Native Re-vegetation undertaken in August 2004

Visy has further embarked on a program of identifying the birds, mammals and reptiles that inhabit Visy's 1,400 ha property. An initial fauna survey undertaken by an Australian National University (ANU) research project team was commissioned in June 2005.

The survey is being undertaken to obtain an inventory of species present on the site, as well as providing an estimate of abundance and the bio-diversity of the site. It will involve the use of hair traps for small mammals, frog call tape playbacks, bird sighting, a reptile survey and spotlighting for arboreal mammals.

Over time the survey's aim is to monitor changes to types and number of species as the areas of re-vegetation further establish creating new habitats.

Livestock Management

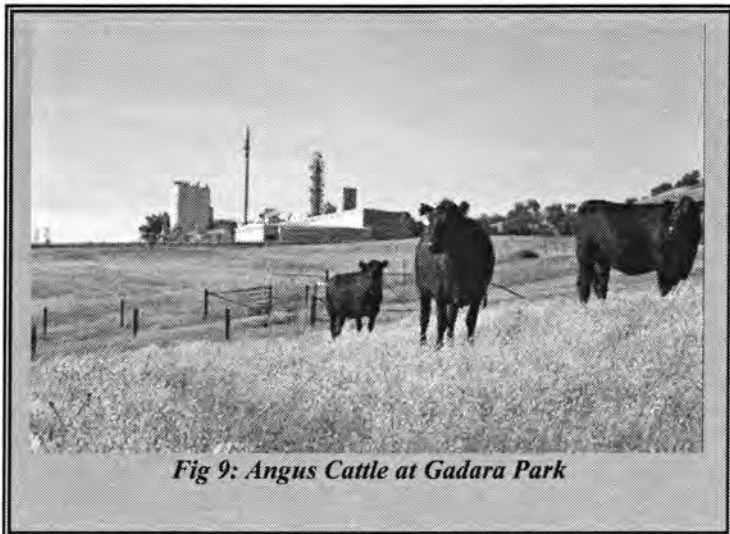


Fig 9: Angus Cattle at Gadara Park

The Gadara Park property runs Angus and Angus-cross breeders, trades in steers, and has a carrying capacity of 20 dry sheep equivalents to the hectare, or one cow to an acre.

Higher stocking rate was reached by using careful agronomy combined with thrifty feeding of summer crops and establishing a cell grazing system. Under this regime, cattle were averaging 1.5-kilogram weight gain a day.

This regular feed source from the wastewater re-use scheme allows the property to background steers for feedlots.

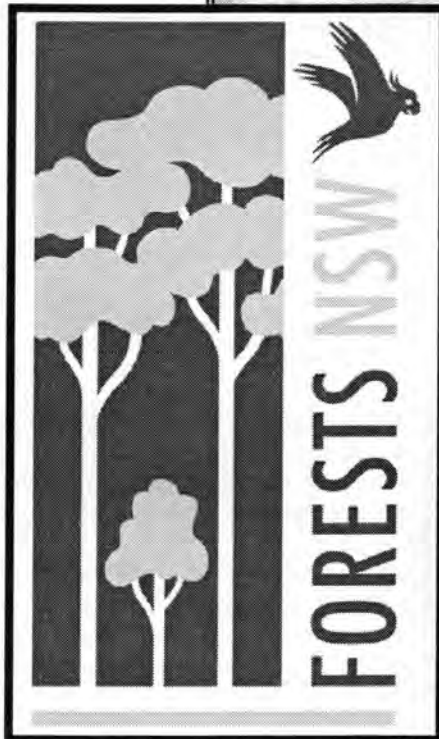
The steers are bought in at 300kg and sold to feedlots at 420-450kg. The farm also runs 1,000 Angus females based on Lawson's Angus Ythanbrae bloodlines.

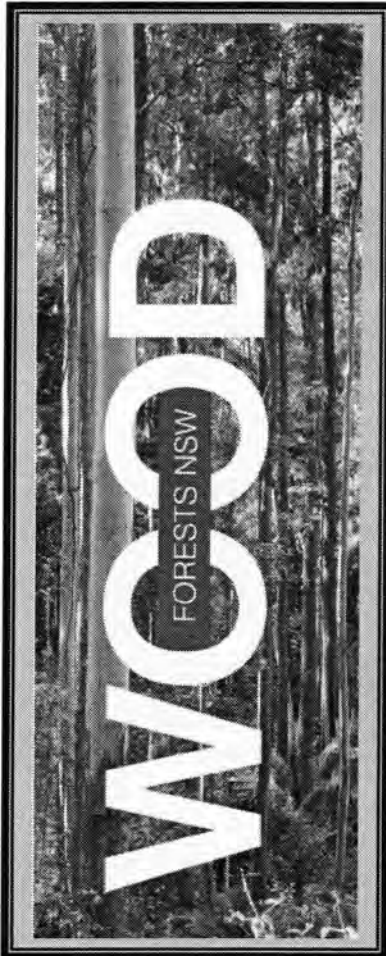
The partnership between industry and agriculture at Visy has never been so important to ensure financial and ecological sustainability for both the mill and farm operations.

The ongoing environmental monitoring program will ensure the longer-term sustainability of this development.

The Association extends its gratitude to Visy Pulp & Paper for being the 'Gold' Sponsor for the 2006 Biennial Conference.

SILVER SPONSOR





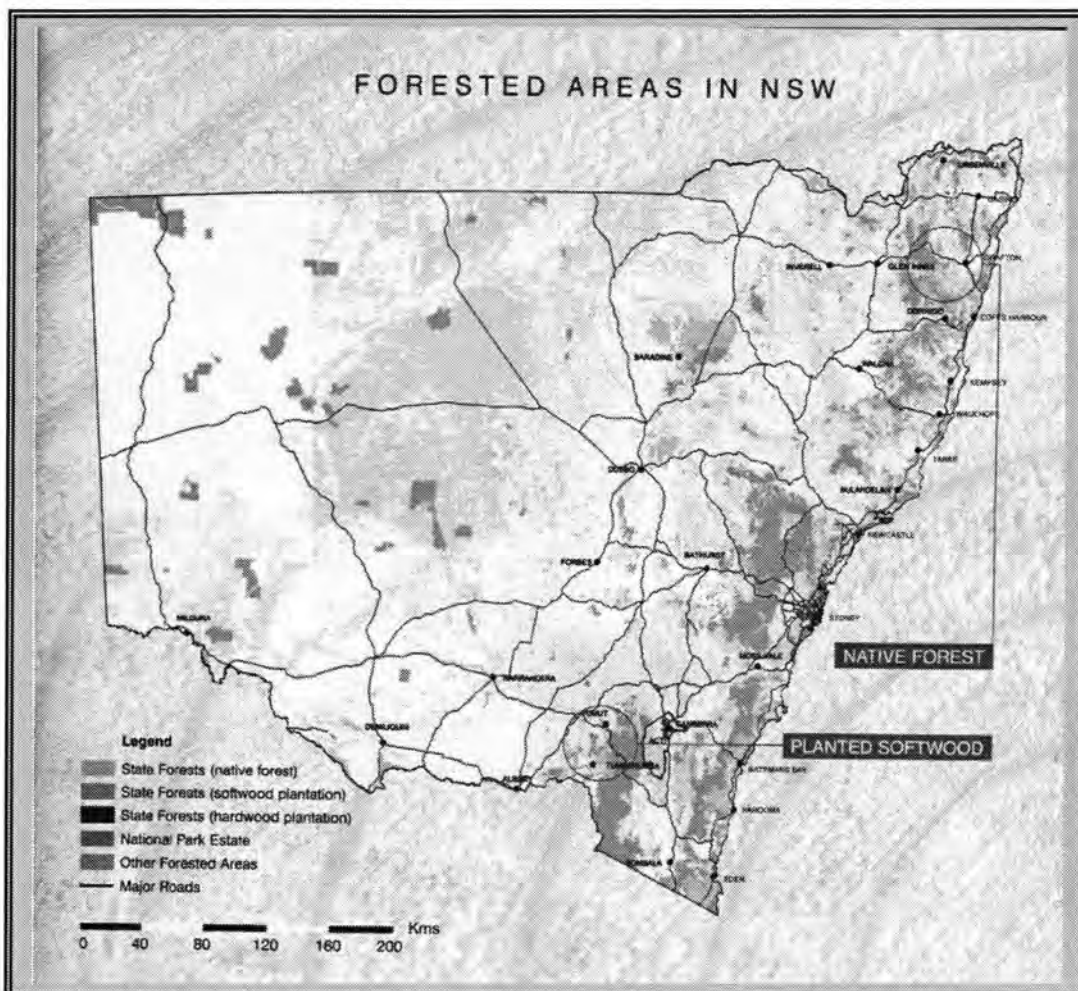
Forests New South Wales is the largest producer of plantation-grown radiata pine timber in Australia, selling enough timber to construct about a quarter of the houses built in Australia each year.

Radiata pine is native to North America, growing on a narrow stretch of coast in Southern California and two small islands off the coast of Mexico.

The first 'commercial' radiata pine plantation established in Australia was planted in Tuncurry on the mid north coast of New South Wales in 1914. Although this site proved unsuitable, planting expanded to the higher altitude tableland areas near Bathurst, Tumut, Bombala and Walcha where the trees then flourished. Radiata pine plantings in New South Wales now exceed 210,000 hectares and are valued at over \$1 billion.

Radiata pine is not only commercially-grown in Australia – it is one of the most widely grown exotic timber species in the world with major plantations in New Zealand, Chile and Spain.

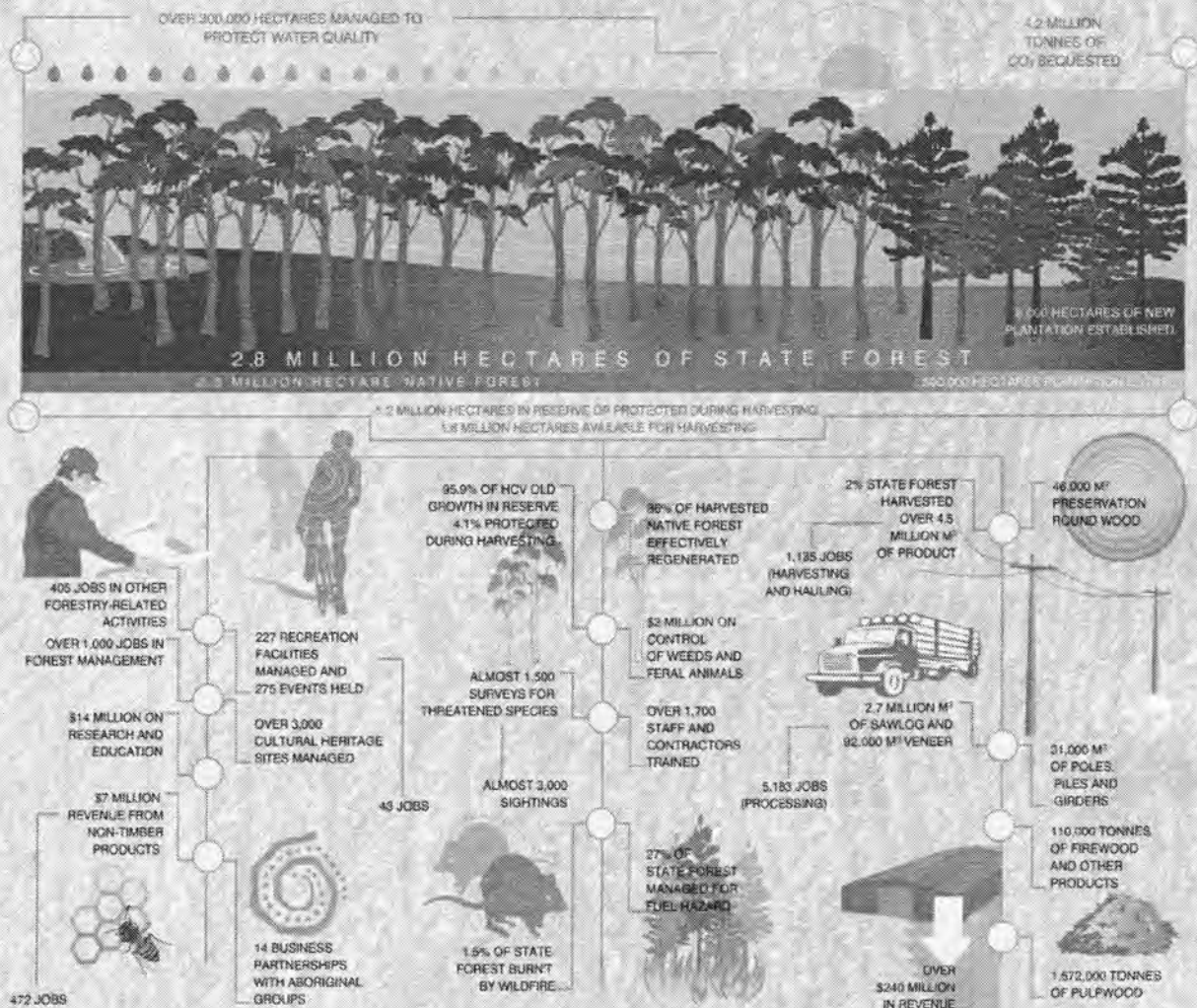
Forests NSW are developing carbon trading, which links the ability of trees to absorb carbon with industry's need to reduce carbon emissions. Radiata pine is an excellent absorber of carbon and greatly aids the reduction of greenhouse gases.





New South Wales has close to 27 million hectares of forest covering 34% of the state.

This is about eight football fields (four hectares) of forest for each person in NSW. About 3 million hectares of NSW forest is State forest, a form of public land managed by Forests NSW. State forests are managed to balance the way people use forests for things like timber and recreation with the conservation of unique forest features like wildlife, clean water and cultural heritage sites.



LIVING, WORKING, PLAYING ... FORESTS 2003/04



Horses are welcome in State forests



A hazard reduction Burn begins in Darling Mills State Forest, Sydney



An ecologist uses a hair sample to identify wildlife



Contemporary softwood sawmill near Tumui



Ecology staff plan a wildlife survey prior to timber harvesting



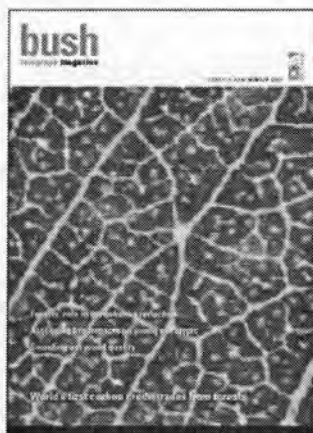
Cypress pine cabin, one of the valuable timbers from Western NSW



Timber cutting today

FORESTS NSW: RESOURCES

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- If you want to know more about planted and native forests across New South Wales
- If you want to gain insight into the people who manage these forests and plantations
- If you want to learn about the environmental services of forests
- If you want to be informed about the latest forest research
- If you want to receive fun activity sheets with games, puzzles and constructions
- If you want to appreciate native timbers and their uses

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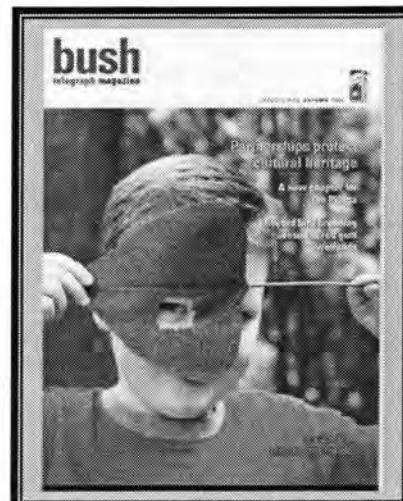
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FACSIMILE

For many years Forests NSW has conducted free bus trips for teacher's professional development. These have been proven to be very successful for demonstrating how State forests are managed for a range of economic, environmental, social and cultural values.

In 2006 we are reviewing the format, number and location of the bus trips and we encourage you to register your interest in attending future bus trips in the locations below.

Please circle your preference then fax the survey to the fax number above.

Preferred locations

Watagan State Forest (Hunter)

Lower North Coast (Moonan Brook)

Bathurst

Tumut

Coffs Harbour

Southern Highlands

**FAX YOUR
COMPLETED FORM
TO.....**

02 98726447

**Having visited the
Pine Plantations
during the
conference; a great
opportunity exists
to take your
students into a
forest in your area.**

Bus trip duration preference

Overnight

Extended day trips

9am to 3pm trips

Weekday/weekend preference

Weekday trip

Weekend trip

Combination of weekday and weekend (eg. Friday and Saturday)

Overnight preference

Camping in tents

Staying in cottages

My Contact Details:

Name:	School & subject/class taught:
Address & Postcode:	
Email:	Phone number:
Additional questions or comments:	Fax number:

Thanks for participating in the Teacher's Bus Trip Survey!

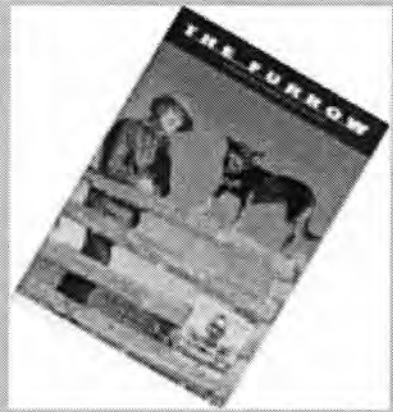
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Since its very beginnings, John Deere has had strong ties to the land. And, as importantly, the livelihood of most of our customers depends upon the land.

Running Green Sustainable growth through stewardship



Construction & Forestry



JOHN DEERE



60 SERIES COMBINE AWARD

2004 PRODUCT OF THE YEAR



Grounds Care



Agriculture



John Deere in Australia



John Deere:

- John Deere has grown and prospered through a long-standing partnership with the world's most productive farmers and lawn care professionals along with homeowners who find a special reward in caring for their lawns and gardens.
- Today, John Deere is a global company with several equipment operations and complementary service businesses. These businesses are closely interrelated, providing the company with significant growth opportunities and other benefits enabling us to serve our customers better.
- John Deere is committed to providing genuine value to our customers, dealers and communities. In support of that commitment, John Deere aspires to:
 - grow and pursue leadership positions in each of our business areas
 - extend our pre-eminent leadership position in the agricultural and lawn care industries
 - create new opportunities to leverage the John Deere brand globally
- By pursuing the broader corporate goals of customer support and continuous improvement, each of the company's business units is expected to:
 - achieve world-class performance by attaining a strong competitive position in target markets
 - exceed customer expectations for quality and value
- By growing and continuously improving, each of the John Deere's business areas will benefit from and contribute to John Deere's unique intangible assets:
 - our strong and distinguished brand
 - our heritage of integrity and teamwork
 - the special relationships that have long existed between the company, customers, dealers and other business partners around the world
- Deere's extensive product range can be view on John Deere's web site at www.deere.com.au and includes a large number of specialists commercial mowing equipment designed to meet the demanding and harsh environments they operate in. These include:

Commercial ride-on mowers

- **LT150**
15 horsepower, hydrostatic, 38 inch mower deck
- **LT160**
16 horsepower, hydrostatic, 42 inch mower deck
- **LT180**
17 horsepower, hydrostatic, 42 inch, 48 inch mower decks
- **LX280**
18 horsepower, hydrostatic transmission, 42 inch, 48 inch, 54 inch mower decks
- **LX280 All Wheel Steer**
18 horsepower, hydrostatic transmission, 42 inch, 48 inch, 54 inch mower decks
- **LX289**
17 horsepower, hydrostatic transmission, 42 inch, 48 inch, 54 inch mower decks



- **GT245**
20 horsepower, hydrostatic transmission, 54 inch mower deck
- **GX345**
20 horsepower, hydrostatic transmission, 48 inch, 54 inch mower decks
- **X475**
23 horsepower, hydrostatic transmission, 48 inch, 54 inch, 62 inch mower decks
- **X485**
25 horsepower, hydrostatic transmission, 48 inch, 54 inch, 62 inch mower decks
- **X495**
24 horsepower, hydrostatic transmission, 48 inch, 54 inch, 62 inch mower decks
- **X575 mechanical front wheel drive**
23 horsepower, hydrostatic transmission, 48 inch, 54 inch, 62 inch mower decks
- **X585 mechanical front wheel drive**
25 horsepower, hydrostatic transmission, 48 inch, 54 inch, 62 inch mower decks
- **X595 mechanical front wheel drive**
24 horsepower, hydrostatic transmission, 48 inch, 54 inch, 62 inch mower decks



Commercial front mount mowers

- **1435 Series II Front Mower**
24 horsepower, 60 inch and 72 inch mower decks
- **1445 Series II Front Mower**
31 horsepower, 60 inch and 72 inch mower decks
- **1565 Commercial Front Mower**
36 horsepower, 72 inch mower deck
- **1600 Turbo Wide Area Mower**
64 horsepower, 62 inch., 94 inch., 128 inch cutting widths



Small compact utility tractor models available:

- **2210**
23 horsepower, mechanical front wheel drive, ROPS, operator presence system
- **790**
27 horsepower, ROPS, operator presence system



Compact utility tractor models available:

Small Chassis (13.8 - 19.6kW)	Mid Chassis (21 - 26kW)	Large Chassis (29 - 36kW)
	3120	
	3320	4320
4110	3520	4520
4115	3720	4720

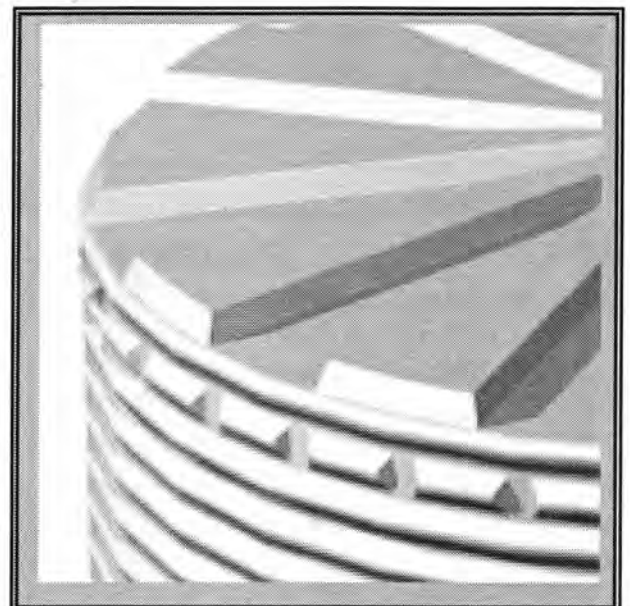
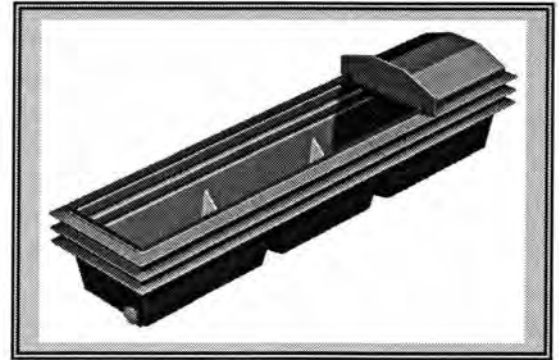
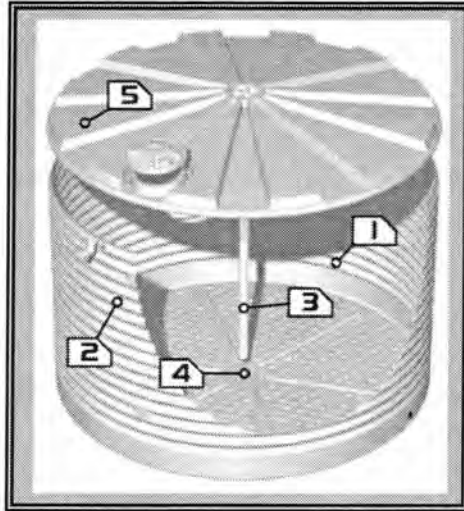
Department of Education and Training Contract

- John Deere has secured the very prestigious and exclusive Department of Education and Training contract for New South Wales.
- This contract was secured in 2004 and runs to the end of 2007 and covers three models of compact utility tractors: (4110, 4210 and 4510) and are designed specifically for training students on the operation of these tractors.
- Specific safety features included in the product specification are:

- Right-hand entry restriction bar
- Lock-out of medium and high speed gears
- Slip prevention for entry step

- Remote engine cut-off system
- Rear mounted engine cut-off system
- Reversing alarm
- Canopy
- Rear vision mirrors

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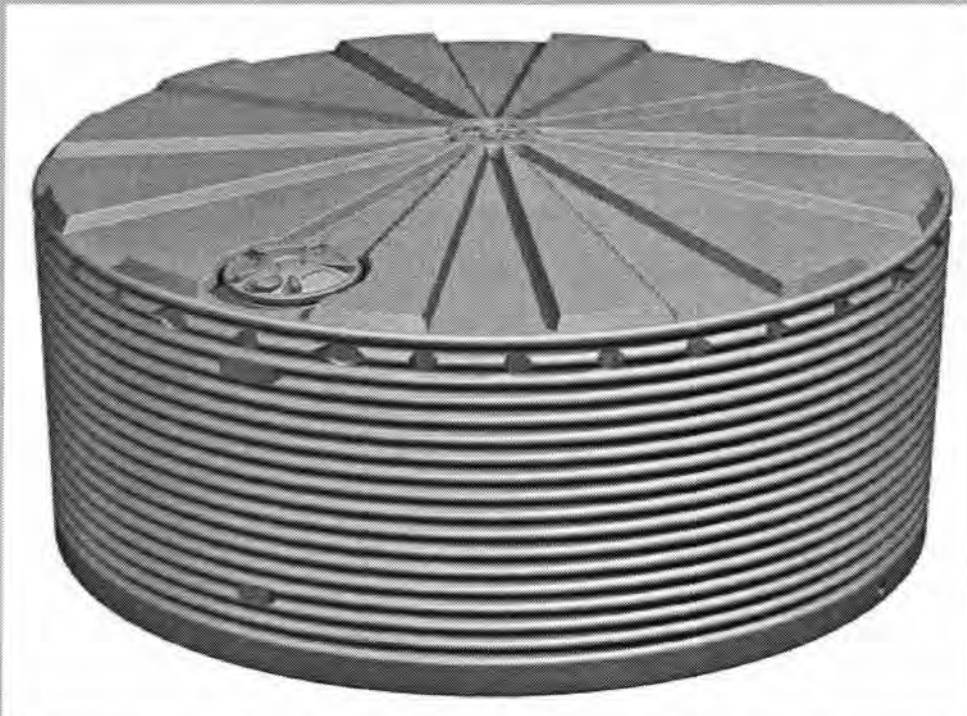
Team Poly

Team Poly, a member of the Hills Industries Group, based in Lonsdale in the southern suburbs of Adelaide, is one of the largest rotational molding companies in the southern hemisphere and is an industry leader in the manufacture of polyethylene water storage tanks and other specialty products.

Water has become an extremely important issue for both the rural and urban communities. With reservoir capacities dropping to alarming levels and governments suggesting that recycled water will be used in the future. A large focus has turned to water storage solutions to utilise the water that would have previously ended up as storm water.

Team Poly manufactures an extensive range of rotationally moulded polyethylene water storage products which can be used as a major part in these water storage solutions. The polyethylene used in the manufacture of these products is food grade and uv stabilised, in accordance to the Australian Standard AS 4020. All products are available in a large range of colors.

For circumstances where space is not an issue Team Poly manufactures a traditional range of corrugated water storage tanks, resembling the galvanised tanks of the past. Ranging from 250 litre capacity up to the large 27,000 as pictured below.



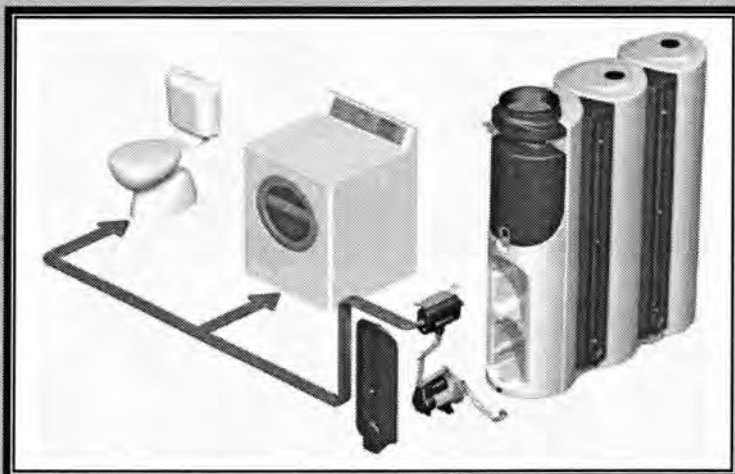
Team Poly

Team Poly also manufacture a range of water storage tanks designed to offer storage solutions where space is at a premium



The ST-700 range of water storage tanks (pictured left) offers an alternative to their galvanised competitors. This range of products has a capacity of 700 litres and several units can be linked together.

The slim design is ideal for side paths or areas with narrow access. The walls are supported by steel hoops for minimum wall distortion. This product has a removable lid for easy cleaning out of sludge. The Water Machine manufactured by Team Poly is specifically designed to allow consumers to use rain water in toilets and washing machines.



These modular systems can be installed along the side of a house and have provision to conceal a pump and Rainbank® inside.

When water is required the Rainbank® automatically uses the rain water from the storage tank, until the storage tank empties.

Then the Rainbank® switches over to mains until the next rain refills the storage tank. These systems can have extra modules added for greater storage capacity.

For more information regarding all the products Team Poly manufacture and to find your nearest local agent visit our website at www.teampoly.com.au

A Hills Company

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Yates
A growing way of life

DYNAMIC LIFTER

IT'S TIME FOR A SEA-CHANGE WITH TWO NEW ORGANIC PICK-ME-UPS!

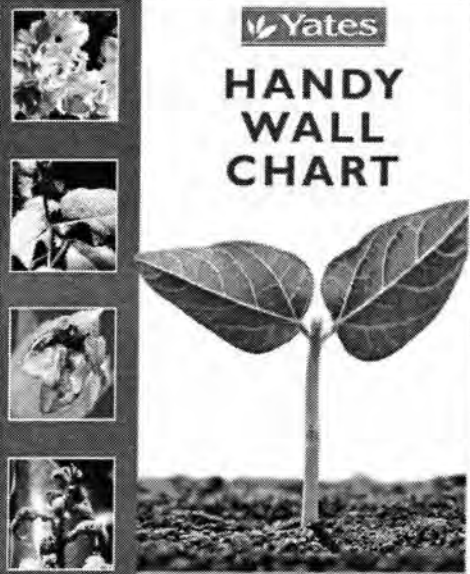


Natural garden growth



Yates A-Z GARDEN PROBLEM SOLVER

HANDY WALL CHART



A quick reference guide to common garden pests, diseases and weed control



Yates
A growing way of life

Waterwise

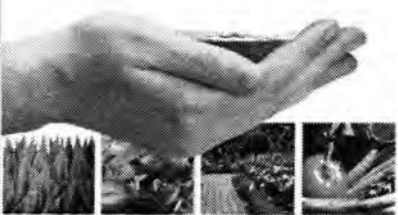
NEW A new and exciting range of products



Helps water conservation for gardens, pots and lawns.
Water Wise Gardening

Yates

Keeping Your Garden W.E.T.



Discover how to make the most out of less water





A growing way of life

Garden Doctor range and Medicinal range

Yates wouldn't be Yates without some packet seed introductions and we're focusing on introducing some exciting plants that will help grow natural remedies.



~ ~ Yates now has a gentle, organic control for mites ~ ~

Yates Natrasoap Mite & Insect Spray is a low toxic, organically-based insect and mite control that uses potassium salts combined with fatty acids in a vegetable oil base (also known as 'insecticidal soap') to smother and dry out insects and mites. Because it has no residual effects Natrasoap poses minimal risk to other beneficial insects and animals in the plant's environment. This means that the birds, the bees and all their garden friends can continue doing their good work!

~ Mites are notoriously difficult to control. For a start, mites aren't insects, so they aren't necessarily affected by every insecticide. They're very small (in fact they're difficult to see with the naked eye) and they're adept at hiding in protected places. They have a reputation for rapidly building up resistance to chemicals. But, because Natrasoap's action is physical (i.e. it dries out or smothers the pest), the mites aren't able to develop resistance to its effects.

~ Yates Natrasoap is available in a 200ml concentrate container with a handy measure on the side.

Yates leading the way in low toxic solutions

~ Yates is committed to reducing the toxicity of the pest control products in its range.

~ Yates's aim is to actively seek and promote products that are low toxic, have minimal impact on the environment and break down rapidly into natural components.

~ The good news for home gardeners is that new, less toxic actives are being developed all the time. For example, in recent years Yates has introduced or distributed low toxic or naturally-derived home garden pest controls such as Bayer Confidor, Mavrik, PestOil and Success*.

~ Now Yates is taking a further positive step by announcing that it is discontinuing the production and sale of a number of outmoded chemicals. The first products to be affected are those based on the active constituent malathion. The next stage will see Yates cease production of products based on carbaryl and rogor. The majority of the garden problems controlled by these older-style chemicals can be solved using less toxic and less persistent substitutes.

~ Yates is proud to be leading the way in updating its plant protection product range

Yates no-cut boxes

~ Last year cardboard and paper manufacturer, Visyboard Australia, offered Yates the opportunity to become one of a select group of manufacturers chosen to take advantage of Visy's new, patented, no-cut box opening system. This clever idea means that goods are shipped in traditional-looking cardboard boxes that have one important extra feature: they've been perforated so they can be opened and made shelf-ready without cutting.

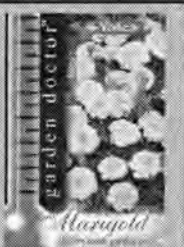
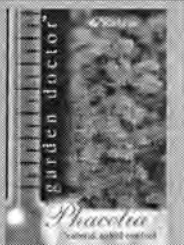
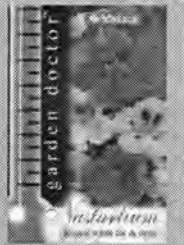
~ The safety advantages of this system are obvious. Retail staff members can open Yates boxes without having to carry or handle sharp knives. Knives aren't left lying around where they can be picked up by passers-by.

~ On-shelf presentation is also improved with the boxes all being opened along the same perforation lines so they end up with a uniform appearance. The opening process is speeded up considerably and there's far less risk of the goods contained within the packaging being accidentally damaged when they're opened.

~ More than 80% of Yates products are now available in the new, no-cut boxes. This innovation proves that Yates continues to maintain its reputation as the innovator in the gardening market.

Yates continues to educate gardeners

~ Gardeners are always hungry for practical information and this year Yates has continued its great tradition as the garden educator by producing a series of small folded flyers that can be hung in store right next to product purchase points. These cover topics such as Waterwise gardening, Keeping Your Garden W.E.T., All About Potting Mixes and How to Achieve a Weed-Free Garden.



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EASY Liquids

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Incitec Pivot

Because the land is your life.



GRAMAM
24/5/2016

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GRANULOCK

The multi-vitamin pill for your crops



Incitec Pivot Limited plays a leading role in the manufacture and supply of fertilisers to farmers in Australia's eastern and southern States.

The company's five manufacturing plants, strategically located import facilities and distribution network stretching from far north Queensland to Tasmania and South Australia give it unequalled capacity to meet the market's needs.

Incitec Pivot

were proud to sponsor the

NSW Association of Agriculture Teachers.

The logo features the text "Incitec Pivot" in a bold, white, sans-serif font. It is centered within a dark, rounded rectangular background. Two light-colored, curved lines sweep around the text, one above and one below, creating a sense of motion or a stylized 'P' shape.

Incitec Pivot

Because the land is your life.

.....
**Incitec Pivot
Limited
&
NSW Association of
Agriculture
Teachers
as a
bronze sponsor.**
.....

- Many agriculture teachers are already familiar with Incitec Pivot, using the company's fertilisers for pot and field nutrition trials and in their own rural enterprises.
- Incitec Pivot's website is available as a resource on fertiliser and plant nutrition issues. Students and agriculture teachers are invited to use the website for information on topics such as:
 - Basic nutrient information
 - Product information
 - Issues in fertilizers
 - Company information.

www.incitecpivot.com.au

**Incitec Pivot were proud
to be involved with NSW
agricultural education as
a sponsor of the NSW
Association of
Agriculture Teachers.**



Incitec Pivot Ltd

- ❖ Incitec Pivot Limited is Australia's leading fertiliser manufacturer and supplier.
- ❖ The company supplies more than two million tonnes of fertilisers a year to farmers in Australia's eastern and southern States. It operates five manufacturing plants, strategically located import facilities and an extensive distribution network.
- ❖ Incitec Pivot helps farmers make accurate fertiliser decisions through its Nutrient Advantage™ laboratory services. This encompasses soil, plant and water analysis and a training and accreditation program for agronomists providing fertiliser advice.
- ❖ Incitec Pivot supplies farmers with a wide range of quality fertilisers and continues to develop new and innovative products.
- ❖ The following key fertilisers are available exclusively from Incitec Pivot and its Agents and Dealers.



EASY Liquids

EASY Liquids®

- A comprehensive range of 10 liquid fertilisers
- Includes single and multi nutrient fertilisers
- Easy to use, flexible and efficient for a range of cropping and pasture situations

Big N®

- The most highly concentrated nitrogen fertiliser available
- Available in selected cropping districts across New South Wales
- Ideal for variable rate application



BIG N

Granulock®



GRANULOCK

- Premium starter fertilisers
- Co-granulated for uniformity of granule analysis and high product quality
- Widely used in broadacre crops and for establishing pastures

NEW – Green Urea™

- Specialty topdressing fertiliser
- Treated with an additive that inhibits the activity of urease enzymes
- Useful where volatilisation losses are likely



Green Urea™

More Information & Resources:

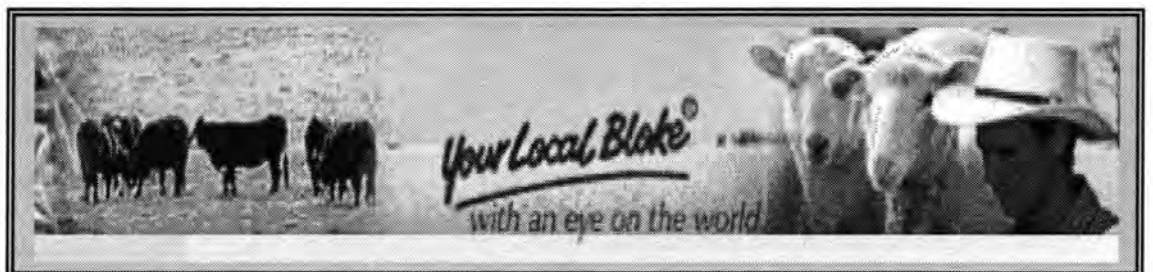
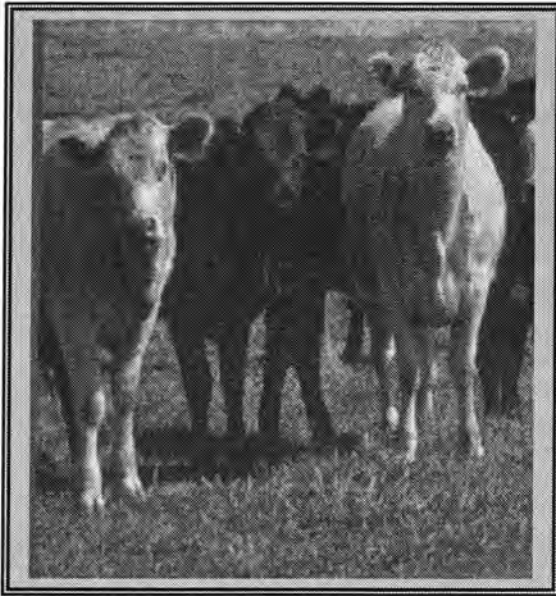
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Because the land is your life.

BRONZE SPONSOR



COMBINED RURAL TRADERS CORPORATE PROFILE

- ✓ Established in central-west NSW in 1970 as a counter to the two big corporates, Elders & Dalgety, CRT has evolved into Australia's largest group of independently owned rural merchandisers with turnover close to \$450 million.
- ✓ A trading brand of the successful Ruralco Holdings Group, CRT has over 300 outlets servicing the country's diverse agricultural industry.

Business Focus

- ✓ Our primary business focus is concentrated in the areas of crop protection and animal health with market share for these two highly competitive sectors running at between 25-30%.

Crop & Animal Products

- ✓ CRT's crop protection market is valued at \$195 million with grass and weed herbicides and crop fertilizers making up the bulk of our market.
- ✓ Our animal health portfolio turns over \$96 million annually and, whilst we support all livestock industries, our emphasis is on sheep and cattle drenches, dips, vaccines and shearing equipment.

General Products

- ✓ We also support an extensive general products portfolio supplying everything from pet food and clothing through to gardening supplies and hardware.

Business Opportunities

- ✓ 2002 was an important year for CRT with a number of exciting opportunities presenting themselves following Ruralco's merger with Grow Force Australia in 2001 and the company's subsequent listing on the Australian Stock Exchange.
- ✓ Chief among these has been CRT's expansion into the wool and livestock and real estate markets as it signals an important new direction for the company. Although a significant departure from our traditional retail merchandising base, this move will complement and enhance our existing operation.
- ✓ Over the years, CRT has developed a strong and respected profile throughout rural and regional Australia due, in part, to our distinctive corporate branding program and our innovative approach to rural retail merchandising. From our very recognizable shop-fronts through to our growing range of CRT branded merchandise, local sponsorship and wide-reaching infomercials, CRT is the most recognised merchandising brand in rural Australia.

CRT - Your 'Local Bloke'

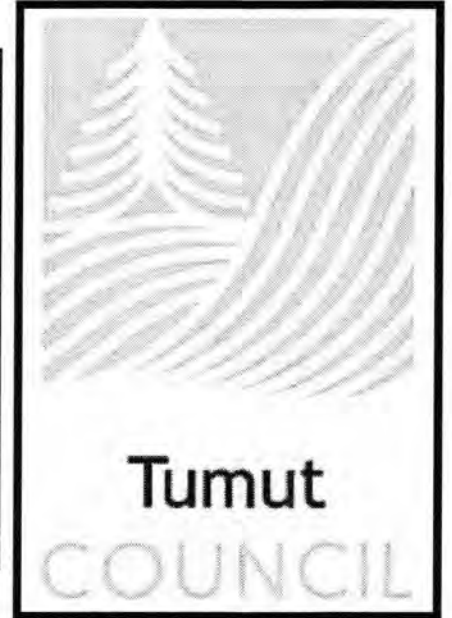
- ✓ Our continuing growth is also heavily connected with our Membership as it is these people who largely define and determine our success. Our corporate slogan, *CRT - Your Local Bloke*®, clearly reflects our members - local people using their local knowledge to support their community and industries. Our 'Local Bloses' make it their priority to provide the best service, products and advice and they are out there doing their best so our farmers can produce theirs.
- ✓ Competition with major corporations such as Elders and Landmark means price competitiveness is a major issue and all our independent members operate under constant pricing pressure.
- ✓ The collective purchasing power of \$450m ensures that independents under the CRT banner are far more competitive than unaligned independents. Members have the advantage of utilising a state-of-the-art web enabled administration system, distribution centres in each state as well as an extensive networking operation, all of which adds profit to independents.

CRT Stores in Rural Regions

- ✓ In order to compete effectively and support the goals and objectives of our independents, we have grown our business around the concept of value-adding. We have done so to deflect the pricing issue facing independents and afford ourselves the opportunity to concentrate on those elements which set us apart from the large corporates, those 'extras' that an independent trader can offer to their clients.
- ✓ Over 90% of CRT stores are located in rural areas with store owners living either in the town or on a nearby property. In many instances, our members run other businesses in conjunction with their CRT operation with additional services ranging from banking and postal agencies, hardware, electrical, car dealerships, mechanical services or petrol depots.
- ✓ The vast majority of our members are dynamic and proacti business people who enthusiastically support and endorse the CRT ethos and who lead by example not only in our industry but also in their communities.

✓ For your nearest Local Bloke, contact Simon Hellams or Leoni Furze on 029769 0888

BRONZE SPONSOR



TUMUT Region

TUMUT Region

JOBS & BUSINESS OPPORTUNITIES

~ THE TUMUT REGION IS A PROSPEROUS CENTRE. A SHIRE WITH AN INCREASING POPULATION OF OVER 11,600 RESIDENTS AND A SERVICE HUB OF AROUND 20,000 PEOPLE.

~ THERE ARE EMPLOYMENT OPPORTUNITIES IN A DIVERSITY OF INDUSTRIES, INCLUDING TIMBER AND FORESTRY, CONSTRUCTION, TRANSPORT, ENGINEERING, TOURISM, RETAIL, EDUCATION, HEALTH, HORTICULTURE, GRAZING AND SUPPORT SERVICES.

~ AVERAGE INDUSTRY GROWTH IN THE TUMUT SHIRE IS ABOVE STATE AND INDUSTRY LEVELS.

~ AVERAGE PER CAPITA INCOME IS THE SECOND HIGHEST IN THE RIVERINA.

~ INTERNATIONAL TIMBER PROCESSORS OPERATE IN THE REGION. OVER \$435M OF DEVELOPMENT IS PROPOSED FOR THE NET THREE YEARS, GENERATING HUNDREDS OF DIRECT AND INDIRECT JOBS.



Figure 1: Tumut River

~ TUMUT IS LOCATED A SHORT DRIVE OFF THE HUME HIGHWAY, THE REGION IS WELL LOCATED BETWEEN SYDNEY AND MELBOURNE, WITH CANBERRA JUST OVER A TWO HOUR DRIVE.

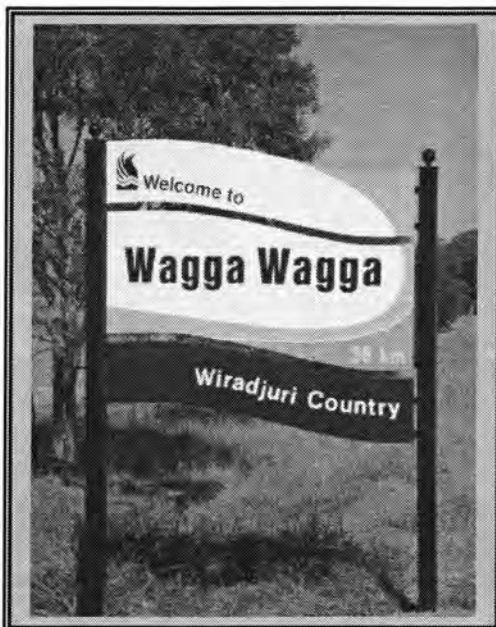
~ AN ESTIMATED 220,000 VISITORS EXPERIENCE THE REGION EACH YEAR.

~ A POPULATION OF MORE THAN 600,000 LIVES WITHIN A TWO AND A HALF HOUR DRIVE FROM TUMUT.



~ THE TUMUT REGION IS A VAST AREA OF UNTOUCHED BEAUTY PROMISING AN UNFORGETTABLE EXPERIENCE WITH ITS UNIQUE LANDSCAPES, FLORA AND PROLIFERATION OF WILDLIFE, INLAND LAKES, CRYSTAL STREAMS, AND GENTLE FERTILE PASTURES LEAD TO VAST PINE FORESTS, TOWERING MOUNTAINS, THE AWESOME SNOWY MOUNTAINS SCHEME - ONE OF THE GREAT ENGINEERING WONDERS OF THE MODERN WORLD - AND THE MANY ATTRACTIONS OF THE NORTHERN END OF THE SENSATIONAL KOSCIUSZKO NATIONAL PARK.

BRONZE SPONSOR





Wagga Wagga Overview

POPULATION:

- ~ Wagga Wagga City: 57,600
- ~ Riverina: 148,737

UNEMPLOYMENT:

- ~ Wagga Wagga: 5.8%
- ~ National: 6.8%



Lagoon Wall



Botanical Gardens Rainforest.

WAGGA WAGGA BUSINESS:

- ~ Wagga Wagga has a varied workforce from skilled labour through to professionals in many industry sectors.
- ~ Wagga has a strong economy and its unemployment levels means that labour turnover is low and employers can confidently spend money on training and up-skilling employees knowing that loyalty and job security has benefits both ways.

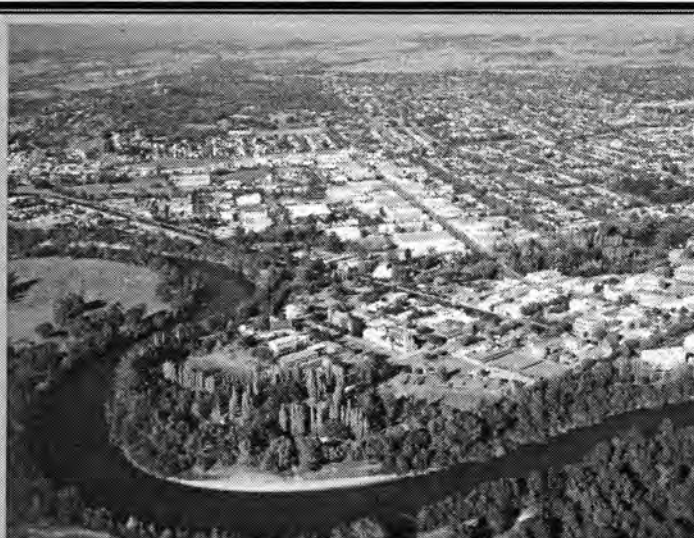
WAGGA WAGGA BUSINESS:

Bomen Business Park:

~ This Group has a balance of local, national and multinational companies.

~ A number of major international food and fibre processors are associated with value adding to regional production, including:

- Cargill Foods Australia
 - o a major export abattoir
- Chargeurs/Riverina Wool Combers
 - o the largest wool top manufacturing facility in the Southern Hemisphere
- Heinz-Watties
 - o meat products exporter



Murrumbidgee River at Wagga Wagga.

SOME IMAGES FROM APRIL



Where do we register Ilka?



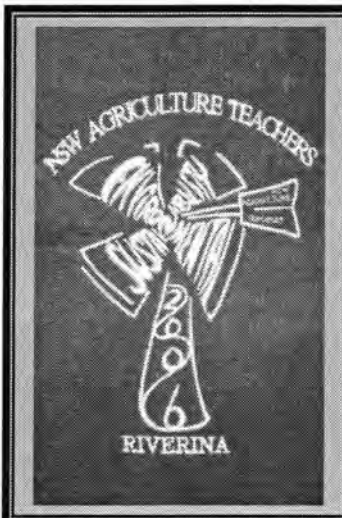
Stewart, Gary, Peter, Ian & Nicolet are very attentive at the broom factory.

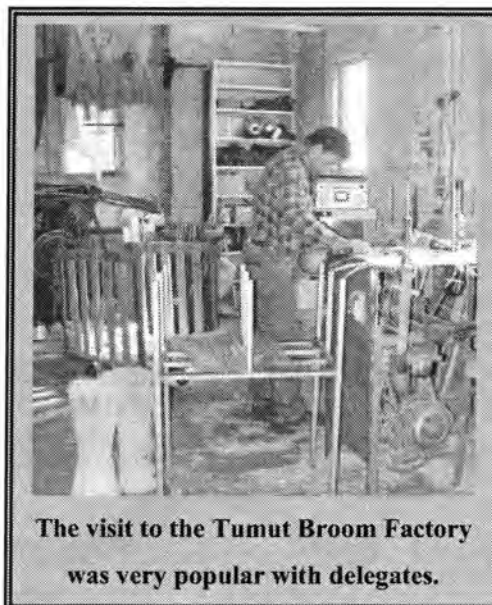
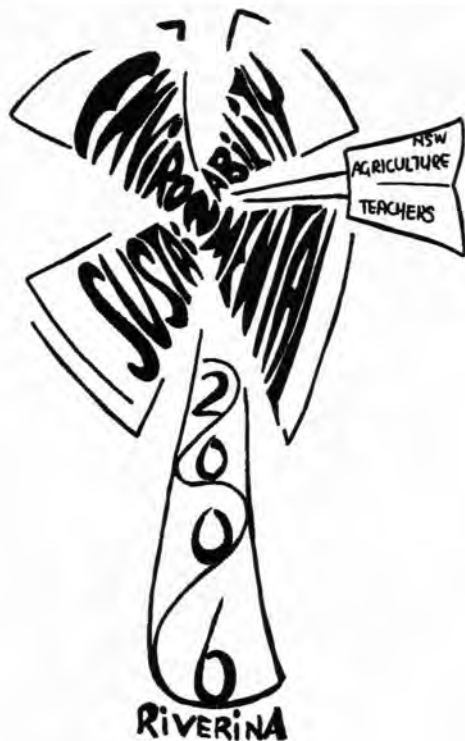


Graeme, Tony, John & the rest, wait patiently while the 'mechanics' do their stuff at the back of the bus.



'Dave, I need more wine'
'Ilka: its only water'.





The visit to the Tumut Broom Factory was very popular with delegates.

^ Internet wool seller has scored a record sale. A 13.1 micron bale was sold for 27,663 cents per kilogram clean or 20,000 cents greasy in the highest price paid on the four-year-old selling system.

^ Australia dominates world production of ultrafine wool; the record breaking wool was produced in the South Island of New Zealand and is destined to be made into ultrafine cloth by Italian weavers

^ The 89kg bale sold for about \$18000 to an exporter.

Section 5
sponsored by:



5
**"NAAE
CONFERENCE"**
Report

**National
Association
of
Agricultural Educators
Conference**

**CSIRO
CANBERRA**

Monday 9th – Friday 13th January
2006



Fourteenth Biennial Conference of



NATIONAL ASSOCIATION OF AGRICULTURAL EDUCATORS

Canberra 2006

WHEN: 9th January – Friday 13th January 2006

WHERE: At CSIRO Canberra

Stephen Speer
Stephen Ryan
Peter Lehmann
Ian Crabb
Angela Parker
Joan Keiger
Wayne Hoy
Rowland Clark

Huge thanks to the
Canberra Ag teachers &
CSIRO for organising a
diverse & professionally
rewarding conference in
the Nationals Capital

CSIRO

- Videoing Root Growth
- Gene Technology (DNA Extraction)
- Grazing Decision Support Systems
- Pasture & Crop Legume Inoculation
- Salinity
- Entomology
- Water Projects
- Australian Plants

Australian Centre for Plant Functional Genomics

Ben Fargher
CEO National Farmers Federation

Murray Darling Basin Commission - Program to check salinity locations

Royal National Botanical Gardens - Tissue Culture - Seed Collecting

Dept of Agriculture, Forestry & Fisheries

- National Animal Welfare Strategy
- Commercial Environmental Forestry
- National Carbon Accounting

Aust. Veterinary Medicines Pesticides Authority - Permit Requirements - MRLs

Poultry AI Workshop

Ian Crabb: Queanbeyan High

- Collect & dilute semen
- Microscope examination & inseminate hens

Ginninderra Research Station

- Wheat Breeding
- Grazing trial
- Farm Management



Tony Condon CSIRO: demonstrating how to cross pollinate wheat



Extraction of DNA from plant material



Videoing plant root development



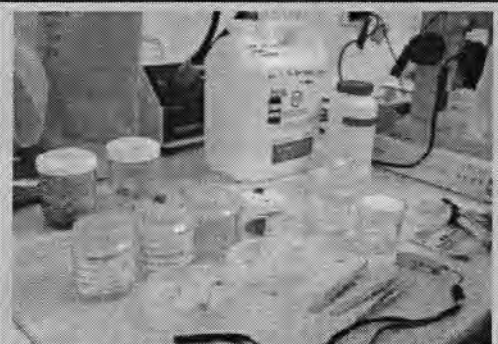
Native seed cleaning



Storage of native seed at Royal Botanical Gardens



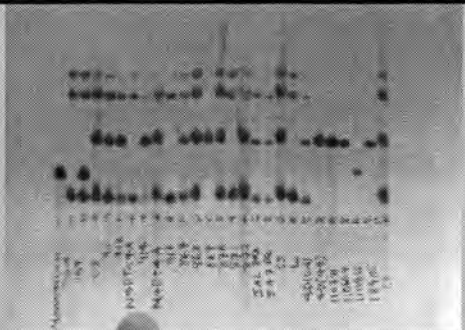
Dr Uli Mathesius CSIRO: examining soybean inoculation



Tissue Culture at Royal Botanical Gardens



**Royal Botanical Gardens Glasshouse.
Nice to have these facilities on the school farm!**



Mapping of DNA



Bush Tucker lunch provided by the Royal Botanical Gardens



Joe McAuliffe: Nurseryman: demonstrating the ideal method for grafting native plants



Poultry semen collection at Queanbeyan High Ag Farm



Grafted native



AI of poultry
A very popular workshop

The AI in Poultry expert
Ian Crabb
Ag Teacher
Queanbeyan High School

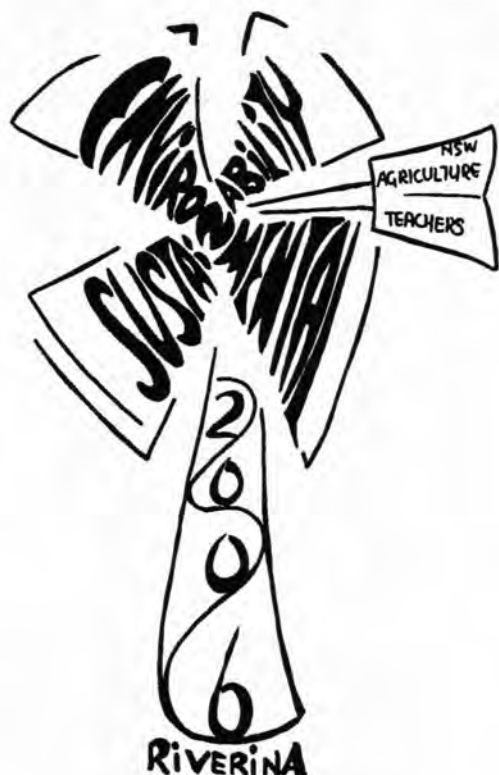


52 delegates from all Australian states & 2 delegates from New Zealand enjoyed the 14th Biennial National conference in Canberra.

The 15th Biennial National Conference is to be held in Victoria in 2008



A successful AI in poultry group
Thanks to Ian Crabb of Queanbeyan High School



Visy property manager, Anthony Barr highlighting property management to the delegates

6

What's Hap'ning in my Paddock!

^ Organic food production has grown substantially in the past 10 years in the US and elsewhere, at the same time as genetically modified (GM) crops have been commercially introduced and widely grown (now to 81 million hectares worldwide)

^ GM foods tend to be cheap because they are designed to be low input while high yielding

^ Wagga Wagga High School

- Dave Gillard
- Allan McMillan

^ Murrumburrah High School

- Ian Baird
- Jan Young

Section 6 supported by:



AGRICULTURE

at Wagga Wagga High School

~ ~ Wagga Wagga ~ ~



WAGGA WAGGA
HIGH SCHOOL

"Vincit qui se vincit"
Success through self-discipline

~ Wagga Wagga is situated on the Murrumbidgee River and is the largest inland city in New South Wales.

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~ Wagga Wagga is often labelled the 'Garden City of the South'. The name derives from a local Aboriginal word meaning 'place of many crows'. It is the centre of the Riverina district, an extensive agricultural area devoted to wheat, fat lambs, dairying & mixed farming



~ Wagga Wagga is often labelled the 'Garden City of the South'. The name derives from a local Aboriginal word meaning 'place of many crows'. It is the centre of the Riverina district, an extensive agricultural area devoted to wheat, fat lambs, dairying and mixed farming.

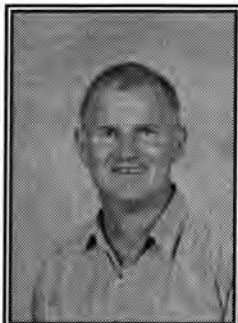
~ Wagga Wagga (lat 35.17 deg S, long 147.47 deg) is located halfway between Sydney and Melbourne and a two-and-a-half hour drive from Canberra, it is 214 m above sea-level and has a population of approximately 57 000.

~ ~ High Schools ~ ~ # There are 3 Government and 4 private high schools in Wagga Wagga.

~ Wagga Wagga High School is the oldest High School in the district; it was established in 1912 and became affectionately known as the "High School on the Hill" due to its location overlooking the town. It is an inclusive, comprehensive co-educational high school for Years 7 to 12 students. The current school population is approximately 980 students drawn from diverse backgrounds and more than twenty feeder primary schools.

~ The students come from predominately city or urban area. A significant number of students come from small neighbouring rural communities around Wagga Wagga. Most have no direct connection to farming. A very small number of students come from farms.

~ ~ Agriculture Staff at WWHS ~ ~



Allan McMillan

Trained at Wagga Wagga 1973-76

Appointed additional to Yanco Agricultural High School 1977 (2 months)

Appointed to Wagga Wagga High School 1977 (my old School)

Deployed temporarily to CSU as an education officer in Nov 1990-1991

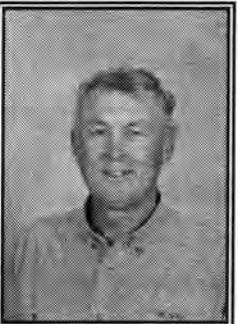
Resumed position at WWHS 1992-2006 ➡



David Gillard- Trained at Wagga Wagga 1978-81

Appointed to Finley High School 1982-1995

Appointed to Wagga Wagga High School -1996-2006 ➡



Robert Taylor (Farm Assistant)

Farmed at "The Rock" -20 Years

Quarry Foreman/Heavy machinery operator-10 Years

Appointed Farm Assistant at WWHS 1999-2006 ➡

~ ~ WWHS Farm & Classroom from the School Oval ~ ~



~ WWHS farm is located adjacent to the school oval and the TAFE campus. It is a 5 minute walk from the school. It also shares a boundary with the Willans Hill reserve, the Museum of the Riverina and Willans Hill Special School.

~ WWHS farm developed on a much larger farm area (80 acres+200 acres given by the City Council) which had been put aside as a site for a new Teacher Training College in Wagga Wagga in 1928. For whatever reason, another site near the towns showgrounds was chosen for the College and so the school "acquired" a substantial portion of this land for a school farm. This area was subsequently divided up for other developments including TAFE, Willans Hill School, City Council Reservoir, The Museum of the Riverina and School Ovals.

~ Today WWHS farm is 10 hectares of predominately undulating and in places steep land on the side of Willan Hill. (so we are really the 'School farm on the Hill')

~ ~ School Farm Resources ~ ~



~ Four(4) acres of land are reasonably productive (Class 111) and can be irrigated by a 2 inch aluminium sprayline and monsoons.

~ These soils are red brown earth, slightly acidic and tend to shatter easily after cultivation.

~ The soils on the steeper slopes(Class 1V-VI) are shallow and only the lower slopes are cultivated.



~ Improved pastures like lucerne, clover and phalaris are sown often in rotation of a cereal fodder crop to supplement winter grazing. In summer a small paddock is often sown down to forage sorghum to provide late summer grazing and supplement the lucerne. In the higher classes of land, areas of cereals are undersown to improved pastures every 5 years.

~ There is a regular top-dressing program with a phosphate/lime and trace mineral based fertiliser. In the steeper areas native pastures provide some summer grazing and fire control. Care is taken not to overgraze these areas and some drainage lines have been fenced off and planted out with native trees and shrubs.

~ ~ Major Animal Enterprises ~ ~



~ ~ Shorthorn Beef Cattle Stud ~ ~



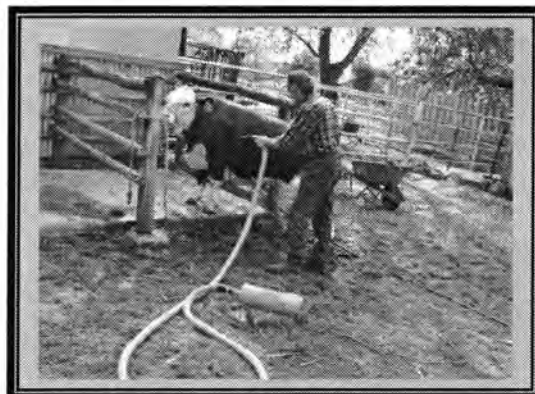
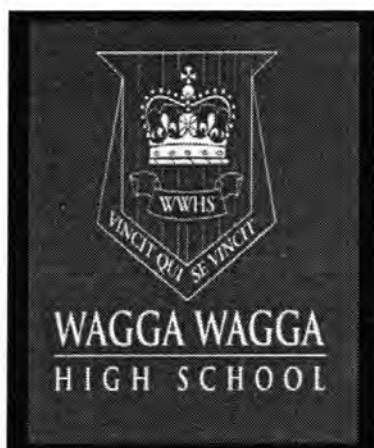
~ This comprises approximately 4-5 breeders and their calves.

~ This stud is sponsored by Keith and Chris Edyvean from the Ewilo Shorthorn Stud at Euberta. This stud has been going for 12 years.

~ Cattle are used as a teaching resource for both junior and senior agricultural courses and are shown at local and royal shows.



~ Steers are also sourced from local cattle studs for students to prepare for both the Canberra and Melbourne Shows.



~ ~ East Fresian Sheep Flock ~ ~

- ~ This enterprise consists of approximately 20 breeding ewes run as a 'self replacing flock'.
- ~ The majority of lambs are sold through the local saleyards.
- ~ In the last 2 years some of the ram lambs have been selected out and later sold as breeding rams. Our lamb marking percentage is around 160-180%

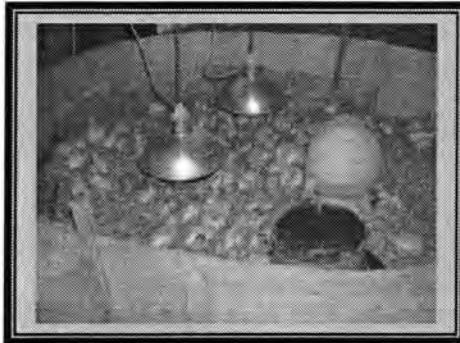
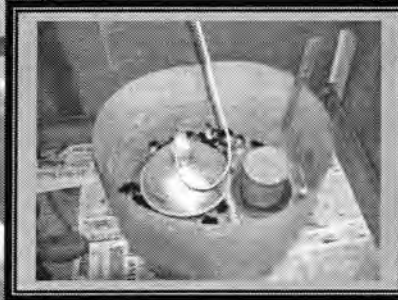


~ Apart from a valuable teaching resource, the East Fresian sheep are shown at local shows including the Holbrook Sheep and Wool Fair.

~ ~ Orchard & Horticulture Area ~ ~

~ A small number of fruit trees have been established to provide some hands-on experience in pruning, spraying and general care. A bed of roses and chrysanthemums are used to provide further practical activities with our students.

~ ~ **Pure Breeds of Poultry** ~ ~



~ The farm raises and breeds pure poultry breeds (Australorp, New Hampshire, Rhode Island Red) and guinea fowl which are used for our junior agriculture programs.

~ In late winter and spring students are involved in breeding and incubating fertile eggs from this group. The farm also has a large groups of crossbred layers that provide eggs for the school.

~ These are bought as day olds in large groups to be used by junior classes before being either sold off to the school community or used as layer replacements.

~ ~ **Herb Garden** ~ ~

~ The herb garden was set up as a resource for a D&T unit called "Hooked on Herbs"

~ Weed matting was laid down with a bark mulch cover.

~ An overhead automatic spray irrigation system has also been installed.



~ ~ **Plant Nursery** ~ ~



~ This consists of a shaded tunnel house, a square tree shade house (supplied by Rotary) and a small hot house with a thermostatically controlled heat bed. All green houses have an automatic spray and misting system. These structures enable are used in both junior and senior agriculture courses.

~ ~ Vegetable Garden ~ ~



- ~ Vegetable gardening is still a great way of learning about plants and agriculture.
- ~ Plot work starts as individual small plots for Year 8 and then class gardens for Years 9 and 10.
- ~ These gardens are also used to conduct a Year 10' Plant Trial.
- ~ Primary Industries students also use these gardens to grow horticultural crops for their senior course.



~ ~ Agriculture in the Curriculum ~ ~

~ At Wagga Wagga High School, students have a choice to study Stage 4 Agriculture as a 'Easter' semester course with 20x80 minute lessons in Year 8. Students also had some introduction to Stage 5 Agricultural Technology in Mandatory Technology in Year 7 and 8. The units taught at WWHS with aspects of both Plant and Animal Technologies may include Hooked on Herbs, From Moo to You and Chicken Run.

~ Students at WWHS can elect three 200 hour electives. The vast majority of students complete 200 hours for their School Certificate.

~ At Wagga Wagga High School we have either 2x80-minute lessons per week or 2x40 plus 1x80 minutes and topics will generally run for 5-10 weeks. There are about 9 agricultural classes that use the school farm without including Year 7 and 8 Technology (mandatory).

~ In order to optimise its relevance to Stage 5 students, Agriculture Technology primarily is taught on an enterprise basis. Students are exposed to the knowledge and concepts of the applied science nature of agriculture. Such elements as plant and animal anatomy and physiology, soil science plant breeding, and environmental science.

~ Students can see both the integrated body of knowledge underpinning agriculture and by each enterprise being viewed holistically, recognise the interactive nature of farming

AGRICULTURE

MURRUMBURRAH
HIGH SCHOOL



'AD ASTRA'

AGGIE STAFF



Ian Baird



Jan Young

WHERE IS MURRUMBURRAH HIGH SCHOOL?

Murrumburrah High School is situated in Harden on the southern slopes of New South Wales. The school draws its students from the twin towns of Harden and Murrumburrah, as well as from a small number of surrounding rural centres.

Harden/Murrumburrah is notable for its scenic beauty particularly during spring.

Murrumburrah is located 342 km west of Sydney and 62 km north-west of Yass via Burley Griffin Way.

The Harden/Murrumburrah district has one of the most reliable rainfall areas in the State, which allows such a diverse range of agricultural and pastoral activities to prosper. The district boasts many fruit orchard producing some great fresh produce.

AGRICULTURE RESOURCES

~ Murrumburrah High School's Agriculture department runs an "Ag Plot" with a comprehensive practical program like other schools teaching Agriculture and Primary Industries.

~ Access to 13 hectares of land adjacent to the school however, has meant that it has been possible to carry out a more extensive animal breeding and cropping program over the 28 years that the school has been situated on its present site.



Murrumburrah High School

Murrumburrah High School

The Farm Club

~ The Farm Club has had an extremely busy year this year.

~ We attended both local and national shows.

~ Our run started with:

- Gundagai and Gunning Shows
- Canberra Royal Show
- Boorowa Show
- Sydney Royal Show.



~ The winter break then saw us breaking in the new stock for the spring season and the arrival of our stud bull calf, Missy's first calf.

~ We chose the name ASSASSIN but this had to be changed due to the nature of the "world" and the fact we may upset people.

~ So what will we call the calf but ARDEN (Harden without the H as the stud prefix for the year is A).

~ Missy and Arden have won many ribbons this year and we think that this bull calf will be kept as a bull to sell onto breeders in Spring 2006.

~ Our Square Meater Stud comprises of 5 stud females and 1 bull calf.

~ Our Spring Season started with a rush with:

- Harden - Murrumburrah Show
- Young Show in the holiday break
- Cootamundra Show
- Albury Show (our replacement for Dubbo).



~ We have had a huge increase in the number of members and have also welcomed some Primary School Students to our local shows.

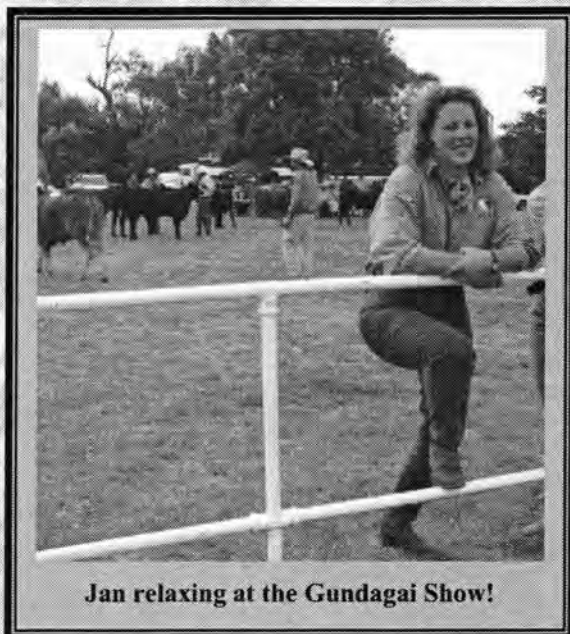
~ Murrumburrah High School has grown with the number of steers and stud animals that we are showing.

~ We are expecting two more calves before the school year ends.

~ The senior students are teaching the junior members about showing and preparing stock.

~ The number of ribbons won by students continues to increase so they must be doing things right.

~ We had 5 State level Paraders in 2005 and 2006 is looking good for the Sydney Royal Show with 4 State Level Paraders.



Jan relaxing at the Gundagai Show!



Primary Industries at



Murrumburrah High School

~ Primary Industries has become more popular with the students with bigger and bigger classes filling year 11. Vertically teaching year 11 and 12 is becoming a struggle with large numbers.

~ The students are enthusiastic and some students are wishing to take a horticultural strand in their studies to complement what they wish to do when they leave school.

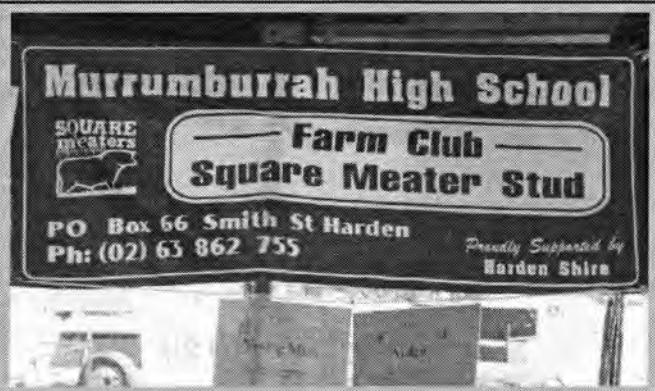
~ Students have been busy constructing a set of stays to teach future classes to fence on a put up and pull down system. We have also been busy repairing and replacing old fences.

The CD game "Don't Kick the Tractor" continues to be popular and has been a life saving device on those days of 43 degrees Celsius when we could get into a computer room.

~ With a even balance of males to females our school continues to push on with Primary Industries which provides a niche for those not taking the Academic path or those wishing for a hands on, outside lesson in their subject line up



Murrumburrah High Students relaxing at the Canberra Show.



Agriculture at Murrumburrah High School

~ One of our programs, breeding Gromark sheep, has been in place now for 26 years of those 28 years. We have a breeding flock of 20 ewes and have been stud breeders for 22 years. This particular breed of sheep has been developed on the basis of objective measurement rather than selection in the show ring so we have not been subjected to a narrow visual assessment process of other breed societies. Visual assessment however does play a role, mainly in looking out for and culling on visual faults.

~ Arthur Godlee established the Gromark breed of sheep in 1965 on his property "Marengo" near Tamworth. For us at Murrumburrah High School, this focus on objective measurement has fitted neatly into the Junior and Senior Agriculture syllabus study requirements and has enabled us to select breeders using data initially from our own records then from the NSW Meat Sheep Testing Service, and now from LAMBPLAN.

The selection processes along with management and husbandry procedures are then used to relate back to syllabus aims and objectives.

~ Improvement also has been possible through the willingness of the Gromark Breed Society to openly allow the introduction of sires from other breeds whilst retaining a nucleus of Gromark breeders. Hybrid vigour is one of the factors in the improvement that we have achieved in estimated breeding values (EBV) for growth rate, muscle depth and leanness.

~ A more recent development in our program has been the use of Artificial Insemination (AI) to greatly speed up the rate of genetic improvement in our flock. For the past 3 years we have engaged the services of a local veterinarian, Ron Merriman, who operates a practice, which specialises in sheep artificial insemination.



Observing laparoscopic techniques



Students assisting the veterinarian and observing the AI procedures.

~ Students have been involved in the processes by observing the plugging and unplugging of the ewes and the injection of Pregnenol to bring on ovulation, prior to them being inseminated. On the AI day students assist with the handling of the sheep and are also to observe the laparoscopic procedures. Seven weeks after AI Ron returns to pregnancy test the ewes and once again students can observe the reproductive processes in progress.

~ Five months after AI the long wait is over and the husbandry activities such as lamb marking, vaccination, drenching and weighing lambs gets underway once lambing takes place. We average between 160 to 180% lambing which means up to 40 lambs born each year.

~ The Gromark is a self-replacing breed, so after LAMBPLAN testing, ewe lambs with the highest ebvs are selected for the stud replacing the caste-for-age ewes. The rest of the ewes along with best performing ram lambs are sold to breeders. The remaining wether portion is lot fed and sold at the local saleyards.

~ This program has been valuable in terms of student involvement and with Murrumburrah High School playing a significant role in the development of one of the lesser known breeds of sheep.



Students assisting the veterinarian and observing the AI procedures.



'VICTOR' RAISES \$25,000 FOR VICTOR CHANG INSTITUTE



The Shute Bell Badgery Lumby Charity Steer prepared by Murrumburrah High School for the Victor Chang Cardiac Research Institute was auctioned for \$25,000 recently.

Well Done



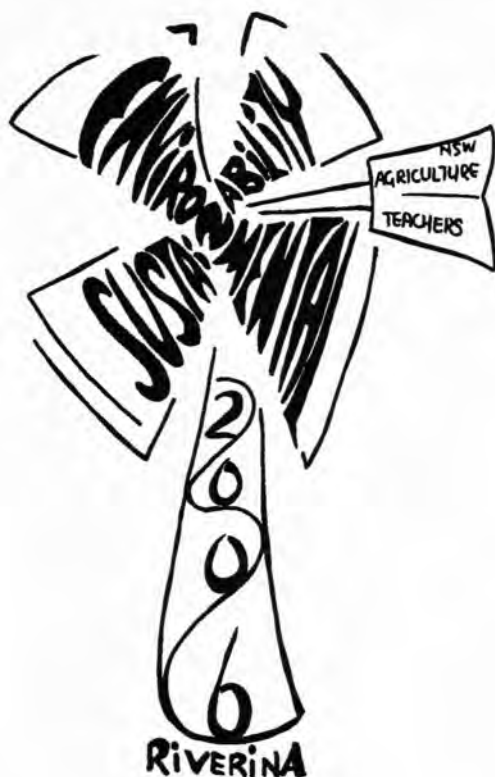
Murrumburrah High School

~ Adam Manwaring, Murrumburrah High School parades 'Victor' the Shute Bell Lumby Charity steer that has raised \$25 000 for the Victor Chang Reasearch Institute.

~ This is the first time a school has been asked to Fit the steer. The purchasers were the Bush Brothers from Goulburn who have all first hand experienced heart conditions.

~ The Victor Chang steer was purchased from Tony Manchester "Rosevale" Angus Stud, Kingsvale. Murrumburrah High School was approached by Keith Prosser, Head of Shute Bell and Lumby, Sydney to fit the steer for the prestigious auction.

~ 'Victor' travelled the show circuit with the school including Gunning, Canberra Royal, Boorowa, Yass and finally Sydney Royal Show.



'Clean Sweep' Broom Winners: Luke, Georgina, Peter & Peter

7

What's the Go!

^ The SCHUTE Bell Badgery Lumby Charity Steer prepared by Murrumburrah High School students, was purchased at auction for \$25,000 by 3 brothers from Goulburn.

^ This is the first time a school has prepared a steer for the Victor Chang Cardiac Research Institute.

^ Congratulations to Jan & her students at Murrumburrah High School.

^ Tractor Training TAFE

- December 2005
- 1 & 2 day courses
- Graeme Anderson TAFE NSW

^ SMARTtrain AQF4 reaccreditation

Nth Wagga Wagga TAFE

^ Agriculture Promotion workshop:

Canberra

Ilka Klepper

14-15th November 2005

^ NLIS: Sheep & Goats

^ Agriculture Enrichment Days

Bob Anderson

^ 'Farm Safety Solutions'

State wide Workshops

^ Animal Care & Ethics in NSW Schools

Section 7 supported by:



TRACTOR TRAINING



TRACTOR TRAINING FOR AGRICULTURE & P.I. TEACHERS FARM ASSISTANTS & GENERAL ASSISTANTS

The Association extends its gratitude to Graeme Anderson & the TAFE Nth Wagga Wagga Primary Industry campus team for successfully conducting the new tractor training course which will be available to school teaching staff throughout NSW as of 2006.

The tractor training model was developed in conjunction with the Association and the first participants of the course have indicated how beneficial the course was for their respective roles in schools and that the staff at TAFE are willing to ensure that the training day is structured for maximum benefit to the participants.

The Association believes that this model needs to be ongoing and able to be accessed by farm assistants, general assistants, agriculture & primary industries teachers when the need is required.

For this model to work throughout NSW; Ag/PI teachers will be required to network with their local TAFE coordinator & ensure that your staff are trained to industry standards.

Further information can be obtained from:

Graeme Anderson North Wagga Wagga TAFE
ph: 69395040 email: graeme.anderson@tafensw.edu.au



GENERAL ASSISTANTS

AG & P.I. TEACHERS

FARM ASSISTANTS

Tractor Training for School Staff.

TAFE NSW Riverina Institute's Primary Industries Centre has developed a model to enable certification of a range of people employed at Riverina schools in tractor use

- the target for this program includes
 - o Farm Assistants
 - o General Assistants
 - o Agriculture teachers who may be teaching Primary Industries components
 - o PI teachers who wish to have their certification updated.

***A workable model offered by
TAFE NSW for school staff***

The program will be split to meet the requirements of those who have no or only limited experience with tractors, and those who consider they are experienced and competent:

- participants will be offered a place in either a 2-day training and certification program, or a 1-day certification program
- the intention is to offer these programs at various locations around the Riverina Institute
- Wagga, Albury, Leeton and Deniliquin are the proposed locations, but will be finally determined by the numbers of participants and their school location.

The Recognition process which applies for this program is relatively simple

- a checklist has been circulated which allows individuals to align their existing skills against the elements of the TAFE Tractor Operation & Safety module
- once participants have assessed their own level of competence they need to justify this assessment
- this justification usually takes the form of a written submission detailing their work and life experience using a tractor including:
 - o examples of attached equipment they have utilised
 - o examples of circumstances in which they have operated a tractor and attached equipment
 - o information on the time frame of their experience
- this written submission must be supported either verbally or in writing by a person who can verify that the individual is competent as claimed
- individuals must return these checklists and all documentation to the Primary Industries Centre to allow their claimed level of competence to be verified
- participants who are considered competent will be offered a position in a 1-day certification program
- all others will be offered a place in a 2-day training and certification program on completion all staff will be issued with a TAFE Statement of Attainment.



^ Please contact: Graeme Anderson @ TAFE
ph: 69395040
email: graeme.anderson@tafensw.edu.au

Farm Assistants, General Assistants, Ag & Primary Industry teachers from Tumbarumba, Junee, West Wyalong, Albury High, Tumut, Wagga High, Batlow, Gundagai, Lockhart & Ungarie attended the one & two day tractor training course offered by Nth Wagga TAFE in December 2006.



John Schuter TAFE tractor training instructor



What is this?
"I don't need assistance!"



It's in here somewhere!



Best put the muffs on, the boss is watching



**INSTRUCT YOUR PRIMARY
INDUSTRIES STUDENTS IN
CHEMICAL USER TRAINING**

SMARTtrain AQF3



^ The Association has worked with TAFE NSW over the last two years to develop a suitable chemical training model. This model provides our students with training "Chemical Application" AQF3.

^ Training in the use of pesticides is now compulsory in NSW under the new regulation that commenced on 1 September 2005. Under the Pesticides Amendment (User Training) Regulation 2003 (NSW), those who use pesticides in their job or business must be trained in their use, including herbicides, insecticides & fungicides.

^ The regulation applies to farmers, market gardeners, flower growers, ground rig operators, parkland & green keepers, landscape gardeners, nursery operators, marina operators, wood preservation operators, landlords, local councils and government agencies, among others.

^ The purpose of the training is to protect workers who use pesticides regularly, as well as their families, the community, trade & the environment.

^ The for these reasons the Association realises that a number of our students will enter many of the above work professions & as part of our duty or role as agriculture teachers we need to provide a mechanism to train our students to industry & OH&S standards.

^ Graeme Anderson from Nth Wagga Wagga TAFE outlines the training model that allows our students to be credentialed in the appropriate chemical application qualifications.

^ This model can be incorporated at most TAFE campuses throughout NSW; but as with the tractor training model you will need to do the leg work to firstly establish your connections with your TAFE campus & then follow the appropriate procedures to establish the training for your students.

^ The chemical training model is in place & all that is needed is to implement it. Several courses have been implemented with very positive results.

^ If you need further assistance or have enquiries about the program please contact:

Graeme Anderson North Wagga Wagga TAFE
ph: 69395040
email: graeme.anderson@tafensw.edu.au



Chemical Training for PI Frameworks Students.

TAFE NSW Riverina Institute's Primary Industries Centre has developed a model to allow delivery of both the "Apply Chemicals Under Supervision" competency unit and the AQF3 Chemical Application competencies to Primary Industries Frameworks students attending Riverina schools.

Students enrol through the TVET program which means that TAFE staff deliver the Apply Chemicals Under Supervision competency, then extend that and deliver the additional learning required for completion of the AQF3 Chemical Application course

- students gain the necessary accreditation enabling them to apply chemicals with powered equipment as required by industry, and they meet the HSC requirements at AQF2 level.

Suitably qualified school teachers (those who have completed AQF4 training) are employed by TAFE as Part-Time Casual Teachers to provide the training to their students

- teachers have to complete the Entry on Duty requirements, which includes Prohibited Employment screening and presentation of qualifications and other relevant documents
- this is a once-only process to be completed in the 1st year of participation in this process
- it is essential that teachers contact their local TAFE Primary Industries Head Teacher to complete the Entry on Duty requirements well in advance of their intention to deliver the training.

The process to enable teaching to commence involves the following steps

1. School teachers to contact the TAFE TVET co-ordinator at your local campus to enable formal enrolment procedures for "Apply Chemicals Under Supervision" to commence
 - a. the co-ordinator needs the names, addresses and BOS number of all students, as well as dates classes are to run
2. School teachers to contact the local TAFE campus to enable formal enrolment procedures for Chemical Application AQF3 to commence
 - a. names, addresses and class dates must be provided
3. The TAFE campus staff will then order necessary manuals and forward them to the school, and arrange a suitable teaching location
4. Teaching commences at the nearest TAFE campus
 - a. must not be undertaken during school hours
 - b. 20 hours are available to deliver both Apply Chemicals Under Supervision then Chemical Application
 - c. teachers are to notify their TAFE campus by end of school hours Thursday of teaching hours for the week to enable time sheets to be completed
 - d. Once the teaching and assessment is complete teachers are to submit all necessary documentary records to their TAFE campus along with \$65 per student to cover cost of manuals
5. The TAFE campus will process results and record all results, and notify SMARTtrain of successful students so AQF3 cards can be issued.

For further information please contact Graeme Anderson

- Phone 69395040

email graeme.anderson@tafensw.edu.au

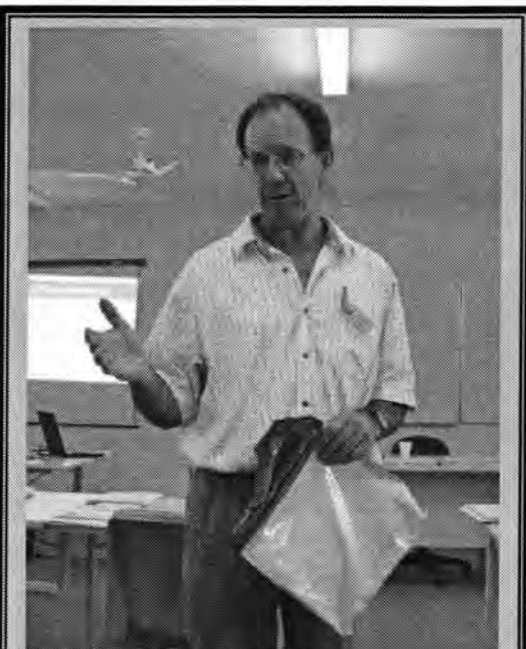
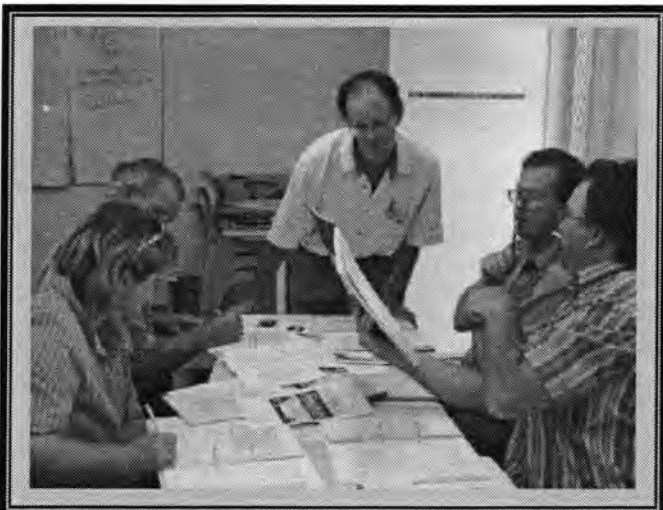




Reaccredited
for the AQF4 level

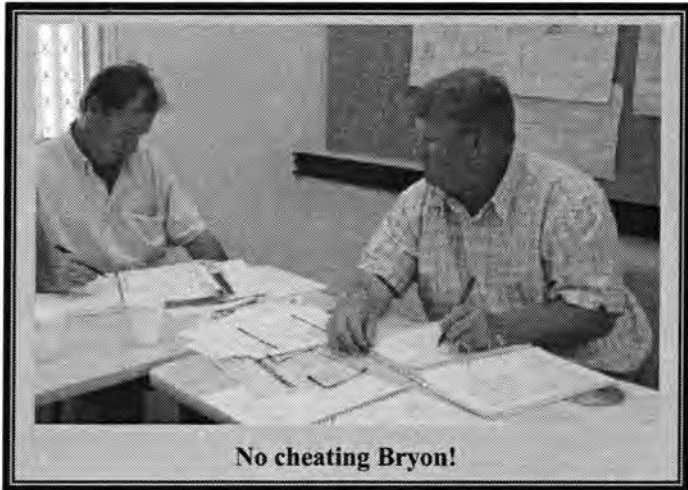


Geoff keen to do well in his
AQF4 SMARTtrain reaccreditation



TAFE instructor Jon Schuter instructing
participants at the AQF4 qualification

Reaccredited
for the AQF4 level



No cheating Bryon!

A number of Primary Industries teachers in the Riverina region were reaccredited for the AQF4 level in November 2005; so that the AQF3 SMARTtrain course can be delivered to Primary Industries students at TAFE campuses.

Promotion of Agriculture to Schools

NATIONAL WORKSHOP

Monday 14th - Tuesday 15th November 2005

Olim's Hotel, Canberra

Background

In early 2004, a small network representing each state and territory was convened to develop strategies for the further promotion of agriculture to schools. A meeting held in Sydney in August 2004 decided to seek funds for a project to scope the matter further. In May 2005, the Australian Wool Education Trust commissioned Mr Mal Brown of Scarlet Consulting, VIC to undertake a scoping study. This study was overseen by the national network.

The scoping study is now virtually complete and has identified a wide array of initiatives across Australia currently under way to promote agriculture to schools. It is clear from the report that there is no national strategy or coordination.

There is general agreement that more needs to be done if agriculture is to remain at the forefront of school-based study. This is particularly important given Australia's increasing urbanisation despite its strong reliance on agriculture both economically and through national identity.

Following on from the scoping study a facilitated national workshop will now be held in Canberra to build the momentum for a national strategy.

The aims of the workshop are to:

- Develop a national network of interested individuals and organisations for the promotion of agriculture to schools;
- Develop a national strategy for the promotion of agriculture to schools; and
- Identify best practice for future investment for the promotion of agriculture to schools.

Program structure

Day 1 - Monday 14 November

9.30am Morning Tea and registration
10.00am - 5.00pm Workshop

Day 2 - Tuesday 15 November

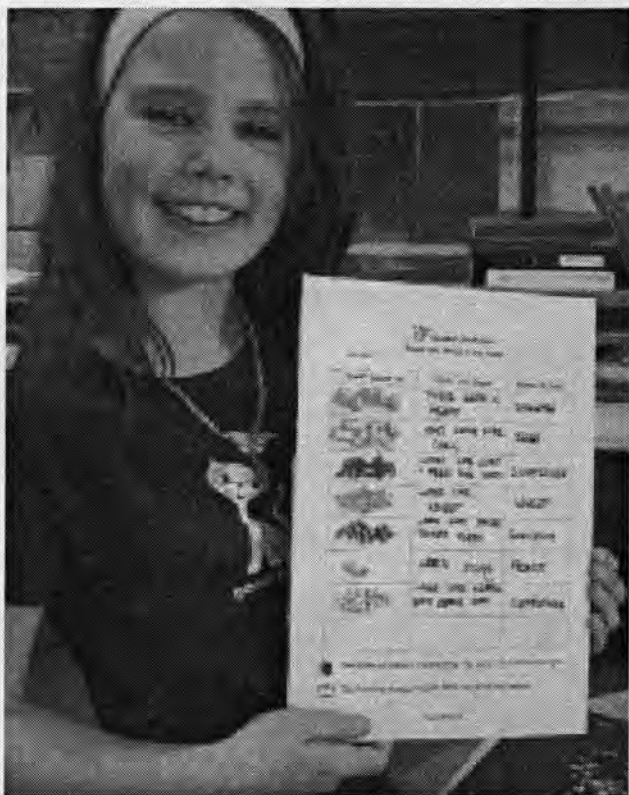
8.30am - 3.30pm Workshop continues (concluding at 3.30 pm)

Indicative Program

- Best Practice Presentations - these will be identified from the consultant's report. Major themes arising from the report are:
 - Arousing curiosity in Agriculture.
 - Promoting agriculture through Science.
 - Promoting agriculture through Landcare.
 - Promoting agriculture through Careers.
- State/Territory round up - presentations from each state and territory as to what is currently happening.
- Identification of national funding bodies/partners/sponsors and their requirements.
- Open discussion.
- National Strategy - What are the key elements? For example: 'Taking an integrated approach' versus 'Random production of resources which are not supported by ongoing service and information.'
- Identification of the next steps.

Likely Outcomes

- This workshop will aim to have concrete outcomes including:
- A national network which will operate into the future; and
 - A national strategy and clear identification of best practice for future investment.





Ilka Klepper
Cootamundra High School

~ NSWAAAT appointed Ilka Klepper from Cootamundra High School to attend the **"Promotion of Agriculture in Schools"**: workshop in Canberra.

~ Ilka is a member of the executive & attended in that capacity.

~ The Association is grateful to Ilka for her attendance at the workshop.

~ Below is Ilka's report on the 2 day workshop from 14 - 15th November 2005.

Ilka's Report...

~ I had the unique opportunity on behalf of the NSW Ag Teachers Association to attend this workshop held in Canberra and was one of a small handful of practising teachers in attendance. The majority of participants were industry-based people looking at promoting agriculture to schools in a variety of ways. This workshop attracted over 60 participants from across Australia who over the two days considered the strategies and approaches needed for a national approach for the promotion of agriculture to schools.

~ A variety of keynote speakers addressed the audience in response to the question:

- What is the current story/situation?

~ These speakers included Mal Brown, Scarlet Consulting, Paul Comyn, Program Manager Australian Wool Innovation, Sue Pickering, Horticulture NZ and Bill Barwood, Dexcel Industry Education Facilitator NZ and Dr David Russell, University of Tasmania.

~ Rhonda Scoullar from the Ag-aware Group in Queensland and Ann Fagan from the Landlearn DPI Victoria presented models for educating about Agriculture highlighting the key characteristics of respective statewide models.

~ The workshop continued with several speakers highlighting ways to incorporate agricultural ideas into schools. These ideas came under the following headings.

- 'Arousing curiosity in Agriculture'
- 'Promoting agriculture through Science/SOSE'
- 'Promoting agriculture through careers'
- 'Promoting agriculture through agricultural and horticultural studies (school-community partnerships)'

~ After plenty of digesting information, a facilitated discussion led to ideas being generated regarding the following questions:

- Where do we want to be?*
- What does success look like?*
- What is happening when things are working well?*

~ A Hypothetical question was provided and small groups worked with facilitated discussion following. Any feedback that was generated was to provide for the industry partners. For example: What advice do we give the Sheep CRC regarding education about sheep and wool?

~ **End of day one.....**

~ Day two.....

~ Started with a fantastic breakfast at the hotel and then we began to identify the strengths of education about agriculture. This was to build a picture of the future with several key speakers highlighting different perspectives about this to focus our thinking.

~ These speakers were:

Kerrie Murphy:	Department of Education Science and Training;
Carmen Perry:	DPI, NSW and
Alison Jacks:	DPIF&M, NT.

....These speakers gave food for thought about several programs that allowed the participants to discuss strengths and characteristics of programs that are current and have had much success.

~ Highlighting the resources that we have available from a national perspective allowed the workshop to develop the next steps to take to strengthen the promotion of agriculture to schools.

~ The workshop identified the following issues as being important.

Recognition of:

- The role of states and territories in the delivery of K-12 educational programs. Each state and territory operates virtually autonomous systems.
- The role of national bodies that have an interest in the promotion of agriculture to schools including the Commonwealth, research and Development Corporation, National Farmers Federation, Cooperative Research Centres.
- That the delivery of any national program needs to be negotiated on a state by state basis. This therefore relies on collaboration between state stakeholders for this purpose. For example Education department, farmer's organizations, DPI or equivalent, Agricultural Societies, Community and industry organizations.
- Those priorities will vary between industries and over time.
- The key roles that state based Departments of Primary Industries, or their equivalent, can play in assisting the promotion of agriculture to schools.

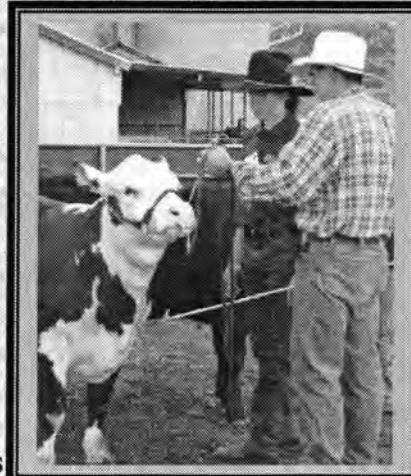
Workshop Recommendations:

National Network Committee

- Form a National Executive Committee.
- Appoint a caretaker committee for 12 months.
- Cameron Archer to convene caretaker committee.

Core tasks for the National Committee

- Consolidate information from Canberra workshop, 2005
- Determine a clear structure & function for a national network.
- Develop a framework for the promotion of agriculture to schools
- Develop Terms of Reference for the new entity (coordination, sustain networks)
- As a first step, establish a 'one stop shop' website for listing resources and links to network participants and industry.
- DAFF and DEST should be invited to participate in National Executive Committee.



More Information:

~ A comprehensive report about this conference can be found on the Tocal Website: <http://www.tocal.com/> where you can then click on the Promotion of Agriculture to Schools Report.

~ This report also contains a lot of website resources that we can all use and contact numbers.

NSWAAT thanks Ilka for her time & effort at the workshop & also for her comprehensive report.

NLIS: Information for Sheep & Goat Producers

National Livestock Identification Scheme (NLIS)

Sheep and Goats

QUESTIONS
AND
ANSWERS



Red NLIS Tags for 2006

Q1. The National Livestock Identification Scheme - Sheep and Goat (NLIS) began on 1st January 2006. What is required of me?

All lambs and kids born on or after January 1, 2006, must be identified with an approved property of birth tag with the Property Identification Code (PIC) printed on it. Red is the 2006 tag ID colour.

Q2. Are there any exemptions to tagging?

Yes, lambs going direct to slaughter from property of birth only, to over the hook (OTH) trade.

Q3. What industries support the NLIS - Sheep program but oppose exemptions and why?

Meat Processors, Livestock Agents, Live Exporters, Transporters and Saleyard Operators plus many producers recognise the need and support the program but oppose exemptions.

Exemptions create opportunities for error thus problems in trade. For example; should livestock become mixed and do not have a visible ID it creates a flawed perception to our overseas customer in a flock based NLIS ID program.

Q4. What would the loss of our export market mean to the Australian Sheep and Goat industry?

The loss of any export market would place more meat on the domestic market causing an over supply. It is anticipated producers would suffer a substantial financial loss in value for lambs and grown sheep.

Q5. Do you know how much mutton and lamb was produced last financial year and what percentage of Australian grown sheep and lamb meat was exported?

Australia produced 354,291 tonnes of lamb and 237,356 tonnes of mutton, of which 41% of lamb, 74% mutton and 3,236,415 head of live sheep were exported. The gross value of Australian grown sheep, lamb and live sheep production is estimated at \$1.86 billion (ABARE).

Q6. Does the EU have an ID system for sheep and goats?

Yes, and since July 9, 2005, animals going for slaughter must be identified with an appropriate ear tag, in some parts of the EU with up to 3 tags. There are no exemptions.

Q7. Is it reasonable to expect the EU or other countries to continue to import product from Australia if we had an inferior traceability system to theirs?

No, our overseas customers would be unlikely to buy from a country with an ID system that is inferior to their own.

Q8. What would happen if the current flock based ID system for sheep failed to pass an audit or identify and isolate a mob of sheep correctly?

The probable loss of a market could equate to 10 or 15% of export product. To regain a lost market is costly, difficult and time consuming. This could force the sheep industry into a different, much more expensive ID system with RFID tags that are yet to be proven in this industry.

Q9. Does NSW Farmers (a member of NFF) represent the majority of producers in NSW?

No. There is an estimated 125,000 farms of varying size ranging from hobby farms to large holdings with approximately 82,000 registered PIC in NSW. The membership of NSW Farmers is about 12,000 or approximately 10% of producers in the state. The various NSW Farmers committees have supported exemptions claiming a mandate in speaking for sheep producers in NSW.

Q10. Given the potential risk and cost to the sheep industry and your business, should you support NSW Farmers and the NFF position on exemptions and reliance on an NVD for identification?

No sector should be permitted to put the investment of all involved in the Australian sheep industry at risk. NLIS is designed to be a national identification program and encompass all. We cannot afford a flock based system that is divisive and have some animals tagged and others not.

The National Vendor Declaration (NVD) is a statement about the health and food safety of sheep. **It is not an identification device** and therefore cannot identify animals.

Because tagging in our flock based program has only just commenced, the impact of exemptions will not be felt until later this year when the new season's lambs are sold. If you disagree with exemptions express your opinion and say **no to exemptions** before damage is caused to your business and our industry.

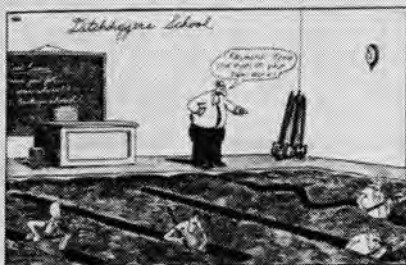


Local Government
Association of NSW



Shires Association
of NSW

"Preparing for the HSC in Agriculture"



HSC Enrichment Seminar
Prepared by Bob Anderson
andersonb@knox.nsw.edu.au

NEW! NEW! NEW! NEW!

Location: Knox Grammar School
Paterson Centre Auditorium
Pacific Highway
Wahroonga 2076

Date: Monday 31st July 2006

Time: 3.30-5.00pm

RSVP: Bob Anderson
Monday 24th July

If you missed these Enrichment Days.....Bob is putting an Enrichment Day on at Knox Grammar

Where are the Ag. Enrichment Days Held in 2006?

- Organised HSC Enrichment Days which operate on regular basis, which Bob has been involved with and recommend, include:
 - Singleton - a large day covering all subjects
 - organised by Ian Skilton, the Deputy Principal at SHS,
 - Friday 26th May.
 - Dubbo - a large day covering all subjects organised by an Organising Committee, (headed by Christine Bray),
 - Dubbo Distance Education at the Dubbo RSL Club,
 - Friday 9th June.
 - Leeton - a large gathering of Ag. students held
 - at St. Francis de Sales Regional College,
 - co-ordinated by Alison Dahlenburg at St. Francis.
 - Tuesday 20th June,
 - Inverell - a growing gathering of Ag. students
 - co-ordinated by Karlene Bailey at Inverell High.
 - Friday 23rd June

If you missed 2006

Keep in mind these contacts & locations for Enrichment Days in 2007

FURTHER INFORMATION:

- Contact: Bob Anderson : Ag Teacher: Knox Grammar School
anderson@knox.nsw.edu.au
Ph: 02 94870438

Agriculture HSC Study Seminar



Farm Safety Field Days

Be involved with your students

LOCATION	DATE	SITE
FORBES	29 June 2006	Forbes Showground Show St, Forbes
WAGGA WAGGA	13 July 2006	Wagga Wagga Agricultural Institute Pine Gully Road, Wagga Wagga
GRIFFITH	27 July 2006	Griffith Centre for Irrigated Agriculture Murray Road, Griffith
LISMORE	10 August 2006	Wollongbar Agricultural Institute Bruxner Highway, Wollongbar
BOURKE	31 August 2006	Renshaw Showground, Anson St (Bourke Showground)
BALRANALD	14 September 2006	Balranald football field/race track Greenham Park, Balranald
NARRABRI	5 October 2006	Australian Cotton Research Institute Wee Waa Road, Narrabri, (25ks west)

INFORMATION FOR AGRICULTURE / PRIMARY INDUSTRIES TEACHERS

WorkCover NSW is holding a series of Farm Safety Field Day throughout New South Wales as part of its *Safer Farms, Safer Farming* program.

Actively supporting the Field Days will be the NSW Farmers Association, Farmsafe NSW, NSW Department of Primary Industries, the Australian Workers Union, the Country Women's Association, Tractor & Machinery Association of Australia, the Motor Traders Association, TAFE NSW and Country Energy.

Local field days will be an ideal opportunity to obtain practical advice about safety issues you may have on your farm.

You will also be able to view a wide range of practical solutions and demonstrations that will help you and your employees work more productively and safely. Displays will include animal handling, child safety, silo safety improvements, fuel tank modification, shearing shed upgrades, auger safety, ATV safety, electrical safety, farm chemicals, as well as machinery specific to the agricultural activity of the region.

The NSW Police will also be in attendance to provide information on rural crime prevention.

WorkCover's new Business Advisory Officers, along with the newly commissioned Safety Bus, will also be on site to provide small to medium business operators with personalised advice on any safety or workers compensation matters.

CATHY CUSACK
RURAL SAFETY HOTLINE 1300799003



CONTACT

Animal Care and Ethics in NSW schools



Using animals in NSW schools

The use of animals in NSW schools is governed by the *Animal Research Act 1985* (NSW), the *Animal Research Regulation 1995* and the *Australian code of practice for the care and use of animals for scientific purposes*.

These pieces of legislation have been developed in response to the attitudes of the Australian community and its concern for the welfare of animals used for teaching and research. Underpinning these attitudes is the notion that vertebrate species can feel pain and suffering and that there is a moral duty to minimise the harm to any animal.

SACEC

The legislation requires that wherever animals are used for teaching and research, their use must be supervised by an animal ethics committee. For all NSW government and non-government schools, this supervision is carried out by the Schools Animal Care and Ethics Committee (SACEC). It also determines the:

- responsibilities of the school sectors for animal use
- membership, operations and responsibilities of animal ethics committees.



The work of the SACEC and the support provided by the school sectors, is monitored by the Department of Primary Industries, Animal Welfare Unit.

Members of the SACEC include:

- two veterinarians
- two teachers
- two animal welfare representatives
- a representative of each of the three school sectors
- a member of the Board of Studies
- two independent members (these are people who have not used animals for teaching or research purposes or are not members of the three school sectors).

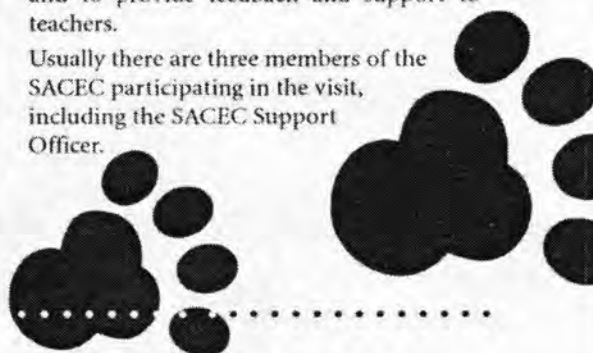


The SACEC also has an executive officer and a support officer.

School visits

Each year the SACEC visits a minimum of 16 government and non-government schools throughout NSW. The purpose of these visits is to monitor the use of animals in schools and to provide feedback and support to teachers.

Usually there are three members of the SACEC participating in the visit, including the SACEC Support Officer.





The school visit focuses on the following:

- educational justification for keeping animals at the school
- facilities where the animals are kept
- records documenting acquisition, disposal and all husbandry activities carried out with any animals kept at the school.

The visit takes approximately two hours. The Animal Welfare Liaison Officer (AWLO) should be available for the duration of the visit. Any other teachers or students that use animals, the principal or any head teacher, may participate in the discussions and inspection of facilities during the visit.

Staff are encouraged to discuss any issues they have related to the use of animals.

At the end of the visit, the school is provided with a verbal report. This information forms part of the written report that is tabled at the following SACEC meeting. Following the meeting, a letter is sent to the school principal with the outcome of the visit.

Either before or after the visit, the school staff may contact the SACEC Support Officer to clarify information or discuss any concerns.

Animal care and ethics Who's responsible?

Teachers are responsible for:

- assisting students to develop a respect for animals
- teaching students to care for animals in a responsible and ethical manner
- being an excellent role model
- applying the principles of best practice.

Students are responsible for:

- using and caring for animals in accordance with instructions from their teachers
- considering ethical and community values and expectations, as well as legislative requirements for the care and use of animals
- obtaining written permission from a parent or caregiver that an animal will be adequately cared for if the student takes the animal home.



For more information about animal care and ethics in NSW schools, contact:

Sally Bannerman

SACEC Support Officer

Private Bag 3

RYDE NSW 2112

Telephone: (02) 9886 7426

sally.bannerman@det.nsw.edu.au

Visit the *Animals in schools* web site:

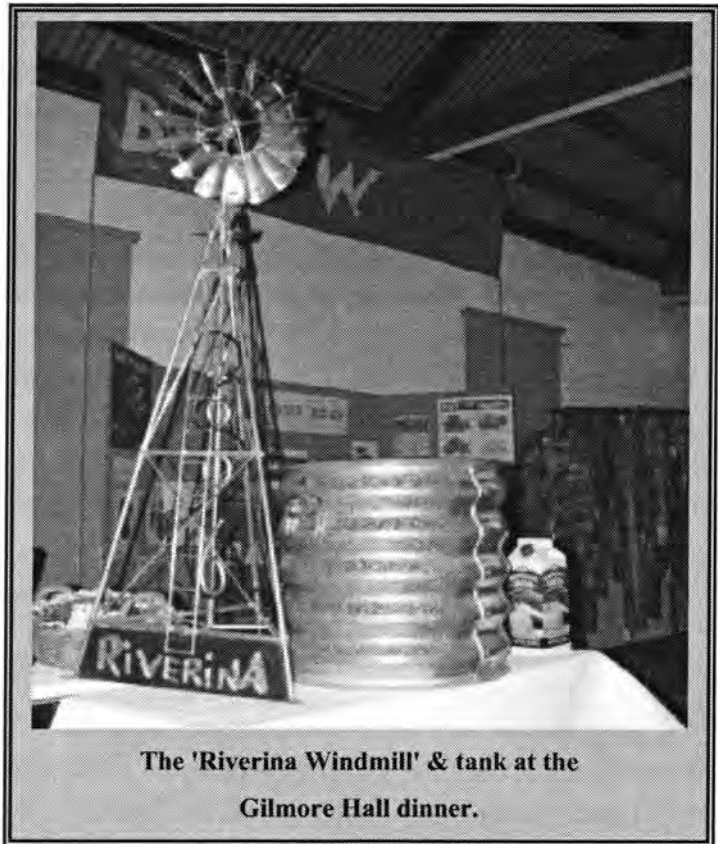
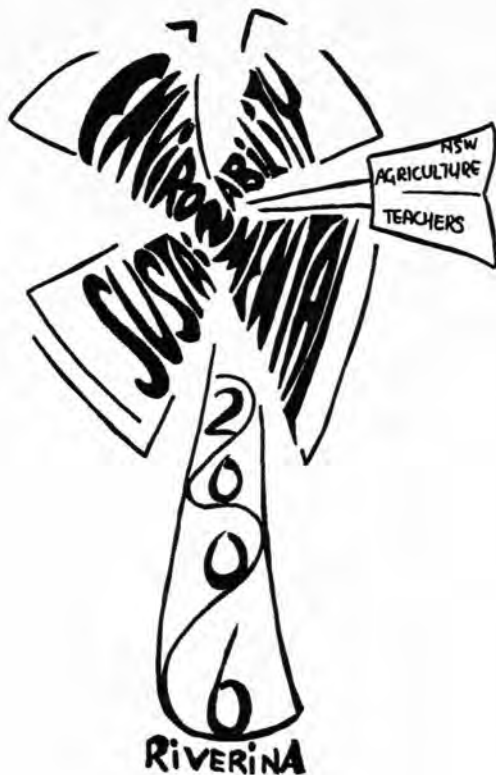
<http://www.schools.nsw.edu.au/animalsinschools>



Sally Bannerman
SACEC Support Officer

*Contact
Sally*





The 'Riverina Windmill' & tank at the Gilmore Hall dinner.

^ The Native Vegetation Act 2003 replaces the Native Vegetation Conservation Act 1997 making clearing of remnant vegetation illegal if it does not 'maintain or improve' environmental outcomes

^ Farmers need to apply for a property vegetation plan (PVP) if they need to knock down a single tree if it's not regrowth or is covered by an exemption

^ But farmers can timber for construction but it can not be a threatened species or be home to one and must be used within 18 months of being cut (18months in coastal regions)

Section 8

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Tumut
COUNCIL

8

"SPECIAL FEATURE"

^ Report:

State Agricultural Advisory Group

.... Peter Crick: Chairperson

^ "An Agriculture Teaching Career --- A Retrospective"

By Rick Kemp



STATE AGRICULTURAL ADVISORY GROUP REPORT

~ The State Agricultural Advisory Group (SAAG) has been constituted since the mid 1990's to help advise the Department of Education and Training (DET) on the allocation of funds from the Finance Directorate to schools teaching Agriculture and related courses and with school farms. This money helps with the costs associated with running these farms and educating the students that use these farms. In 2006, over \$400,000 was allocated for this purpose.

~ The SAAG, in the past has been given the responsibility of setting priority lists for the replacement of tractors on school farms. The last allocation for this occurred in 2002.

~ The SAAG is DET committee and its credentials to operate were reconfirmed, in September 2004, by Trevor Wootten, Director of Secondary Education, at the time. It has continued to operate since then with our working relationship with Finance Directorate progressing as before.

~ The position of chairperson is taken by a Principal of a DET high school. Since I have been in this position I have been able to procure the approval of the State Secondary Principal's Council to have this position recognised by the Principal's Council. This will enable the chairperson, to make representations on matters pertaining to the Group through the Principal's Council and its maintenance sub-committee.

One of these matters is the status of the tractor replacement program. This has been seriously affected by the restructure of the Properties Directorate to the Asset Management Unit (AMU) in 2005. In late 2005 the following notification was sent from John Deeble, School & College Liaison Officer, of the Asset Management Directorate, to the SAAG in response to enquiries about the future of the tractor replacement program;

"The recently implemented restructure of Asset Management Directorate, resulted in the abolition of the Manager, Program Coordination position previously held by Mr Terry Whyte. No other head office position was created to manage the role previously undertaken in regard to Plant & Equipment funds allocation. The Minor Capital Works allocation, which includes the Plant & Equipment funds, has now been allocated to Regions. Any issues relating to replacement of tractors for teaching and learning will now need to be addressed by individual Regions.

As the funds are no longer held centrally the Advisory Group will need to approach the Regional Directors to determine the most appropriate model for the group to provide input to the Regional prioritisation process for the Plant & Equipment funds dispersment. It must be remembered that this funding dissection will also be required to cover a range of items such as telephone replacement; Industrial Arts & Home Economics fixed equipment replacement, etc. The replacement of tractors for teaching and learning will compete with these items on an annual basis." - John Deeble.

~ This has been slow to be recognised by Regional Managers of AMU's and many Principals, including myself were not aware of this until well into 2006. Most Regional Managers of AMU's are aware of their responsibilities regarding tractor replacement however the issue now is the ability of Regional AMU's to be able to fund the program.

~ One regional manager has told me that there is an annual pool of \$50,000 to fund the full demands on the Plant and Equipment funds mentioned above. With the cost of a replacement tractor, being somewhere around \$20,000 it is easy to visualise the issues schools face in trying to gain access to this pool of money.

~ The SAAG is a DET committee, therefore it cannot be an advocacy group for issues effecting Agricultural education in public schools. It's main brief is to provide advice to the DET and to make the various DET directorates aware of emerging issues that will need to be factored into their planning and to assist with this planning when required. Advocacy on the importance of these matters and the need to prioritise these matters is not the preserve of this group. These issues are best raised and supported by advocacy groups such as Professional Associations, Parent/Community Groups and Union organisations.

~ The SAAG will continue to gain clarity on the tractor replacement program and the ability of Regional AMU's to manage this program in a fair and equitable way. It will also hold to the view in our advice to the AMU and to the DET, that a state-wide program is a more effective and efficient way to administer this program successfully.

~ Other issues in relation to tractor replacement, that need to be addressed, are training of teachers and staff in tractor use and the OH and S issues related to the use of the aging tractors on school farms. This is only one of a number of OH and S issues relating to school farms, that needs to be addressed at a policy and directorate level to ensure that all teachers of Agriculture are informed and farms are OH&S compliant, and that procedures are in place to address OH and S matters when they occur.

~ I would like to thank the members of the SAAG for the amount of time they have spent bringing me up to speed on the background to the Group and for their commitment to sustainable funding arrangements for Agriculture in Public Schools.

Peter Crick
Chairperson
State Agricultural Advisory Group.

Foot note:

^ *Please ensure you are up to speed with this important issue from the State Agricultural Advisory Group.*

^ *It is your subjects resources that this group is battling for & it's your subject that you need to maintain well resourced in your school to maintain Agriculture as a strong subject with your students & the wider community.*

^ *This is the only subject advisory group in the state & we need to ensure that this group is maintained.*

^ *As an Association we need to support & thank these guys for the work they do on our behalf.*

Tony

An Agriculture Teaching Career --A Retrospective

By Rick Kemp

You may wonder why I am taking the time to write this article, after all, I have retired...left it all behind... "good night and good luck". However, I feel that part of the separation from the "job" to "retirement" necessitates a "handover" of distilled wisdom to those currently engaged in the teaching of Agriculture and to those who could be teaching Agriculture in the future. Frank McCourt's recent book, "Teacher Man", has had a particular resonance with me, especially the practice of the classroom teacher who sadly remains largely hidden and forgotten. I too, consciously remained as a classroom teacher as promotion to an administrative role would have been an escape from the greater challenges of teaching Agriculture.

My article aims to trigger some soul searching discussion for the betterment of the subject now and into the future. It does not pretend to have THE answer as those who have been thoughtfully engaged in the subject know, teaching Agriculture is a challenging, thought and discussion promoting subject. The theme I wish to pursue is the issue of "challenging the culture of Agriculture: the need to get the parochial, inward-looking and narrowly-pragmatic concept of the "aggie" out of Agriculture or risk the subject slipping into irrelevance".

The approach I want to take is philosophical. After all, this is what drives and guides what we are doing as opposed to simply organizing and doing as "aggies" are expert at doing and heaven help anybody who interferes. Thinking philosophically ensures we keep ourselves aware of Agriculture's place in the wider scheme of things locally, nationally and globally. It attunes us to change. There is a need to think in terms of a sustainable agricultural teaching process to keep the subject fresh, vital and in tune with the learning environment of the students, not just one that simply tells the students "the way it is" and if they comply, they will turn into a good "aggie".

A brief history of me. Approximately half of my life has been spent in the city and the other half in the country in diverse locations. From an early age, I have had an interest in growing plants and raising/caring for animals in the backyard. I was inspired by a NSW Department of Agriculture publication "Getting Started in Farming". I was influenced by my father, a teacher of geography and economics. He also had an insistence that whenever the family travelled (mostly across NSW to QLD to visit grandparents) that I take note of the geography en route. This acquired interest has culminated in two trips overseas in recent years involving first hand experience of Agriculture globally. During the "geography en route" times, "country experience" was a necessity for teachers of my father's era if they were "going any where". For me, this meant "shifting around" and getting used to change. Whilst my father went to the top of tree, I preferred to stay and do what I wanted to do, teach Agriculture. It meant dealing with change in teaching location and change in how the subject was taught. So I was embedded in change. How do you survive? You change, grow and learn, not create some refined organizational structure and defend it at all cost against intruding influences and "infidels". Verv "aggie"!

I would like to highlight some of the significant points of the subject's history as I have seen it and how I responded to evolve my longitudinally developed philosophical position.

1. "Theory" and "Practical".

From my school student days of Agriculture, like Science, there were two books of work, "theory" and "practical". Agriculture was saddled up like its big brother, Science, in this way for reasons that will follow. It became clear to me that one informed the other. Those who were good at the subject were able to talk and do by explaining the "practical" in terms of the "theory" and the "theory" in terms of the "practical" through example. One reinforced the other. Later, this was explained in terms of developing a "praxis". Lateral enrichment of this occurred interacting with "Systems Theory".

2. Agriculture as an Applied Science.

Agriculture as an applied science was my starting point as a teacher. The subject was seen as a great end use of Science, its research and its techniques. It gave me as a young teacher a rational framework to deal with what the subject could deliver. It opened up a world of biological wonder and a massive capacity to solve Agricultural production problems I had grown up with. Queensland Fruit Fly annually ruined the backyard fruit crops and Coccidiosis killed the carefully hatched chickens under broody hens but Agriculture as an applied science led me to solutions for these problems. Interaction with farmers and their sons soon challenged my enthusiastic blind faith in this line of Agricultural thinking. This reached a tragic climax when Agriculture was allowed to become a full Higher School Certificate subject on the grounds that it "must challenge the intellect of the brightest child". The result was a syllabus so dense with academic knowledge of Agriculture that even the four year trained graduates from where this material originated had difficulty with the knowledge let alone teach it to poor unsuspecting students with a solid agricultural/farming background. It sent me into a time of deep philosophical reflection and dilemma. This path was not going to do the subject justice for what it could potentially offer.

3. Considering Agriculture as a "Man modified Ecosystem".

This approach saw a huge expansion in the numbers of schools and students taking up Agriculture as a subject. It was accompanied by the now familiar cries of "dummying down" the subject. These cries tended to reside with those who saw the teacher as purely a "knowledge imparter". The teacher was perceived as little more than "an expert echo chamber". Agriculture, as we are now aware, could deliver more than knowledge, it could develop useful skills, attitudes, values and competencies that could be transferred to other areas. It is a subject that could cope with change. Coupled with this was the advent of the student research project following the "set topic" part of the course in the Wyndham era. Such topics as "rabbits", "weeds" and "soil acidity" gave an opportunity for the latest from the experts to be poured directly into the students.

With the advent of the "Systems era" came the student generated research project. Students were liberated from listening to experts and started to do some of their own learning. In doing so, students developed many important transferable competencies.

3. Considering Agriculture as a "Man modified Ecosystem".

(con't)

In fact, the student generated research project set the pattern for many other subjects to follow and still under pins student initiated work today. Still a dilemma emerged as it does in "aggie" discussion - quantitative versus qualitative research. A typical "them" (dumb), "us" (smart) dichotomy brawl emerged from which the subject has never recovered. Instead of each side realizing that one could better inform the other as was the case with the "theory"/"practical" dichotomy interacting to produce an informed praxis, the two camps were hell bent on destroying the other because they were "right". For each party, their point of view was more important than the future of the subject. Both have been left irrelevant in the world that Agriculture now finds itself with both being unable to change. Very "aggie"!

4. Agriculture through Enterprise Studies.

The introduction of "enterprise studies" created an opportunity to bring together the two parties together and advance the "cred" of the subject, keeping it responsive to change. The concept of contextualizing the study of Agriculture to make it relevant to the student/learner is another lost opportunity. Many saw this as an opportunity to regress and use the "enterprise theme" as a way of entrenching bye-gone institutions rather than looking at the place and response of the selected enterprise in the local and global setting. Rather than develop an iterative, dynamic, responsive interaction to keep the subject fresh and embedded in the student's world, it tumbled back into supporting historical myth. Very "aggie"!

A sad scenario but why become "the victim"? Let's get on the front foot. What does the subject offer? Why is the subject so great? Let's get out there and defend it. Here is a short but not exhaustive list. I am sure discussion would quickly generate more.

The study of Agriculture:

- enables learning with students in their world where they can control their learning within a context immediate to them.
- offers a real life opportunity to cope with an imperfect world by using the multiple problem solving skills this subject develops. It helps the student deal with complexity.
- develops self value through empathy with the biological world.
- enables students to find connections as the subject is trans-disciplinary and interactive.
- embeds learning through multiple learning styles which is the nature of the subject.
- is intrinsically multicultural drawing upon biological and human diversity to power the subject.
- provides a discussion forum where real world issues of the student's world can be positively discussed. Students can look analytically at issues without being directly or personally embedded so they can more intelligently deal with them.
- develops highly transferable competencies. Agriculture develops a useful toolbox of competencies that can be used into the future and in areas outside of the Agricultural domain. We are regularly told that transferable skills and competencies are essential for today's student and tomorrow's workforce if we are to remain competitive in the "global game".

4. Agriculture through Enterprise Studies.

(con't)

So what needs to be done?

Firstly, stand up for the subject and be proud of it with its special learning domain. Too often it is our own who run down the subject and their colleagues down with bitter, non productive infighting. Very "aggie"!

Secondly, we need to produce students for a global eco-technical world with an ethic of sustainability guided by Agenda 21. Such students would not be blinkered by solely an economic perspective which often selectively ignores picking up clear market signals and acting accordingly. Agriculture needs to be considered on a matrix of social and environmental as well as economic concerns. In other words, use the triple bottom line.

Thirdly, we need to focus on an Agenda 21 sustainable Agriculture/farming system to legitimately use the vast land area of Australia. Otherwise, we will be left with wide open spaces whose only use will be the world's dumping ground for waste. Some "aggies" might find that a productive use of the back corner of the farm to help pay the bills.

Fourthly, take a point from the most recent Griffith Review: Getting Smarter. In an article by Glyn Davis it was noted that there is no specialist Agricultural University in this country with "fair dinkum" cutting edge Australian based research facilities and not research which is solely corporately funded with the usual strings attached. True we do have federally inspired Combined Research Centres (CRC's) but the genesis of these is more to do with funding than opportunity for Australian based cutting edge research in a university environment. What is needed is a university that is properly funded to carry out cutting edge research specific to Australia rather than modifying globally "off the self" solutions with the attendant legally binding commercial obligations.

This is just a start to a major discussion agriculturalists and "aggies" will have to have, if the subject is not going to slip into irrelevance.



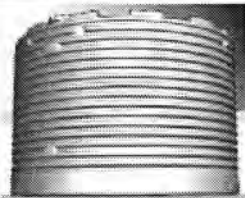
Rick Kemp

In closing, Agriculture and its teaching is an interactive process between the subject, students and teachers. It is an on-going and changing process. Go for the ride or be left behind and become irrelevant. The "aggie" has to go and now. To those I have been taught by, taught with and to, thanks for teaching me and best of luck for the future.

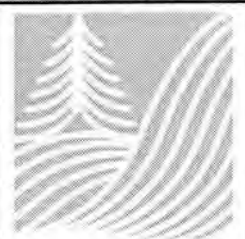
The Assoc. thanks Rick for walking us through the "Agriculture Teaching Career"; many of us can certainly relate to what Rick has provided to us as food for thought.



**PAPER MAKING FOR
A BETTER WORLD.**



TeamPoly



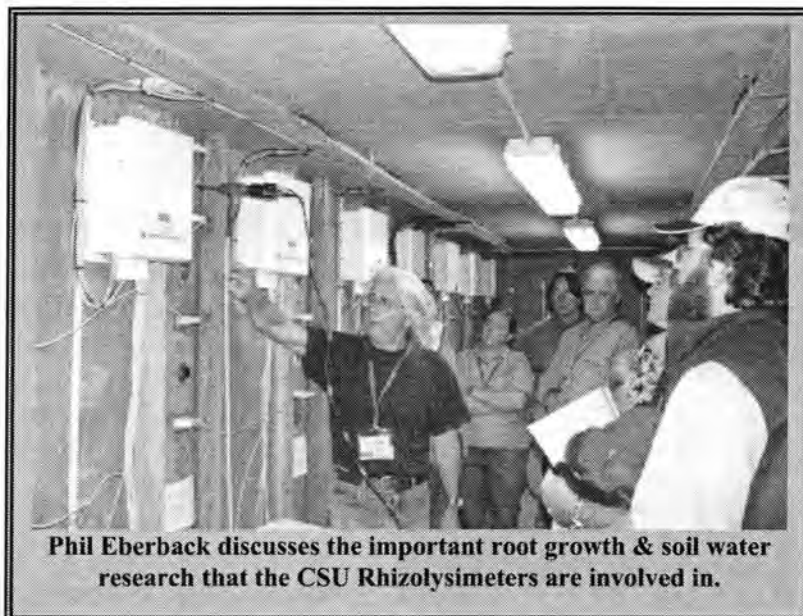
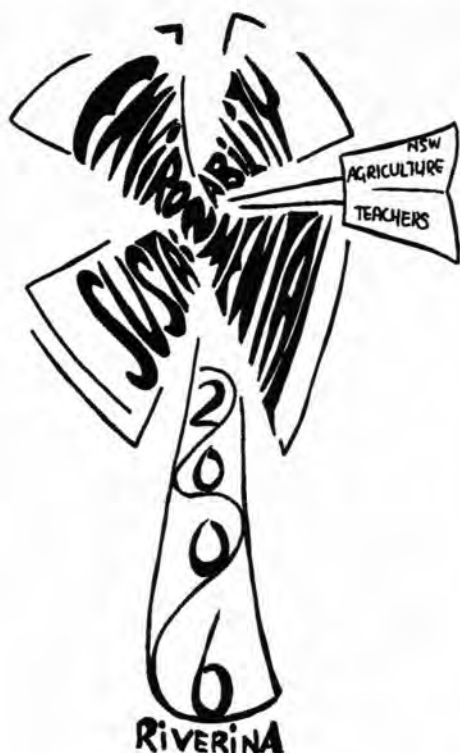
Tumut
COUNCIL



Because the land is your life.



JOHN DEERE



Phil Eberback discusses the important root growth & soil water research that the CSU Rhizolysimeters are involved in.

9

Resources in Agriculture & Primary Industries

^ Under NSW law the 'Protection of the Environment Operation Amendment Bill 2005; for excessive smoke from chimneys is defined as a visible plume of smoke for 10 minutes, including a 30 second period when it is at least 10 metres long.

^ Failure to comply with a Smoke Abatement Notice for 'excessive smoke' will incur a \$3300 fine.

Section 9
Sponsored by:



**PAPER MAKING FOR
A BETTER WORLD.**

^ New Resources:

NSW Department of Primary Industries

- Horse Ag skills
- Farm Ag skills
- Beef Ag skills
- Sheep Ag skills
- Goats Ag skills
- Tractor Ag skills

^ Beef Cattle Show Competition:

South West Slopes Schools

- Batlow Central School
- Gundagai High School
- Tumut High School

^ Year 10 Plant Nutrition Assessment Trial.

^ Year 11 Field Trial.

- o *Avena fatua*

^ Permaculture Gardens.

- o An alternative

^ Fencing Resource.

^ Know Your Ropes.



NEW RESOURCES NSW DPI

These AGskills are completely new, full-colour books, just released. They are great resources for high school teachers and their students. A discount of 40% on the displayed recommended retail price is available to schools and education institutions. You can fax an order to NSW DPI at Tocal college on 0249385549 or phone 1800 025520 for further details. (Prices shown below are RRP and include GST)



Horse Agskills

A basic guide to many of the skills used when handling, riding and caring for horses. Includes lunging, vaccinating, drenching, hoof care, dentition, loading a horse onto a float, care of equipment, safety and animal welfare. Lots of photos and diagrams. 64 pages in full colour. \$24 Cat no. B116.



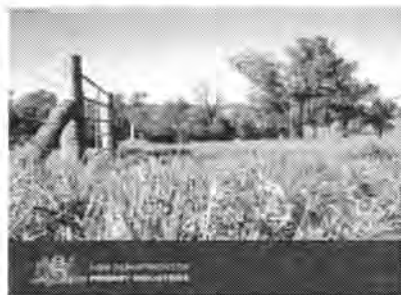
Sheep Agskills

A guide to the basics of handling and caring for sheep, with step-by-step instructions, diagrams, and full-colour pictures. Includes safety precautions, animal welfare, catching, mouthings, drenching, vaccinating, crutching, foot trimming and lambing. 64 pages in full colour. \$24. Cat no. B111.



Farm Agskills

A comprehensive guide to farm skills. Includes rope knots, wire knots, the basics of electric and conventional fencing, calibrating farm machinery, inoculating and lime pelleting legume seeds, planting trees and soil testing. Simple to follow with plenty of diagrams and photos. 128 pages in full colour. \$27 Cat no. B113.



Goats Agskills

Shows how to provide shelter for goats, trim hooves, drench, vaccinate, ear-tag and milk goats. Also covers health problems, animal welfare and safety. 80 pages in full colour. \$24 Cat no. new06. Note, this book will be available towards the end of January 2006.



Beef Agskills

A step-by-step guide to basic beef skills and practices. Includes instructions, diagrams and full-colour photos. Some of the skills included are drafting and counting cattle, vaccinating, dehorning calves, heat detection and problems with calving. 80 pages. \$24 Cat no. B105.



Tractor Agskills

The latest in the Agskills series. It will be available in Autumn 2006, price and catalogue number to be advised. Content includes safety, daily service, driving basics, attaching and handling implements.

SHOW PARADING OF BEEF CATTLE *WITH A DIFFERENCE!*

BEEF CATTLE

SHOW COMPETITION AT:

- # GUNDAGAI AGRICULTURAL SHOW
- # TUMUT AGRICULTURAL SHOW
- # ADELONG AGRICULTURAL SHOW
- # BATLOW AGRICULTURAL SHOW

**BEEF CATTLE
KNOWLEDGE**

**PARADING
SKILLS**

Batlow
Gundagai
& Tumut
Year 7 -10 students
compete in a
"Cattle Parading"
Competition held at
the 4 local shows

**BATLOW
CENTRAL
SCHOOL**
David Piper 02 69491208

**GUNDAGAI
HIGH
SCHOOL**
Dale Chadwick 02 69441233

**TUMUT
HIGH
SCHOOL**
Tony Butler 02 69471077

~ CONCEPT ~

~ This competition was commenced in 1996 by the 3 Ag teachers.
~ Ag teachers identified a need for local students to increase their skills in the areas of:

- Beef Husbandry
- Beef knowledge &
- Handling of cattle in the show ring.

~ The competition gives local students & schools the ability to compete against each other on their own turf.

At each Show:

~ 3 Trophies are up for grabs:
(donated by local businesses)

- i. "School Parader of the Show"
- ii. "Parader School for the Show"
- iii. "Encouragement Award" to students of host town

^ To offset the costs for the show day; each host student is charged an entry fee of \$3



"GENERAL CONDITIONS"

^ The competition consists is open to students in years 7-10 who are enrolled in local South West Slopes Schools.

^ Entrants will be judged on:

- general knowledge of beef cattle
- handling/knowledge of their animal
- personal presentation

^ All cattle are led by the entrant

"THE COMPETITION"

^ The competition consists of 2 sections:

Section 1: Year 7 & 8 Show Paraders

Section 2: Year 9 & 10 Show Paraders

^ Each Section consists of a number of "Rounds"

^ The students with the highest score from each "Round" are eligible to enter the "Final"

^ The "Final" consists of entrants from both Sections 1 & 2.

"General Points"

^ This competition has a combined total of around 35 students participating at most of the local shows.

^ The 3 Ag teachers do the questioning of the students for the "Rounds" & the "Final"

^ The host school organises the questions for the show & does the tallying of results + providing a gift for the judge.

ENTRANTS :

- ✓ All entrants receive a certificate & ribbon in recognition of their participation in the competition.
- ✓ All finalists receive a ribbon & certificate.
- ✓ "The School Parader of the Show" receives an individual trophy & ribbon for their success.
- ✓ The top "Parader" in Year 7-8 & 9-10 will receive a Champion Ribbon.
- ✓ The "Parader School of the Show" receives a perpetual trophy & ribbon.

JUDGE :

- ✓ At each show the host town provides a judge for the competition.

All participants
are recognised



Dave Piper (Batlow Central)
sorting the trophies



After the comp the judge speaks to the
students on the finer parts of parading



Junior judging is a variation of the competition
held at the Adelong Show



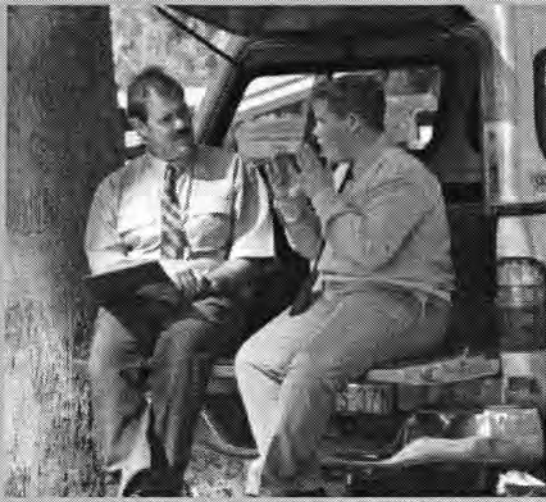
Great class of paraders at the
Tumut Show in the show parader competition



Winners are grinners!



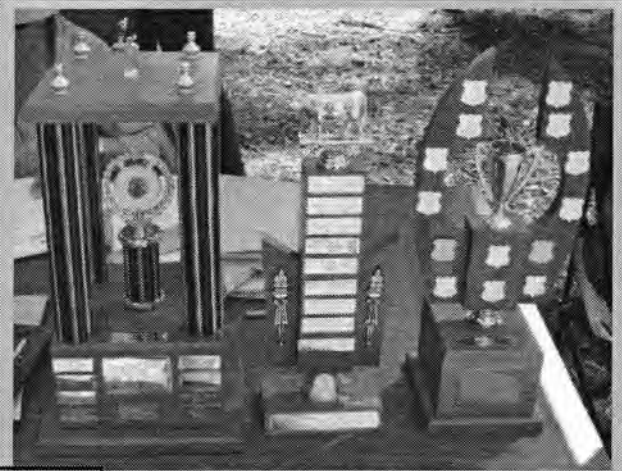
Tony (Tumut) Dave (Batlow)
& Dale (Gundagai)



Dale Chadwick (Gundagai High)
questioning a parader



Dale with some of the Gundagai
contingent at the Batlow Show



Batlow Show trophies



Dave checking the slip knot
of a competitor



Proud winners at
Gundagai Show



"Round" Questions

Page
1

2006 ADELONG SHOW SCHOOL'S SHOW PARADERS COMPETITION

SECTION:	T	ROUND
YEAR	7 - 8	
YEAR	9 - 10	

NAME: _____

YEAR: 7 8 9 10

SCHOOL: Batlow Central School
Gundagai High School
Tumut High School

The competition consists of 3 sections.

1. General knowledge about beef cattle
2. Knowledge of your animal.
3. Handling/Parading of the animal and personal presentation.

Sections 1 & 2 will consist of various questions.

SECTION1:		/ 5
SECTION2:		/ 6
SECTION 3:	Cattle Handling	/ 24

TOTAL: _____

/ 35

"ROUNDS"

Section 1:

Terminology questions
/5

Section 2:

- a. Knowledge of animal** /2
b. History of animal /2
c. Points of animal /2

TOTAL Knowledge: 11

TOTAL Parading: 24

ROUND TOTAL: 35

ADELONG SHOW ROUNDS 2006

Page
2

SECTION 1:

General Knowledge about Beef Cattle.

- ^^ Judges select 2 common questions
^^ Judges select 3 questions of own choice

1. What do the following mean?
(Y: Correct; 1 point) (N: Incorrect; 0 point)

	Y	N		Y	N
Dam			Bobby Calf		
Steer			Cow		
Dehorning			Vaccination		
A.I.			P.T.I.C.		
Pure Bred			Earmarking		
Heifer			Subcutaneous Drenching		
C.F.A.			Bull		
Vealer			Bullock		
AUSMEAT			Mouthing Cattle		

SECTION 1: _____

TOTAL: _____

/ 5

SECTION 2:

-2-

Knowledge of your animal.

The following questions refer to the animal that is being led in the competition.

- i) Identify the following aspects about your animal.
(Ask only 2)

- Age _____ /1
- Features of Breed _____ /1
- Origin of Breed _____ /1
- Estimated Weight _____ /1
- Estimated Value _____ /1
- Estimate Fat Score _____ /1

- ii) A. Brief History of the animal

/ 2

- iii) Points of an Animal (any 2)

- Poll
- Pin Bones
- Crest
- Dewclaw
- Loin

Y N (1 point each)

SECTION 2: KNOWLEDGE TOTAL: /6

SECTION 3:

Cattle Handling TOTAL: /24

**2006
ADELONG SHOW
SCHOOL'S SHOW PARADERS**



FINAL

NAME: _____

YEAR: 7 8 9 10

SCHOOL: Batlow Central School
 Gundagai High School
 Tumut High School

The Final competition consists of 2 sections:

1. General knowledge about beef cattle.
2. Handling/Parading of the animal and personal presentation.

Section 1 will consist of various questions.

SECTION1:	/ 24
SECTION2: Cattle Handling	/ 42
TOTAL:	/ 66

"Final" Questions

-2-

5. why mouthng of cattle?
(need to list x3 for 3 points)

- Determine age of animal
- Cull cows: ie loose body condition/ & broken mouths
- marketing aid for selling steers to particular markets
- check entries for carcass competitions
- guide to finishing steers that have lost weight due to teeth eruption

6. Why castrate calves

- (x3 Point for each correct answer)
- no bulls: control herd
 - meat distribution
 - commercial herd, no replacement

7. Bloat:

(3 points)

- + Causes
- + Prevention
- + Control

8. Beef V's Dairy Cattle

(list x3 for 3 points)

- blocky/ triangular
- milk/meat
- Bos Taurus breeds(dairy/)
- Both Bos Taurus & Bos Indicus(beef)

Page
3

L	S	K

PAGE 2 TOTAL.....

KNOWLEDGE
TOTALS:

/ 24

PARADERS
TOTAL
(FINAL):

/ 42

FINAL TOTAL:

/ 66

ADELONG SHOW SECTION 1. Beef Cattle Knowledge.....FINAL

(all 8)

(L: 1 point S: 2 points K: 3 points)

1. cattle diseases:

local

(list 3 + to obtain 1.5 points)

(abscesses/ blackleg/ bloat/botulism/freemartin/grass tetany/
mastitis/ milk fever/ pink eye/ scours/ringworms/warts)

exotic

(list 3 + to obtain 1.5 points)

2. Gestation period of cattle

(3 points)

- what is it
- other terms
- number of days

3. cattle breeds:

(list 2 + from each to obtain 3points)
(each response is 1/2 point)

a + British

Hereford/Devon/ Lincoln Red/ Devon/ Angus
Shorthorn/ Galloway/ Belted Galloway/

b+ Australia

Murray Grey/ Mandalong Special/ Braford
Simford/ Beefmaker/

c+ Europe/USA

France: Simmental / Charolais/ Limousin/ Maine-Anjou
Italy: Romagnola/ Marchigiana
USA: Poll Hereford

4. marketing of beef cattle in local circuit

- local circuit(Gundagai/Tumut/Adelong) (x3)
- every fortnight (x1)
- selling methods: auction/liveweight/paddock/
direct sale to abattoir/dead weight /computer

{9 = 3 } (divide by 3) Total = 9

L	S	K

Page
2

PAGE 1 TOTAL.....

"FINAL"

Section 1:

Beef Cattle questions
/24

Section 2:

Parading
/42

TOTAL Knowledge: 24

TOTAL Parading: 42

FINAL TOTAL: 66

^ All students are given a "Beef Cattle" booklet at the beginning of the year which contains: "Beef Cattle Industry" information including management skills/ marketing/ breeds/diseases/terminology.



**YEAR 10 AGRICULTURE
PASTURE ENTERPRISE
ASSESSMENT
Plant Nutrient Trial**

ASSESSMENT TASK:
DURATION OF TASK:
TIMING:

20%
10 weeks
Term 2



Description of Activity:

Students ..

- ^ Establish a pot nutrient trial.
- ^ Can work in groups of up to 4 students per group
- ^ Investigate the plant responses to 4 treatments namely:
 - Control
 - All essential plant elements
 - No Nitrogen
 - No Phosphorus
- ^ Will obtain the required treatments by weighing the correct amount of chemicals and formulating the stock solutions of the treatments required.
- ^ Produce 1 litre stock solution of the treatment and add 100ml per week to the appropriate treatment for the duration of the trial.
- ^ Use vermiculite as the pot medium
- ^ Conduct this trial for a period of 10 weeks through term 2.
- ^ A suitable plant for this trial is oats.
- ^ Need to record & observe the plants responses to the nutrients over a 10 week period
- ^ Need to graph results of plant height for the class average & average group results.
- ^ Will need to research:
 - Importance of plant nutrients for healthy productive plants
 - Identify the needs of plants that farmers need to provide successful plant production
 - Deficiency symptoms of plants with limiting availability to:
 - ^ Nitrogen
 - ^ Phosphorus &
 - ^ Potassium.



Outcomes:

- 5.5.3 explains & evaluates the impact of management decisions on plant production enterprises
- 5.5.1 designs, undertakes, analyses and evaluates experiments and investigates problems in agricultural contexts
- 5.5.2 collects and analyses agricultural data and communicates results using a range of technologies
- 5.6.1 applies Occupational Health and Safety requirements when using, maintaining and storing chemicals, tools and agricultural machinery
- 5.6.2 perform plant and animal management practices safely and in cooperation with others.

Year 10
Agricultural Technology
Plant Nutrition Trial

Name: _____

Score: _____
 Value: _____ / 20%

Outcomes:

RANK

Comment

	5	4	3	2	1	
5.3.3						
5.5.1						
5.5.2						
5.6.1						
5.6.2						
TOTAL:						

Comment:

AIM: To establish a pot culture designed trial to investigate the effects of Phosphorus and Nitrogen on plant growth.

METHOD:

- 4 plastic pots.
- Vermiculite.
- Any Cereal (20/pot) = 80 seeds
- Nutrient Solutions as followed;



i) Solution 1 - Distilled Water (1 litre)

ii) Solution 2- Distilled Water (1 litre)

add ~ 1.0g Calcium Nitrate

~ 0.5g Potassium Chloride

~ 0.5g Magnesium Sulphate

~ 1.0g Potassium Hydrogen Phosphate

~ Trace Ferrous Sulphate

iii) Solution 3 - As for Solution 2, BUT replace Calcium Nitrate with 1.0g Calcium Chloride.

iv) Solution 4; As for Solution 2, BUT leave out Potassium Hydrogen Phosphate.

- Prepare 2 of each of the following labels,

ONE on the POT

ONE on the JAR of solution

SOLUTION POT	CONTENTS	LABEL
1	Distilled Water	NIL
2	ALL Essential Nutrients	COMPLETE
3	NO Nitrogen	- N
4	NO Phosphorus	- P

PROCEDURE:

- Plant 20 seeds in each pot
- water each pot with distilled water to germination
- remove weak seedlings to leave 10 plants in each pot
- keep soil moist by adding 100ml of solution to pots once a week
- observe the plants in each pot at intervals for:
 - ^ Germination %
 - ^ Growth in centimetres, fortnightly basis: 10 weeks+2 weeks establishment
 - ^ Description of plants:
 - Appearance; colour; blade diameter & width of leaves in the tables below

* Establishment date of Trial: _____

RESULTS:

Table 1; Germination Percentages: _____ Date: _____

TREATMENT No.	Germination Percentages						Class Av.
1. Distilled water							
2. Complete							
3. NO Nitrogen							
4. NO phosphorus							

Table 2; Growth of Plants (cm) Week: 2 Date: _____ Averages: _____

TREATMENT No.	Growth Rate (cm)										Group	Class
1. Distilled water												
2. Complete												
3. NO Nitrogen												
4. NO phosphorus												

Table 3; Growth of Plants (cm) Week: 4 Date: _____ Averages: _____

TREATMENT No.	Growth Rate (cm)										Group	Class
1. Distilled water												
2. Complete												
3. NO Nitrogen												
4. NO phosphorus												

Table 4; Growth of Plants (cm) Week: 6 Date: _____ Averages: _____

TREATMENT No.	Growth Rate (cm)										Group	Class
1. Distilled water												
2. Complete												
3. NO Nitrogen												
4. NO phosphorus												

Table 5; Growth of Plants (cm) Week: 8 Date: _____ Averages: _____

TREATMENT No.	Growth Rate (cm)										Group	Class
1. Distilled water												
2. Complete												
3. NO Nitrogen												
4. NO phosphorus												

Table 6; Growth of Plants (cm) Week: 10 Date: _____ Averages:

TREATMENT No.	Growth Rate (cm)										Group	Class
1. Distilled water												
2. Complete												
3. NO Nitrogen												
4. NO phosphorus												

Table 7; Plants Description Week: 2 Date: _____

TREATMENT	Appearance (Colour, Blade Diameter, Width of leaves)
1. Distilled Water	
2. Complete	
3. NO Nitrogen	
4. NO phosphorus	

Table 8; Plants Description Week: 4 Date: _____

TREATMENT	Appearance (Colour, Blade Diameter, Width of leaves)
1. Distilled water	
2. Complete	
3. NO Nitrogen	
4. NO phosphorus	

Table 9; Plants Description Week: 6 Date: _____

TREATMENT	Appearance (Colour, Blade Diameter, Width of leaves)
1. Distilled water	
2. Complete	
3. NO Nitrogen	
4. NO phosphorus	

Table 10; Plants Description Week: 8 Date: _____

TREATMENT	Appearance (Colour, Blade Diameter, Width of leaves)
1. Distilled water	
2. Complete	
3. NO Nitrogen	
4. NO phosphorus	

Table 3; Plants Description

Week: 10 Date: _____

TREATMENT	Appearance (Colour, Blade Diameter, Width of leaves)
1. Distilled water	
2. Complete	
3. NO Nitrogen	
4. NO phosphorus	

DISCUSSION:

** Graph the Average group and Class average results for plant height in centimetres over the duration of the trial.

** Explain your results using the following points in the discussion;

- what are treatments; list the treatments of this trial
- which treatment responded the best and why?
- which treatment should have responded the best and why?
- why use a control in any experimentation process.
- how could you best improve the results of this trail

**RESEARCH:**

The following aspects regarding plant nutrition:

- a) The general importance of plant nutrients for maintaining a healthy and productive plant.
- b) Identify the differences between Major & Minor plant nutrients & distinguish their requirements for Plant Growth & Development. Use specific examples.
- c) Identify the main needs of plants that farmers need to aware of for successful plant production.
- d) If plants are unable to obtain sufficient nutrients from the soil environment, they reflect this by developing various symptoms of deficiency in their overall plant growth.

For the following plant nutrients:

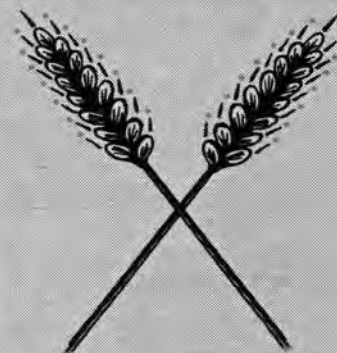
1. Nitrogen
2. Phosphorus
3. Potassium

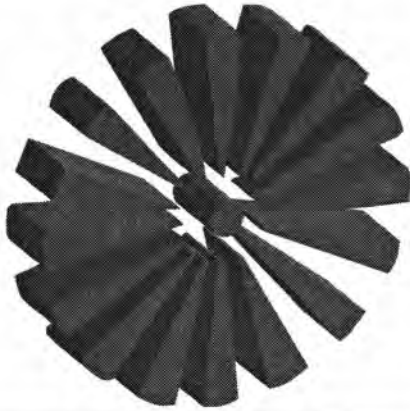
Indicate the plant deficiency symptoms that plants will show if these nutrients are limiting. You may use diagrams & pictures to assist in your discussion.

CONCLUSION:

- Relate the conclusion back to the aims of the trial and the outcome of your results.
- Use examples of the trial results to give depth in the conclusion.

-
- Bibliography required
 - Due Date:

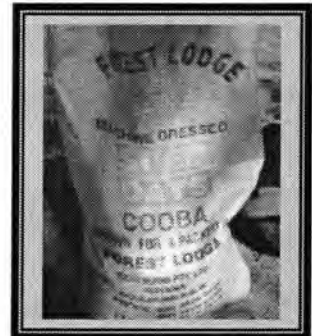




Year 11 Ag

Field Trial

Avena fatua



YEAR 11 AGRICULTURE **FIELD TRIAL**

AIM: To study the effects of topdressing oats in autumn with nitrogen & phosphorus.

THEORY:

Applied nitrogen boosts grasses & suppresses clovers by shading & competition for nutrients. The increase in grass production may more than make up for depleted clover production to the extent that nitrogen topdressing is profitable as a boom effect in autumn provided that extra production is utilised. For nitrogen to give grasses their best response phosphorus must be adequate. Adequate levels of phosphorus will offset clover suppression from grass competition.

OBJECTIVES:

- i. Obtain yield data to determine treatment & main effects of nitrogen & phosphorus at various levels.
- ii. Obtain nitrogen & phosphorus interactions at different levels
- iii. Obtain correlations at different levels
- iv. Obtain correlations between scores & green matter

DESIGN:

2x3(2) Factorial in nitrogen & phosphorus
L single & together
3 levels – 1/2/3

EXPERIMENTAL UNITS:

Plots: 5m x 2m ~ 1/1000 ha

TREATMENTS:

No	N1	N2	N3	Po	P1	P2	P3
0	25g	50g	100g	0	20g	40g	80g

REPLICATION:

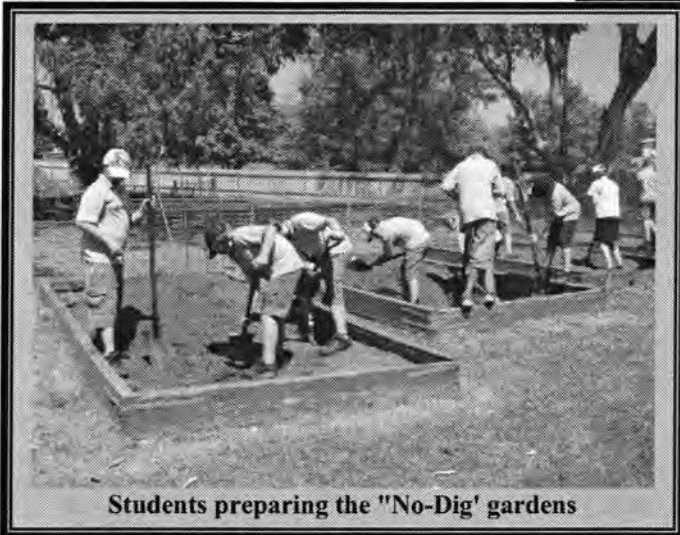
x2



Equipment to establish the field trial. You wish!



permaculture



~ ADVANTAGES ~

- little or no digging
- very little weeding
- minimal watering... hay/compost retain water
- vegetables:
 - mature rapidly &
 - yield plentiful

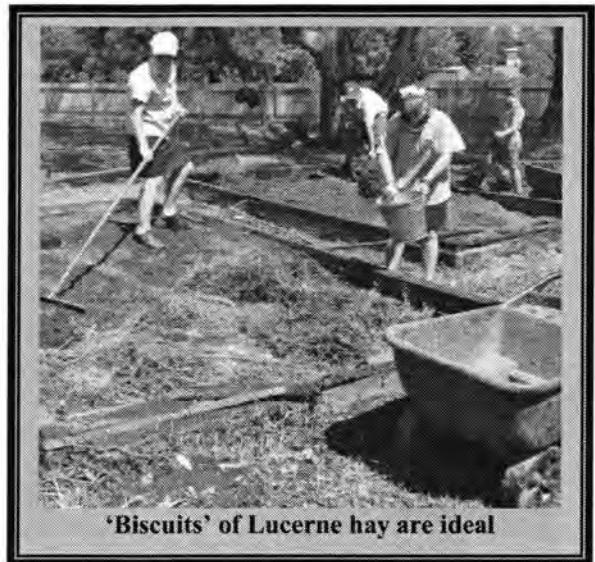
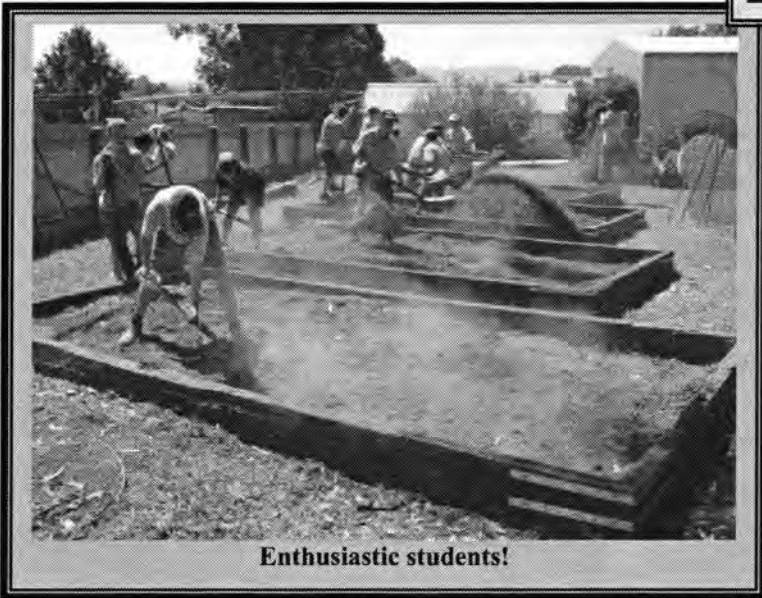
~ PREPARATION & GARDEN DESIGN ~

- 2 x 3 metre area is an ideal garden
- framework: timber or brick
- aspect: face in north – south direction



- Frame Height:
300 - 400mm

- Compost
 - Blood & Bone fertiliser
 - Oaten or Rice or Wheaten straw
 - Blood & Bone fertiliser
 - Lucerne or Pea straw
 - x6 sheets newspaper thick on base of garden



FENCING RESOURCE



Resource

Dale Chadwick
Gundagai
High School
Ph: 02 69441233

~ Thanks to Dale for supplying this great resource which we could use in the teaching of fencing skills to our students in Agriculture & Primary Industries.



Dales Comment

~ I use it for my Primary Industries students to practice their various knots and strainer attachment tie off.

~ There is sufficient tension in the spring to allow a reasonable figure 8 knot.

~ Hope this can be of use to other Ag & PI teachers.

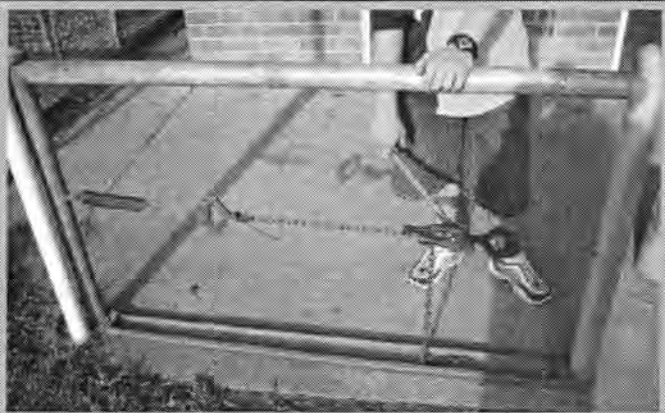
^ The frame is:

- (A) 1600mm long &
- (C) 1000mm high
- (B & E) mostly made of 50mm pipe.

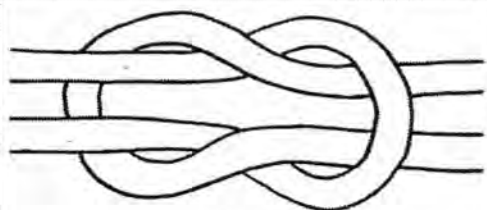
^ (D) The tension spring hook is 600mm from the ground and I used an old car bonnett spring.

^ I need to determine a better way of attaching the spring more securely as when the wire is cut under tension the spring can come off the frame.

^ I also suggest you weld some cross pieces on the bottom to increase stability and with holes drilled through these and the use of tent pegs the frame could be free standing.



Know your ropes



Reef knot

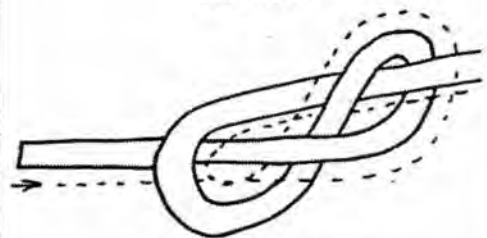
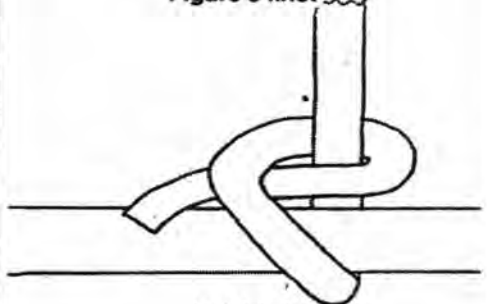
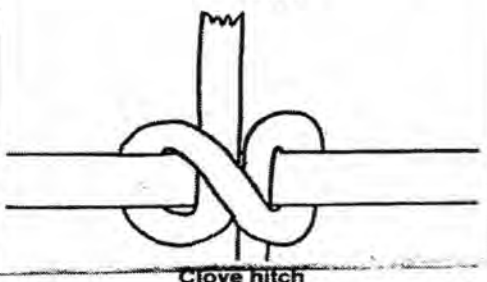


Figure 8 knot



Half hitch



Clove hitch

~ A piece of rope can be a valuable asset in many different situations.

~ Ropes need to be looked after like any tool; so heres so helpful advice about keeping your ropes in good condition.

- Always coil rope & hang it off the ground maintenance.
- If you carry rope around in your vehicle, store it coiled in a chaff or Hessian bag.
- Always keep ropes clean & dry.
- Keep nylon rope away from oil & grease; this weakens the rope.
- Jute & manila rope deteriorates from the inside out, so a seemingly sound rope may be quiet weak.

~ KNOW YOUR KNOTS & HITCHES ~

REEF KNOT:

~ A simple knot for joining ropes or forming loops in the end of a rope. It is easily undone.

FIGURE 8 KNOT:

~ Also used for joining ropes for forming loops.

~ By tracing the path of the knot in one rope in the opposite direction with the other rope.

~ When tied properly this knot won't slip & is easily undone.

HALF HITCH:

~ A simple knot for tying off the fixed end of a rope.

~ Can be doubled for greater security.

CLOVE HITCH:

~ Similar uses to the half hitch, but generally less likely to slip.

~ Can be used in conjunction with a half hitch.

Truckies' hitch

Probably one of the most useful hitches around. It can be used to tie down loads, or can be doubled or tripled to give a block and tackle effect for lifting, pulling or straining.

1. With the rope hanging over the load, run the loose end behind the tie down rail.

2. Pull the loose end of the rope up as shown. Allow loop 'A' to rest on your left wrist. Take hold of the rope at point 'B' with the same hand.

3. Pull your left hand back and up through loop 'A', not letting go of the rope at point 'B', to form the hitch as shown. With your right hand take hold of the rope at point 'C'.

4. Make a double twist at point 'C' with your right hand and push loop 'B' through the twist at point 'C' with your left hand.

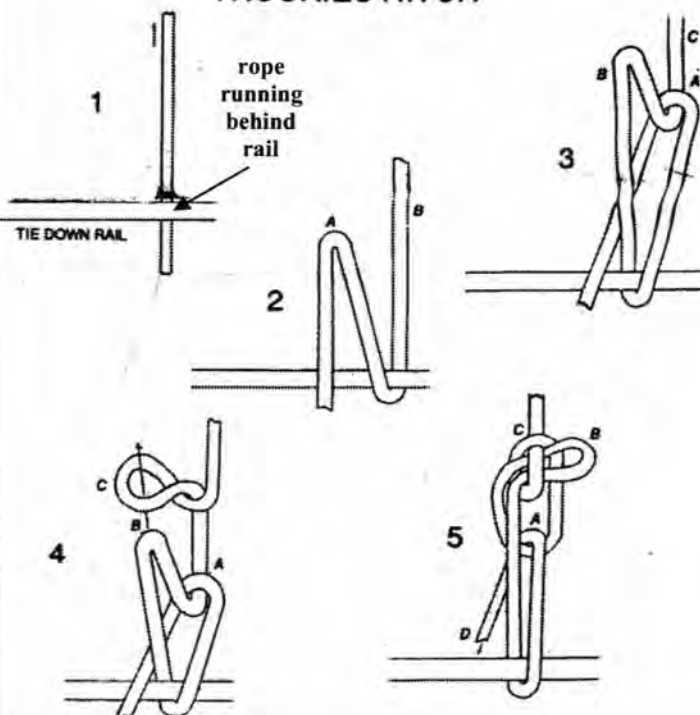
5. Hold loop 'B' with your left hand and pull down on free end 'D' to lock the hitch in place. Secure the free end ('D') to the tie down rail with a clove hitch.

Just a few final tips on knots:

■ Always leave a 'tail' of about a foot when tying off a knot.

■ A knot that looks neat and avoids sharp bends in the rope is usually a strong knot.

TRUCKIES HITCH





The Association thanks the following organisations for their support with the 2006 conference

NEW SOUTH WALES
DEPARTMENT
OF EDUCATION
AND TRAINING



CHARLES STURT
UNIVERSITY



NSW DEPARTMENT OF
PRIMARY INDUSTRIES

BATLOW
apples

RUSSELL
STEVENSONS
TUMUT

Mensland

Cargill
Beef
Australia

CHARLES STURT
UNIVERSITY

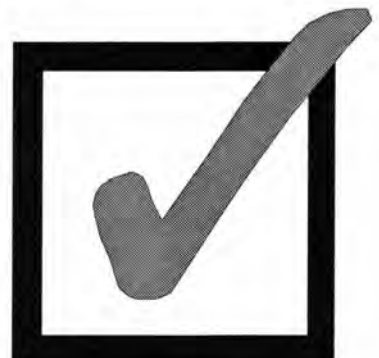


NSW DEPARTMENT OF
PRIMARY INDUSTRIES

E H GRAHAM CENTRE for
AGRICULTURAL INNOVATION

REMINDER
TO PAY:

2006-2007
MEMBERSHIP





Harvester & Forwarder working as a team

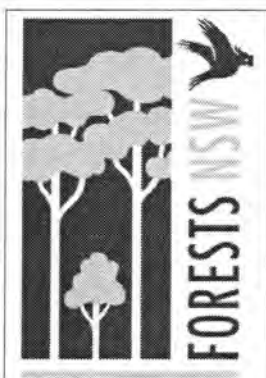
^ It is disturbing that at least one child dies every fortnight on farms in accidents that could have been prevented in many cases.

^ 600 children are hospitalised from farm accidents every year

^ Tractors are the most dangerous piece of machinery and are the main cause of deaths of children on farms

^ Drowning is the main cause of death to toddlers in the country. Other safety concerns include farm animals, bikes and more recently ATVs & equipment.

Section 10
sponsored
by:



10

PROFESSIONAL DEVELOPMENT

^ Batlow Fruit Co-Operative Ltd

*“From Humble Beginnings To
Industry Leaders”*

.....Ron Gordon



^ Weeds CRC

Latest Education Resources



BATLOW FRUIT CO-OPERATIVE LTD FROM HUMBLE BEGINNINGS TO INDUSTRY LEADER



By
Ron Gordon
Field Services Manager



History

~ Batlow Fruit Co-operative Ltd evolved from The Batlow Packing House Co-operative Limited established in 1923. The Co-operative was actively involved in the; packing of fruit for an emerging apple and pear industry; cool stores; vegetable growing; canning of vegetables and production of sparkling juice products under the famous "Mountain Maid" famous for flavour brand.

~ Today, Batlow Fruit Co-operative Ltd represents around 40 orchard enterprises and provides, cool storage, packing, shipping, marketing facilities and production technology services to grower shareholders. Recently, the Co-operative has returned to the production sector of the business with the lease of an orchard.



Figure A: The famous Batlow Apple brand

~ Shareholders pack under the brand "Batlow Apples", which is the cornerstone of the success of the Batlow apple industry.

~ The success of this brand and position it holds in the market place has enticed producers from other apple production areas within Australia, to establish some if not all their production in the Batlow region to capitalise on the reputation of Batlow apples and compete with the famous "Batlow Apple" brand.

Climate advantage

~ The Batlow climate, with an elevation of 800 to 1000 metres above sea level provides the mild autumn temperatures, which provides superior fruit colour development and storage life. The high average annual rainfall of around 1300mm ensures the need for only a supplementary irrigation regime, all of which has provided a distinct competitive advantage relative to other warmer production districts.

Adoption of new technology

~ One of the key ingredients of the success of Batlow Fruit Co-operative has been the adoption of new technology, especially in storage and packing technologies. The Co-operative structure, enabled growers to pool their resources to build common storage and packing facilities rather than have individual growers commit capital to under utilised storage and packing facilities on their own orchards. This structure enabled the development of a single brand, and removed local market competition further enhancing market returns relative to individual family owned packing and storage facilities, common in other districts.

~ The co-operative structure enabled adoption of new technologies as they emerged and Batlow Fruit Co-operative was the first in Australia to adopt controlled atmosphere (CA) storage. CA storage is used to extend the storage and shelf life of apples for up to nine months, which enable the local growers to supply the market with superior quality apples at a time when other districts either did not have supplies or the fruit was suffering from over storage and poor quality.



Figure B: State of the art apple blemish sorter:
the first installation in the southern hemisphere.

~ CA storage involves the modification of air (21% oxygen, 78% nitrogen and 0.3 % carbon dioxide) to atmospheres of around 2% oxygen, and 1 to 2 % carbon dioxide with the balance nitrogen. The composition of the CA atmospheres and storage temperatures varies between varieties. At first, controlled atmospheres were established by the burning of the oxygen as room air was circulated through an external propane burner apparatus. Today, nitrogen generators, where nitrogen is generated and flushed into the rooms to displace the oxygen to the desired level, have largely replaced this technology.

~ Batlow, buoyed with the success of CA storage were once again the first to exploit the marketing advantages of the waxing of apples and furthermore the adoption of fruit stickers which developed consumer brand loyalty. These technologies gave a powerful marketing advantage over other production districts most of which were stuck in family owned business structures and unable to take advantage of the new expensive technologies.

~ This demonstrates how powerful a business structure co-operatives can be, provided there is a will by like minded producers to work together for a common cause and gain by the economies of scale in the adoption of technologies and marketing clout afforded by cooperative effort.



Introduction of new varieties

~ During the early 1980's the introduction of the highly coloured strains of Red Delicious were introduced, and again were quickly adopted by the local industry continuing the dominance by Batlow in the market place.

~ However, these naturally redder clones of Red Delicious also enabled competitor districts the opportunity to compete with the Batlow juggernaut. But it was the introduction of the new varieties, in particular the New Zealand developed Gala and Braeburn varieties, which were taking international markets by storm and the later introduction of Japanese Fuji and the Australian bred Pink Lady varieties which really challenged red delicious and the future success of the Batlow industry.

~ These new varieties with their superior flavour and eating quality were a refreshing alternative to the old staples of Red Delicious, Golden Delicious, Jonathan and Granny Smith and were being planted extensively in Europe and North America. No longer do consumers have to put up with an often-mealy Red Delicious with its short shelf life late in the storage season.

~ All the while, consumers were being bombarded with extensively advertised manufactured snack foods, which are in direct competition with apples for the consumer dollar. This led to the rapid demise of the demand for the highly red and visually appealing red delicious variety throughout world markets – the same occurred in Australia.

New orchard production systems

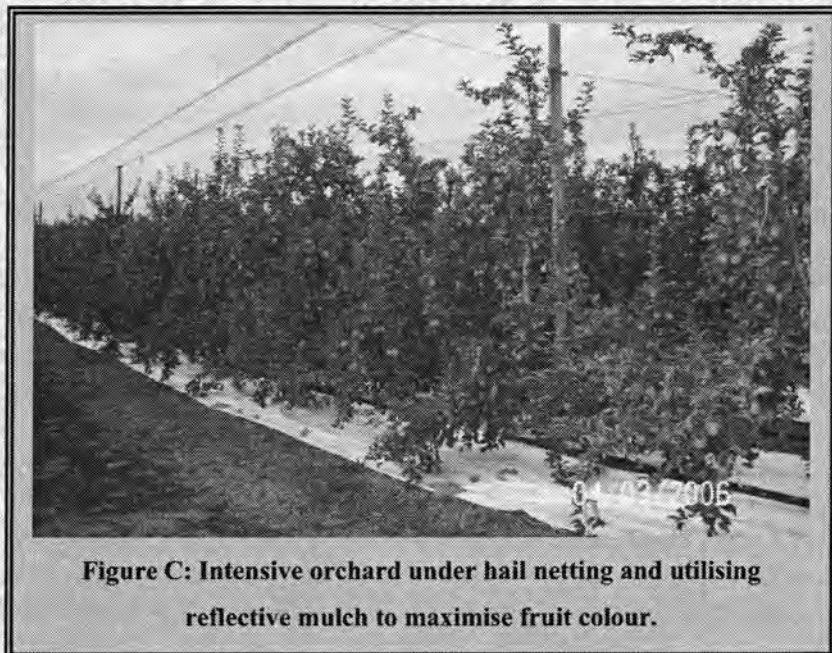


Figure C: Intensive orchard under hail netting and utilising reflective mulch to maximise fruit colour.

~ With the wholesale adoption of the new better tasting varieties came the adoption of new intensive production systems. Developed in Europe, the intensive production systems utilized dwarfing rootstocks to keep the tree size small and trellises to support the tree and crop.

~ These systems were much more expensive to establish with tree densities of up to five times the traditional free standing orchards and the necessity for tree support in trellis structures.

~ The benefits provided by the new systems were quicker production, better fruit quality and lower labour costs.

~ These new varieties and intensive production systems were quickly adopted by competitor districts, while the Batlow industry tended to rest on past successes of red delicious, which is still a significant but rapidly declining percentage of the Australian apple fresh market and traditional planting systems.

The ever changing market environment

~ Overlying this complex apple industry environment has emerged the dominance of the retail sector by supermarkets. The power of supermarkets in the grocery and fresh produce industry has and continues to be a major threat to the profitability of the industry.

~ The threat of fresh apple imports into the domestic market has added another dimension to the market environment. A number of attempts by the New Zealand industry to gain access to the Australian apple market have failed to gain approval by Australian quarantine authority, Biosecurity Australia, due mainly to the presence in New Zealand and the absence of the bacterial disease Fire Blight in Australia. Applications to export fresh apples from USA, China and Chile have also been submitted to Biosecurity Australia for consideration.

The Batlow fight back

~ True to its history of innovation and adoption of new technology, the Batlow Industry is once again clawing to the top by the recent foray into the latest grading technologies. A major infrastructure upgrade, including the adoption of blemish sorting technology, which is at its infant stage for apple sorting, has been installed at Batlow Fruit Co-operative Ltd. The upgrade is expected to improve packing efficiencies by up to fifty percent and is the first of its kind in the Southern Hemisphere.

~ The recent development of a new storage treatment 1- MCP, marketed as SmartFresh® has also emerged on the scene and extensive trials by Batlow Fruit Co-operative research staff over the past three seasons has again placed Batlow Apples in a distinct market leader position.

~ SmartFresh® is a storage treatment applied to the apples immediately following harvest and inhibits ripening by escaping the effects of ethylene on fruit ripening providing the apple with longer storage and shelf life potential. This has the potential to deliver major savings on waste at the retail level and guarantee a consistent crunchy, sweet and juicy apple with a shelf life to provide the consumer a pleasant eating experience, weeks after purchase.



Figure D: Staff packing apple trays into cartons on the production line.



Figure E: Hail netting is used widely in the Batlow district to protect the apple trees.

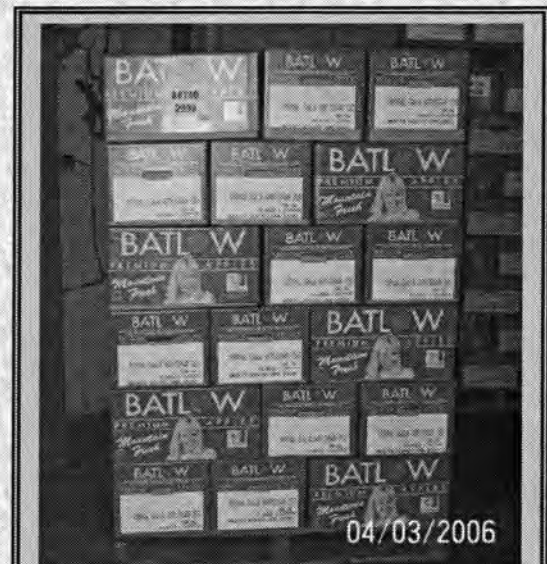


Figure F: Another pallet of Batlow Apples ready for market.

Conclusion

~ Batlow Fruit Co-operative has a long history of success. The co-operative is the largest single apple storage and packing facility in Australia and has the most consumer recognisable horticultural brand in Australia.

~ The future of the co-operative, lies with its continuing adoption of new technologies, focus on consumer demands and adapting to the ever changing business environment to compete with the possible introduction of imported product on the domestic market.

The Association is grateful to Ron for preparing this report on the Batlow Apple.

Education news

Weeds CRC education and training:

April 2006



Update April 2006

Task 5.1: tertiary education resources

Environmental weeds of Australia CD-ROM

The success of the interactive CD-ROM *Crop Weeds of Australia: an identification and information system* has provided an opportunity to begin production on a similar key for environmental weeds. The new key will also be based on the electronic Lucid key identification system. Dr Sheldon Navie hopes to have a prototype available at the end of this year. The key will combine images and text descriptions, a tutorial and weed factsheets for all the environmental weed species included on the CD-ROM.

Further information:

Sheldon Navie, Education Research Officer, Weeds CRC, UQ, Brisbane, Qld.
E s.navie@uq.edu.au

Task 5.2: vocational education and training (VET) resources

WeedEd award nomination

WeedEd is the name that has been given to the Weeds CRC's education and training resources. The program has been nominated for a 2006 Australian CRC Association award in the category of innovations in Education and Training and Public Outreach Activities (winners announced May 18). Thank you to the RTOs

Program 5: Education

Task 5.1: Educate the next generation of weed researchers and managers.

around Australia who wrote letters to accompany the submission.

New training manual for IWM in cropping systems

A new training manual, *Integrated Weed Management in Australian cropping systems*, is nearing completion. This comprehensive publication has been a collaborative effort between Weeds CRC staff from the cropping, community empowerment and education programs and other major contributors located in

Task 5.2: Develop the skills of weed professionals (Vocational Education and Training sector).

Task 5.3: Increase weed awareness of primary and secondary students.

NSW, Western Australia, Queensland and South Australia.

The draft manual has evolved into a user-friendly, industry-focused resource, with key messages conveyed in a positive, action-oriented manner. Agricultural consultant, John Cameron, has developed a training workshop using the IWM manual as a supporting resource. Participants who successfully complete the course are given a statement of attainment for the diploma level units RTC5801A *Promote specialist advice to clients* and RTE5006A *Plan and manage long term weed, pest and/or disease control in crops*.

The following sections of the IWM Manual are available as working drafts on the website. These sections are yet to be processed through design and layout:

- Table of Contents;
- Section 1: Agronomy to enhance the implementation and benefits of tactics;
- Section 3: Profiles of common weeds in cropping; and
- Section 4: Herbicide resistance.

Section 2 (Tactics) and Section 5 (Developing a weed management



A working draft of the new manual *Integrated Weed Management in Australian cropping systems* is now available on the website.

program using Tactic Groups) will be available in draft form by the end of May. Section 6 (Case study factsheets) will also become available on the website. The completed manual will be published in full in the latter half of 2006.

New website factsheets

- *Weed management: collecting blackberry specimens for identification.*
- *Release of biological control agents: additional strains of leaf-rust fungus to control blackberry.*
- *Under pressure: Australian flora and fauna threatened by invasive plants.*
- *Weed eradication program: cabomba in Marlow lagoon, NT.*

A new section on the factsheet web page provides information on weeds with respect to gardening and biodiversity.

Factsheets in the pipeline

- *On farm solutions: IWM and Tactic Groups* (a series of case studies from around Australia that look at how

various integrated weed management tactics are used in cropping rotations - part of the soon to be released training manual, *Integrated Weed Management for Australian cropping systems*).

- *Managing weed risks: prioritising weed control in national parks in Central Australia.*
- *Weed management: help sheet for using the blackberry CD-ROM.*
- *A community approach: managing weeds on a catchment scale (Sixth Creek Catchment).*

Training resources in the pipeline

There are a number of new training resources currently being written for use in the Weed Spotters program. These training resources will be slightly modified for more broad use in the VET sector. Topics for these resources include:

- *Collecting, preparing and preserving difficult plants* (eg succulents, aquatics etc); and
- *Weed recognition manual* (to assist

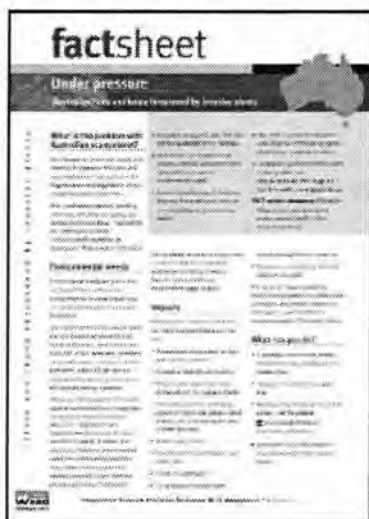
with weed identification and plant description).

Blackberry workshops

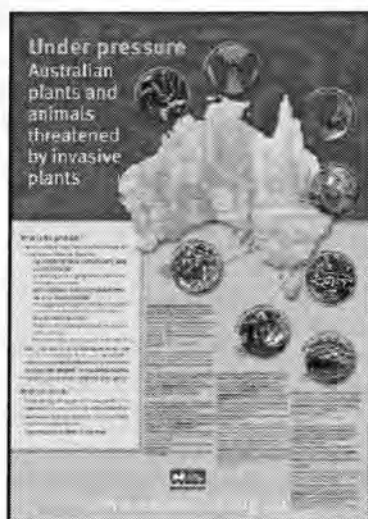
The Weeds CRC with the support of Dow AgroSciences conducted a series of workshops to enhance weed professionals knowledge of *Rubus* species. In Australia the *Rubus fruticosus* agg. (blackberry) is one of the twenty *Weeds of National Significance*.

The **main objectives** of the workshops were:

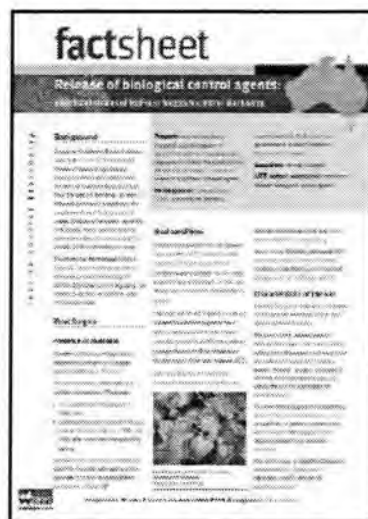
- to develop participants skills in identifying blackberry species by using the Lucid key "Blackberry - An identification tool to introduced and native *Rubus* in Australia" by Robyn and Bill Barker.
- to improve the ability of weed professionals to link the variation in efficacy of herbicides and rust in control, to the species of blackberry.
- to encourage weed professionals to send verifiable samples to the herbaria to enhance knowledge of the range of species in various localities around Australia.



A new factsheet, *Under pressure: Australian flora and fauna species under threat by invasive plants* is available from the website.



Order your poster *Australian plants and animals threatened by invasive plants* from the Weeds CRC head office in Adelaide.



There are new factsheets relating to blackberry on the website. They have been used in the recent blackberry identification workshops.



Participants, Reece Luxton and Bill Jordan, identifying blackberry using the Lucid key.
Photo: Annette Beer

Pilot workshops were conducted in NSW and attracted 67 participants from Councils, Catchment Management Authorities, CSIRO, Department of Environment and Conservation (National Parks) and some other government and non-government representatives.

Participants worked with fresh and preserved samples, in a 'hands on' manner, using the Lucid key to distinguish key botanical features of the blackberry samples to enable identification to species level.

The range of species collected by participants from their local area even surprised Dr John Hosking, a botanist and blackberry specialist with NSW Department of Primary Industries.

Anecdotal evidence suggests that some species react differently to herbicides and are more difficult to kill.

Participants shared their knowledge of the differences in effect of herbicides and rust. The workshop gave participants the skills to recognise differences in species, including natives, so they can utilise knowledge of this variation in better planning and monitoring of control programs.

An evaluation of the workshops showed that 98% of participants would recommend the course to other weed professionals.

Future workshops can be conducted nationally on request.

Further information:

Annette Beer, Education Officer,
Weeds CRC, (NSW DPI, Wagga Wagga)
E annette.beer@dpi.nsw.gov.au
T 02 6938 1671

Staff changes

Dr Annabel Bowcher, VET Education Officer, based at NSW DPI Wagga Wagga, will finish working with the Weeds CRC in June this year. She began writing VET resources for the Weeds CRC in 2002. The WeedED resources form a significant part of the 200 publications that are now available from the Weeds CRC. Annabel has spent almost 10 years with the Weeds CRC (as a PhD research student, communications officer and education officer) and has thoroughly enjoyed her time in the 'world of weeds'. Annabel leaves to further pursue her passion for producing excellence in extension resources but will also spend more time 'educating' her own little weed warrior!!

Annette Beer, who commenced working as a full-time Education Officer with the Weeds CRC in August 2005, will be the key contact for VET sector resources.

Program 5.3: schools resources.

'Ghastly Guests'

In 2005, 32 upper primary teachers nationwide were involved in the limited release of Ghastly Guests unit of work. Extremely positive teacher feedback followed. Teachers explained the unit was easy to use, suited a range of ability levels and they enjoyed the activities which covered many different

learning areas. Every teacher involved in the limited release indicated they will continue to use the unit in their future teaching!

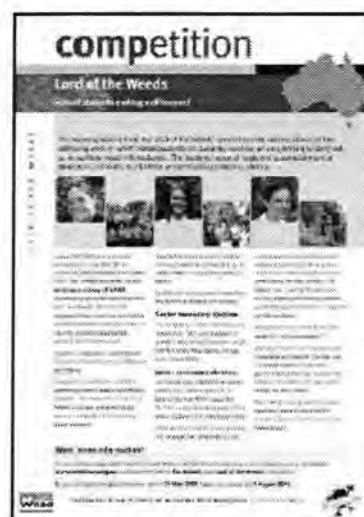
The unit has been further improved with the suggestions from teachers and the inclusion of weeds from more areas across Australia. The unit is available from our website and 200 will be distributed as hard copies. The 200 copies are now available free of charge to interested upper primary teachers who contact Susanna Greig.

'Lord of the Weeds' competition

In 2004 and 2005 the 'Lord of the Weeds' was a great success. With the additional financial support offered by the state weed societies, the total prize money the competition will offer to the winning schools has grown considerably and it seems 2006 is going to be even bigger and better for those Lords of the Weeds. Registration for 2006 is due by the 24 May 2006.

On the horizon

Susanna is currently investigating the types of weed resources that would



Visit the 'for schools' section of the website to find out more about the Lord of the Weeds.

be most useful to **senior secondary** teachers. The new Victorian agriculture and horticulture study guide is of particular interest as it includes the study of weeds and weed management. In addition a survey is currently underway focusing on NSW agriculture teachers. This survey is being conducted to determine the extent to which weeds and weed management is taught in senior secondary agriculture in NSW and to support this by determining the most helpful resources.

Plans are developing for a resource for **lower primary** teachers. Following market research conducted with lower primary teachers, Susanna is investigating the development of a big book story / information book based on weeds.

Further information:

Susanna Greig, Education Officer,
(UNE, Armidale, NSW).

E susanna.greig@une.edu.au

Community links: Weed Warriors program expands

Background

The Weed Warriors program is accessible to all levels of education. It uses biological control as the vehicle to introduce weed teaching and learning opportunities into the curriculum.

The program bridges the gap between research and research users and is able to empower and engage the wider community. Weed Warriors, through a series of practical hands-on experiences centred around biological control helps program participants develop a commitment to and responsibility for local environmental issues that is critical to bringing about lasting change.

A strength of the program is the establishment of mentor student relationships, linking educational institutions with key stakeholders in environmental management in their local area.

The mentor component of the program is important in creating a meaningful experience for all participants and as a tool to transfer ownership of the program to local people. Mentors also help to engage the students in the on-going monitoring of the biological control release site, helping them to determine the impact of their biological control agents over time.

Funding success

In 2005 the national Weed Warriors program was successful in its bid for funding through the national competitive component of the Natural Heritage Trust.

The funding is for a period of three years and will be used to employ part time Weed Warriors coordinators in Victoria, South Australia, Queensland and New South Wales.

State coordinators

The state coordinators will help to build on the existing Weed Warriors model and guide the delivery and consolidation of the program in each of the four states.

Position descriptions for the new state coordinators in New South Wales and Queensland have been prepared in conjunction with the relevant state agency and will be advertised early in 2006. Victoria and South Australia will utilise the funding to expand the roles of their existing coordinators.

Website

A Weed Warriors website is in development. When completed the website address will be www.weedwarriors.net.au.

Toolkit

The Weed Warriors Planning Toolbox and Starter Kit, the step by step guide on how to conduct the program, have been reviewed and redesigned to align with other Weeds CRC education resources.

Participants

The Weed Warriors program has continued to grow in Victoria and South Australia, and has made its way into parts of New South Wales and Queensland. In 2005 a total of 102 schools participated in the program with 30 weed management stakeholders involved in its delivery at the local level.

Schools participating in Weed Warriors (2005)

NSW	8
SA	46
Vic	48

Weed management stakeholders involved with delivery (2005)

NSW	3
SA	7
Vic	20

Further information

Kate McArthur, National Weed Warriors Coordinator, (DSE, Melbourne, Vic).

E Kate.McArthur@dse.vic.gov.au

Bushland Friendly Gardens Website

Bushland-friendly gardens is an initiative of the Weeds CRC. We hope to provide a central location on the internet to help you make more informed, environmentally friendly choices about the plants you use in your garden, nursery or parkland.

In Australia there are around 3,000 non-local plants that have 'escaped' from gardens and are finding new homes in native bushland. Many of these plants have no natural enemies in Australia. This can mean that they are able to grow and spread very rapidly, out-competing native plants for space, light, water and nutrients – just like weeds in your garden. In time, this can result in fewer native plant species and less natural food and shelter for our native animals such as possums, butterflies and birds.

From beauties to beasts

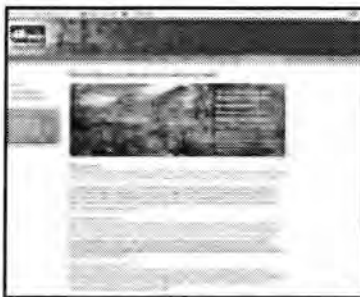
When plants have these negative impacts on our flora and fauna we call them 'weeds' or 'invasive plants'. As these plants are affecting the natural environment negatively, we call them 'environmental weeds'. They may be introduced by accident – with seeds or plant pieces spread around the countryside by animals, birds, humans, cars or boats. They may be intentionally be introduced by people when they dump garden or aquarium waste, or by

those who actually encourage the spread of plants from their gardens into the bush in the mistaken belief that they can do no harm. It is crucial to realise that those beautiful plants from your garden can become a serious problem to our natural environment when they make their homes there.

How you can stop the spread

We hope to help stop this spread of non-local plants from gardens into bushland by highlighting on this website the plants that are most likely to cause problems to the animals and plants in native bushland in your region. Where available we have also provided links to further information on the background and control of the 'weedy' plants as well as websites that give information on alternative plant choices.

By choosing garden plants wisely we can help our native flora and fauna survive for future generations to enjoy.



Visit the bushland friendly gardens website to learn more about plants to avoid in your region: www.weeds.crc.org.au/bushlandfriendlygardens

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~ The Association wishes Annabel all the best in her future endeavours.

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E crweeds@adelaide.edu.au

Information compiled by: Dr Annabel Bowcher,
Education Officer Task 5.2, Weeds CRC, (NSW DPI
Wagga Wagga, NSW).



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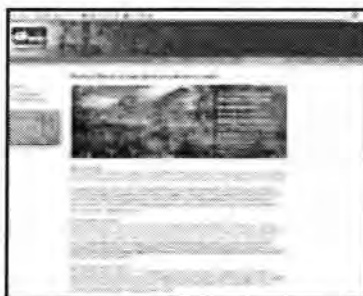
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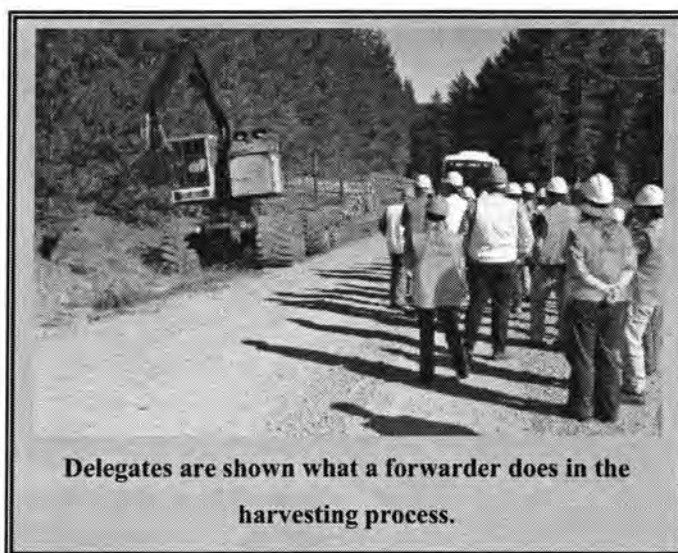


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Delegates are shown what a forwarder does in the harvesting process.

11

AGRICULTURE & P.I. **In the RIVERINA**

^ The NSW Government will set up a \$105 million Riverbank fund to buy water for environment flows to help restore the health of "icon" wetlands and inland rivers.

^ The government will also set aside \$13 million for the voluntary purchase of high conservation value perpetual Crown leases to add to the national park system where practical.

^ Riverina PI Networking

- Yanco Agricultural High School: October 2005

^ Year 11 Agriculture

- Farm Case Study

^ Royal National Capital Agricultural Society

- Junior Judging Education Day for Schools

Section 11 supported by:



NETWORKING

in the

RIVERINA

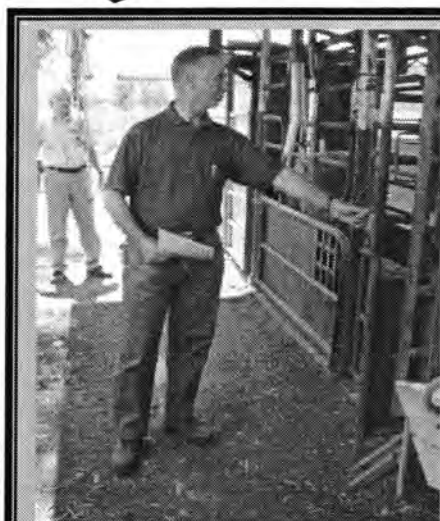
PRIMARY INDUSTRIES

YANCO

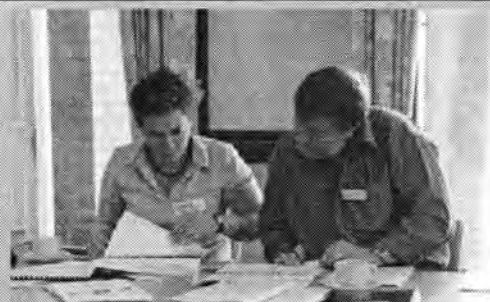
AGRICULTURAL
HIGH SCHOOL



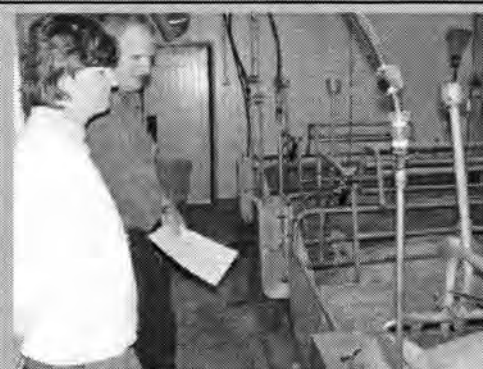
Regular networking
days are valuable for
resource sharing &
networking



David Turner (James Fallon High)



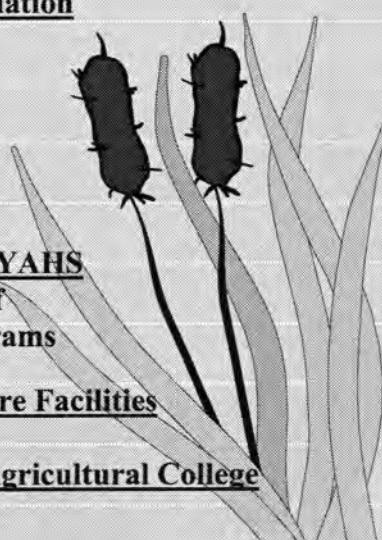
Simone Wilson (YAHS) & Graeme
Anderson (TAFE NSW) checking
YAHS PI programs



Robyn O'Leary (Finley High) &
Al McMillan (Wagga Wagga High)
checking out the piggery at YAHS

~ AGENDA ~

- i. SMARTtrain AQF 3
Chemical application training for students
Graeme Anderson TAFE NSW
- ii. Assessment Validation
 - Weighing/
 - Muscle/
 - Fat scoringof beef cattle
- iii. Computer Lab: YAHS
 - Resourcing of
PI programs
- iv. YAHS Agriculture Facilities
- v. Murrumbidgee Agricultural College
 - Resources



John Hunt (Gundagai High);
Al McMillan (Wagga Wagga High) &
David Johnson (James Fallon High)



Graeme Anderson (TAFE NSW)
a casual observer!



Aaron Flagg (Griffith High)
investigating the dentition of
this Yanco steer



Robert Cain (Hay Memorial High)
referring to the fat & muscle
score charts



**Robyn O'Leary (Finley High) & Alex Koch
(Billabong High)** checking the fat score of
this steer



Assessment validation! A lot of spectators!



**Greg Fulljames (YAHS) & Aaron Flagg
(Griffith High)** some serious observations!



**Peter Humphries (Deniliquin High)
& Robyn O'Leary (Finley High)**
discussing proceedings

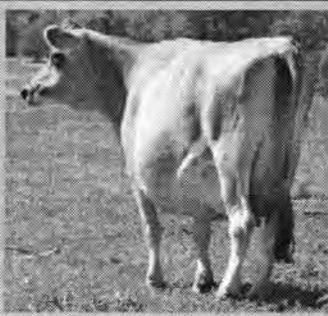


Simone Wilson (YAHS) discussing facilities at
Yanco Ag

YEAR 11 AGRICULTURE FARM CASE STUDY



MDP supply students with milk products



Water quality testing
on the farm



Immaculate calf shed



pH testing of farm water



Water quality testing of 'Thurgoona's' dams

FARM STUDY:

- Students investigate:
 - physical aspects
 - farm plans
 - climatic data
 - topography
 - enterprise mix
 - water quality
- testing of:
dams/creek/bore water.

CASE STUDY FARM

- Dairy Stud in S.W.Slopes "Thurgoona Stud"
- 4 sisters have managed this dairy for over 50 years.
- A property that is admired throughout the district for its management operations.
- This is a 587ha property with 150 Jersey & 450 Angus cattle.
- 75% of "Thurgoona Stud" is devoted to beef cattle.
- 80% of the property is sown to a variety of improved pasture species.
- Reliable rainfall & good loam soils are features of this property.



Morning tea provided to the students



SCHOOLS WORKSHOP

Presented by



The Royal National Capital Agricultural Society

**BEEF CATTLE, POULTRY,
ALPACA, SHEEP & GOAT**

WEDNESDAY 24 AUGUST 2005



DEMONSTRATION OF JUDGING:

What a judge looks for & how they look

EXPLANATION OF JUNIOR JUDGING SYSTEM

Point scoring, animal comparison & interactive discussions

FUNDAMENTALS ON CATTLE, SHEEP, POULTRY, GOAT & ALPACA STRUCTURE

Skeleton, where the bones are placed, overall conformation

BASIC CATTLE, SHEEP, POULTRY, GOAT & ALPACA SKILLS & TECHNIQUES

The do's & don'ts of exhibiting animals

OPEN QUESTION TIME

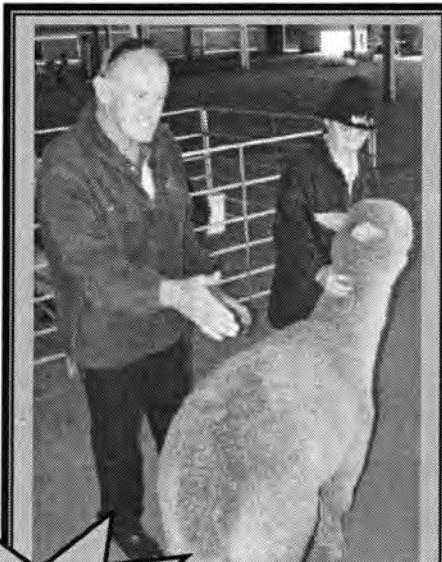
Time for general questions

**P
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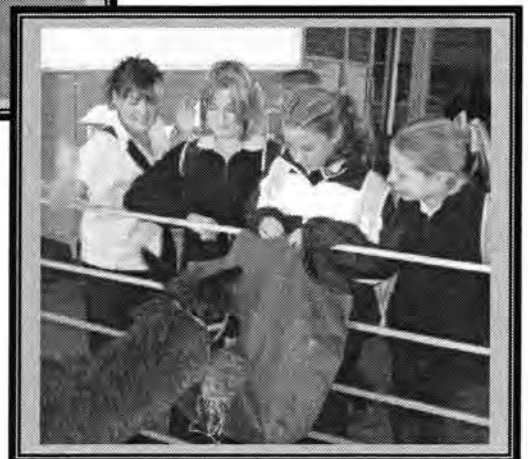
175 students from 10 schools from across the southern region of NSW attended this Education Day.

The Royal Canberra Show Society has organised these Education Days for the last five years.

Schools in this region have indicated to organisers the type of program required in demonstrating skills needed for showing livestock as a prelude to the Royal Canberra Show in 2006



*Kaleen High
Alfred Deakin High*

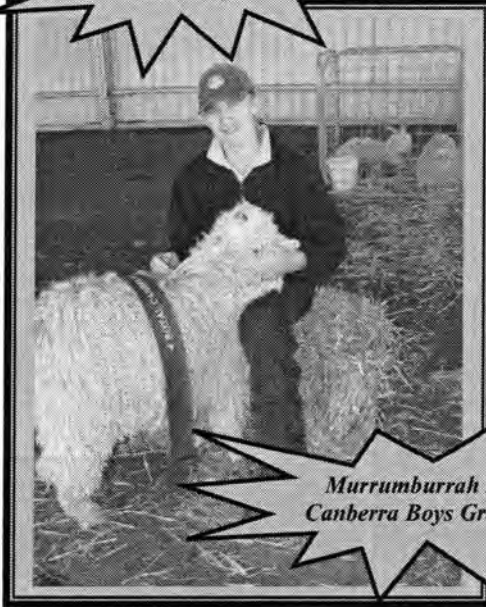




Koorinal High
Lyneham High



Ginninderra High
Tumut High



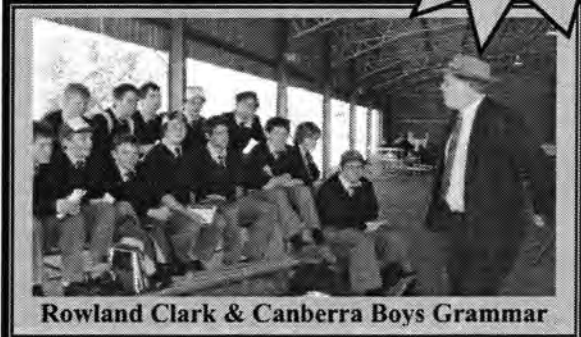
Murrumburrah High
Canberra Boys Grammar



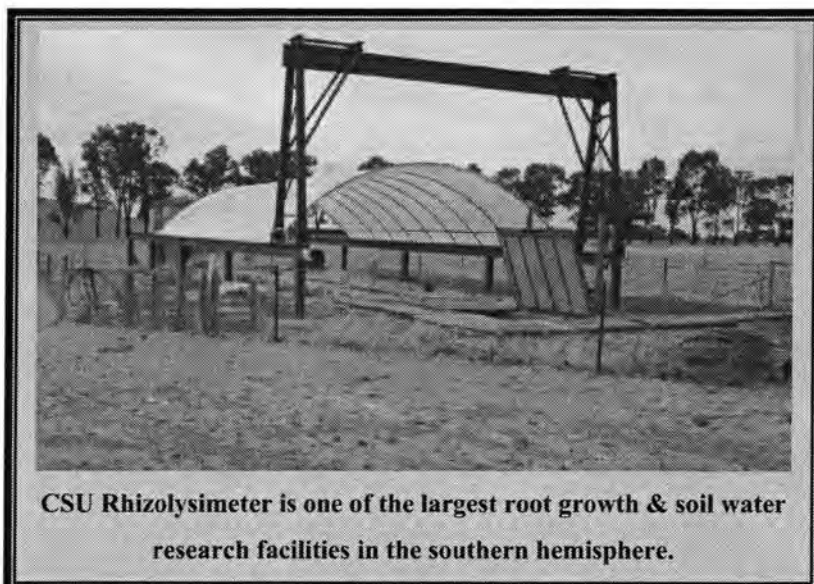
Wagga High
Copeland College



The correct technique for
holding ducks



Rowland Clark & Canberra Boys Grammar



CSU Rhizolysimeter is one of the largest root growth & soil water research facilities in the southern hemisphere.

12 Conference Resources

- ^ "Agriculture Today"
Conference Special Offer
- ^ "The Farmers Mailbox"
Agricultural Items Catalogue
- ^ "Live Cattle Appraisal Competency"
NSW Department of Primary Industries
- ^ "Stage 6 Examination Resource"
- ^ "Riverina Environmental Education Centre"
Keith Collin
- ^ "Stubble Star" NSW DPI
- ^ "Farm Safe Bike Competition"
- ^ "Hydro-Masta" Hydroponics' resource
- ^ "Australian National Field Days"
- ^ Conference Ag. Workshop Practicals
Dr John Harper
- ^ "Beef Cattle Live Assessment"
Tony Butler

^ **Crookwell chook claims egg record:**
^ A farmer from Crookwell is the owner of a chook that has the title of the record for Australia's heaviest egg of 145grams.

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AGRICULTURAL INNOVATION





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Agricultural areas.
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invaluable industry insight into our key rural sectors as well as easy to read,
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~ Contains a squillion of Ag items that you may require for your school farm.

~ In some way replaces the Q store booklet for Ag items.



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Pack & Post

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**NSW DEPARTMENT OF
PRIMARY INDUSTRIES**

**Competency
Standards
provided by
NSWDPI at the
Cargill Beef Life
Cattle Assessment**

Live Cattle Appraisal competency

COMPETENCY STANDARDS

Competency based assessment involves making judgements about performance against a set of criteria.

LIVE CATTLE APPRAISAL

Conditions of Assessment

The assessee will be required to submit a hand written sheet detailing their assessment of live animals for the following criteria; live weight (kg), estimated dressing percentage (% of live weight), Hot Standard Carcase Weight (kg), p8 fat (mm) and Live Muscle Score (A to E range).

Materials

Calculator, notes and writing equipment may be used to complete the assessment task.

Assessment tasks

In order to apply for competency in 'Live Cattle Appraisal', the assessee will be allowed to complete a follow-up assessment within a period of 3 months of advice of results. Upon successfully meeting competency criteria an award will be granted.

COMPETENCY STANDARDS

Competency is assessed as having completed a live assessment using the following standards for 'Live Animal Assessment Criteria' achieving greater than "average" accuracy level for all criteria; live weight, dressing percentage, carcase weight, fat and live muscle score.

Live Animal Assessment Criteria

Live weight

Estimate (kg)	Actual (kg)	Variance (+- kg)	% Variance
?	Weigh scales	Estimate - actual	(Variance/Actual)*100

Dressing Percentage

Estimate (%)	Actual (%)	Variance (%)
?	(HSCW/Live weight)*100	Estimate - actual

Carcase Weight

Estimate (kg)	Actual (kg)	Variance (+- kg)	% Variance
?	Processor measure	Estimate - actual	(Variance/Actual)*100

Fat (p8 rump site)

Estimate (mm)	Actual (mm)	Variance (+- mm)
?	Processor measure	Estimate - actual

Live Muscle Score (A+ - E=15 point scale)

Estimate (LMS,+/- option)	Actual (LMS)	Variance (LMS)
?	Assessor benchmark score	Estimate - actual

Live Cattle Appraisal competency


**NSW DEPARTMENT OF
PRIMARY INDUSTRIES**
ACCURACY LEVELS

Accuracy or performance levels are an indication of the level of accuracy for each of the competency tasks. They indicate to the assessee the level of performance and possible areas for improvement. It should be noted they are not a test result and are quite separate to the key task – achieving competency.

Accuracy Levels

Level	Liveweight (kg)		Dressing %	Carcase Weight (kg)	Fat p8 (mm)		Muscle Score * (see below)
	Cows	Others			Fat depth (mm)	+/-	
<i>Very Good</i>	<5%	<3%	< 1%	< 4	0-2	0	Same Score
					3-6	1	
					7-12	2	
					13-22	4	
					23+	7	
<i>Good</i>	5-8%	3-5%	1 – 2%	4 – 8	0-2	1	+/- 1 score
					3-6	2	
					7-12	3	
					13-22	6	
					23+	8	
<i>Average</i>	8-	5-7%	2 – 3%	8 - 12	0-2	2	+/- 2 scores
					3-6	3	
					7-12	4	
					13-22	7	
					23+	10	
<i>Below average</i>	>12%	>7%	> 3	> 12	0-2	>2	+/- 3 scores
					3-6	>3	
					7-12	>4	
					13-22	>7	
					23+	>10	

Note: * Each muscle score can be assigned a numeric score; as follows.

Live Muscle Scores (15 point scale)

LMS score	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E+	E	E-
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

Time limit

Appropriate to the task, number of animals and conditions.

Credentials

Assessment may lead to an award of a 'Certificate of Competency in Live Cattle Appraisal' awarded by Murrumbidgee College of Agriculture.

Michael Beer
NSW Agriculture
TAMWORTH NSW 2340.

Stage 6: Ag. Exam Resource

TAS

ARC Unseen Sample Exam Papers for 2006

ARC Unseen Sample Exam Papers offer high quality, great value resources to assist with your school's HSC and Preliminary TAS trial exams school assessment and exam preparation.

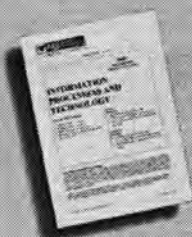
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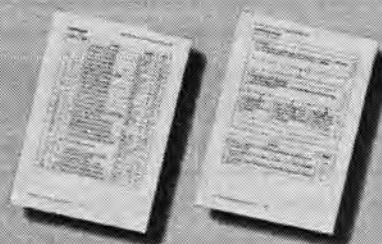
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- Syllabus mapping grids
- Mark allocation per criteria

* Where applicable

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HSC and Agriculture
Preliminary**

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Worth checking this resource out for alternative questions.

TAS



Harcourt Education

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RESOURCES FROM: RIVERINA ENVIRONMENTAL EDUCATION CENTRE

There are student study guides on our web site which students work through at their own pace:

Real Science: www.reec.nsw.edu.au then go to Students 7-12, Science 7-10, Real Science

Dryland Salinity: www.reec.nsw.edu.au then go to Students 7-12, Geography 7-10, Salinity

Soils: www.reec.nsw.edu.au then go to Students K-6, Soils



REAL SCIENCE

Important stuff



Cereal Chemist



Agricultural Protection Officer



Weed Education Officer



Aquatic Ecologist

AGRICULTURAL PROTECTION HOME

SCIENCE HOME

REAL S

Agricultural Protection Officer

Mouse monitoring

Background: mice

Mouse investigation: Murrumbidgee Irrigation Area

Student investigation: where are the mice?

Locust swarms

Locust life cycle

Student investigation: locust survey

CEREAL CHEMIST HOME

SCIENCE HOME

REAL SCIENCE HOME

Cereal Chemist: Helen Allen

Background information on wheat

Cracker biscuit investigation

Student investigation: self raising flour

Student investigation: cracker biscuit flour

Student investigation: how suitable is flour for bread making



contact

WEED RESEARCH HOME

Weed Educator Officer: Annabel Bowcher

Background information on weeds

Weed case study: Paterson's curse

Student investigation: competition

Student investigation: seed dispersal

Student investigation: germination

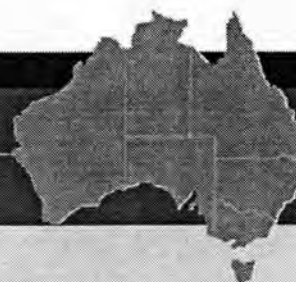


**Keith Collin
Riverina EEC**

keith.collin@det.nsw.edu.au

StubbleStar®

The new seed sowing system:
giving crops a competitive advantage over weeds



StubbleStar®

Concept

The Cooperative Research Centre for Australian Weed Management (Weeds CRC) has developed a novel high-speed, high efficiency sowing opener for conservation farmers.

It passes stubble more reliably and disturbs less soil than conventional tined openers while hair-pinning less straw than disc openers. StubbleStar® is patent protected and proven in trials in New South Wales and Western Australia.

Performance Benefits:

- StubbleStar® improves yields in dry seasons;
- faster planting gives a sowing 'window' yield advantage and reduced labour costs over tined equipment;
- better long term yields than conventional farming;
- reduced herbicide costs;
- fuel savings; and
- reduced machinery running costs.

Features:

- increased stubble retention;
- increased seeding speed and efficiency;
- soil erosion protection;
- elimination of burning;
- improved nutrient retention;
- less soil disturbance than tines and narrow row spacing producing fewer weed seedlings; and
- lower drawbar load and higher stubble throughput than tines.

Opportunity:

The Weeds CRC is currently seeking commercialisation partners to take StubbleStar® to the market.

Summary: StubbleStar® is a reliable new seed furrow opener that gives crops a competitive advantage over weeds, with a star wheel design that allows narrow rows to be sown into heavy stubble for primary producers in the crop and pasture industries.

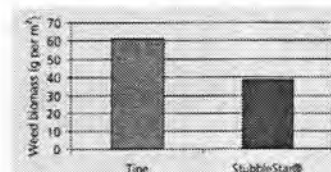
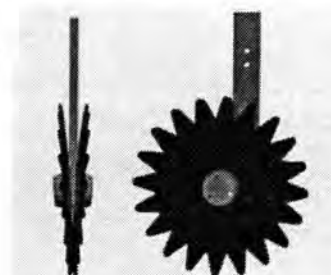


Figure 1: Weed biomass in lupin.

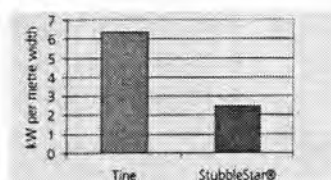


Figure 2: Drawbar power requirement @ 8 km per hour.

To register your interest in this commercialisation process, please contact:

Jan Fair
CRC for Australian Weed Management
Waite Road, Urrbrae
PMB 1, Waite Campus
Glen Osmond, SA 5064
Australia
T +61 8 8303 6590
F +61 8 8303 7311
E jan.fair@adelaide.edu.au

Brian Oldland
FTS Technology Services
Level 9,
60 Collins Street
Melbourne Vic 3000
Australia
T +61 3 8665 5524
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Established and supported
under the Australian
Government's Cooperative
Research Centres Program



Cooperative Research Centre for Australian Weed Management • Commercialisation opportunity

Competition with a difference

Great comp to involve both Agriculture & P.I. students.



AUSTRALIAN CENTRE FOR AGRICULTURAL HEALTH AND SAFETY

CHECK OUT THE
WEB SITE

All Secondary School Teachers

of

www.farmsafe.org.au

AGRICULTURE
HPE (eg. safety)

* SCIENCE/TECHNOLOGY
* ENGLISH (eg. media studies)

Consider your students for the
Farm Motorbike Safety Competition



Overview:

Two and four wheeled motorbikes are a major cause of injury for young people on Australian farms. The Australian Centre for Agricultural Health & Safety will be launching a competition for secondary schools to run through Term 3, to highlight farm motorcycle safety. Key safety messages being promoted are:

- To always wear helmets and protective gear when riding farm motorbikes
- Supervision of children to help develop motorcycle riding & safety skills.
- To follow manufacturer's instructions and make sure children under 16 years do not operate four wheeled motorcycles (ATV's), or ride on them as passengers.

Secondary school students will be required to either (1) produce a TV CSA for national screening; (2) design a farm motorbike safety device or a website focusing on farm motorbike safety; or (3) conduct a local event/campaign promoting farm motorbike safety. Crucial to the success of the competition would be the facilitating role of classroom teachers, teachers associations and farm safety partners in each state.

The winner of the TV Community service announcement category will have the opportunity to star in their own TV commercial to screen nationally.

Further information:

CONTACT

Competition support packs & details on prizes and dates (term specific) for each state will follow. Check the Farmsafe website www.farmsafe.org.au for updates or register your interest by contacting:

Julie Depeczynski
Australian Centre for Agricultural Health & Safety
Ph. 02 6752 8218 or email: julied@health.usyd.edu.au

The **Cooperative Research Centre (CRC) for Australian Weed Management** is interested to determine what would be the most suitable resource to support agricultural teachers teach students about weeds. This resource will be suitable for teaching senior secondary agriculture. If you have not already done so, we encourage you to complete and return the following survey before the 30th of June. The current resources the CRC has developed for schools is displayed at www.weeds.crc.org.au/for_schools/index.html.

NSW Agricultural Teachers Survey

ATTENTION: SUSANNA GREIG

FROM:

COMPANY:

SCHOOL:

CRC for Aust. Weed Management – University of New England, Armidale NSW.

SCHOOL ADDRESS:

FAX No: 02 67733238

FAX NO:



**RESOURCE
DEVELOPMENT**

Teachers' Survey for the CRC for Australian Weed Management

RECEIVE A **FREE** COPY OF THE NEW INTERACTIVE COMPUTER GAME – WEED WIPEOUT. SIMPLY COMPLETE AND RETURN THE FOLLOWING SURVEY).

Weeds are one of the greatest threats to the environment and agriculture in Australia today. Weeds cost the Australian agricultural community an estimated \$4 billion annually yet many still know little about them. Due to their impact, the Cooperative Research Centre (CRC) aims to extend research and the education of weeds at all levels within the Australian community. The CRC specifically seeks to support and extend the study of weeds and their management in schools. Please take a moment to complete this survey to assist us understand how weeds are taught in HSC Agriculture and how the CRC may be able to help teachers with that.

Q1. In what context do you teach your senior secondary students about weeds?
(For example this may be through the 'Lord of the Weeds' competition or perhaps a component of a unit on pasture production).

Send survey to:
{Free Post}
OR
Fax: 02 67733238

Q2. What types of resources or information would you like to have available to assist teaching senior secondary students about weeds and weed management.

Susanna Greig
Reply Paid 61883
University of New England
NSW 2351

PLEASE ADD ADDITIONAL NOTES ON EXTRA PAPER AND INCLUDE AS AN INSERT IF REQUIRED.

Your efforts to complete and return this survey before the 30th of June will be greatly appreciated.

Thank you for your time and efforts to supply this information. Susanna Greig, Educational Officer, CRC for Australian Weed Management, Agronomy and Soil Science, University of New England, Armidale, 2350.

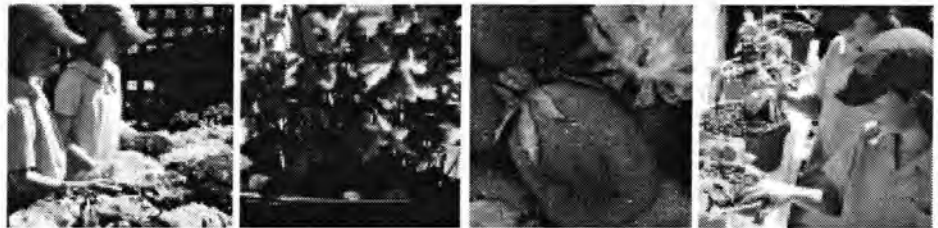
Phone: 02 67732809, fax: 02 67733238, Email: susanna.greig@une.edu.au



THE MINI FARM

For The Ultimate School Project

Grow edible produce
and generate an
income for your school
using hydroponics

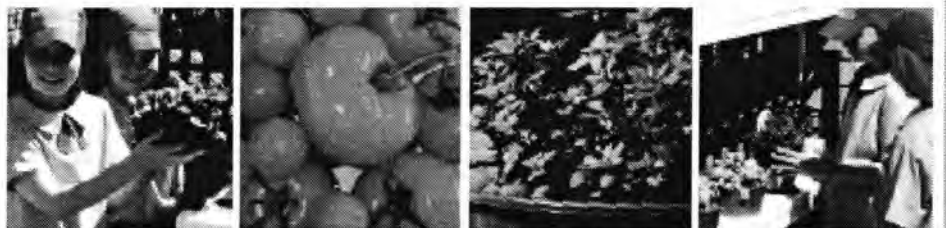


- Easy to assemble - simple clip-on construction
- Flexible design - suited to both primary & secondary students
- Educational - teaches about plant environment, nature & commerce
- Personal development - encourages teamwork, responsibility & discipline
- Chemical free - uses natural mineral salts
- Self funding - pays for itself over & over each year
- Recycles water - highly efficient water use
- Year-round crops - grow fast the hydroponic way
- Nutritious - a range of vegetables, fruit & herbs to choose from
- Parents & Citizens - an ideal fundraising project



Hydroponics – a simple way of growing
healthy and nutritious plants

FREE
initial planting out
workshop with free
ongoing online support



The Mini Farm range of hydroponics packages uses the N.F.T (Nutrient Film Technique), which is based on the principle that a constantly flowing stream (film) of nutrient and water supplies the growing plant with all the mineral requirements it will need 24/7. We at Hydro-Masta have utilised commercial farm technology in the construction of the Mini Farms. They feature an innovative profile gully system which is U.V treated for long lasting strength, a sturdy powder-coated aluminum frame and first class pumps. The nutrients and medias supplied are based on those used in commercial applications and are technical grade mineral salts.

The Hydroponic Mini Farm Kits come as complete packages with everything you need to get started. Alternatively, you can purchase them as bare units if you already have the pump, tank and nutrients. They are suitable for absolutely any lifestyle, growing space or crop type, and can be easily expanded to suit higher demands.

You don't need an engineering degree to put a Mini Farm Kit together or a chemistry degree to keep it running!

The most important advantage to growing hydroponic crops is that plants grow much faster than by conventional soil or organic methods. The need for constant watering, weeding and digging, not to mention the physical strain, are all eliminated through hydroponics.

Some other advantages of hydroponics are:

- Crop yields are higher and plant growth is consistent.
- Growing time can be reduced by half with some vegetables, and yields on plants like tomatoes can be improved by up to 100%! A lettuce grown in hydroponics can produce ten crops per year against 2 to 3 crops grown in soil.
- Vegetables have more flavour and nutrition because they are freshly picked and have all the necessary elements we need in our diet.
- The grower has greater control over the final produce quality.
- The Mini Farm takes up so little space, it is ideal for small gardens, balconies and home units.
- Hydroponics takes the back ache out of gardening.
- Using hydroponic methods means you have no soil diseases, and your system can be absolutely pesticide-free as healthy plants are more pest-resistant.

1 Mini Farm Bench – 2mtr x 7row complete

Product Code: 11267

Area required: 2mtrs x 1mtr

Package price: \$1,495.00 inc GST.

Package includes:

7 gullies, feedline, drainbox, support stand, tank, water pump, pots, growing media and hydroponic plant food.

This system is ideally suited for growing lettuce, herbs or any short term salad type crops.

It is driven by a fully submersible water pump and runs 24/7. It can also be supported by an automatic water back-up system for when school term ends, ensuring the flow of crops is not interrupted.



2 Mini Farm Tiered – 2 levels x 3mtr complete

Product Code: 11028

Area required: 3mtrs x 0.3mtrs

Package price: \$1,280.00 inc GST.

Package includes:

gullies, feedline, support frame, tank, water pump, pots, growing media and hydroponic plant food.

The tiered Mini Farm is ideally suited to strawberries, herbs, broccoli or any long term crops. A typical system for balcony areas or for long narrow pathways. This package is also pump driven and uses very little power.

Both this and the Mini Farm Bench can be adapted to solar driven pumps.



Our Mini Farm Systems make growing your own So So Easy!



3 Mini Farm Static – 3mtr complete

Product Code: 11031

Area required: 3mtrs x 0.5mtrs

Package price: \$875.00 inc GST.

Package includes:

sure gro tray, support frame, tank, smart valve, pots, growing media and hydroponic plant food.

This system is perfect for growing long term crops like tomatoes, cucumbers, beans, chillies or any type of vine crop.

It is operated by a unique smart valve which only feeds and waters when the plant needs it. This system doesn't use any power so it is good for areas that are located in remote areas of the school.

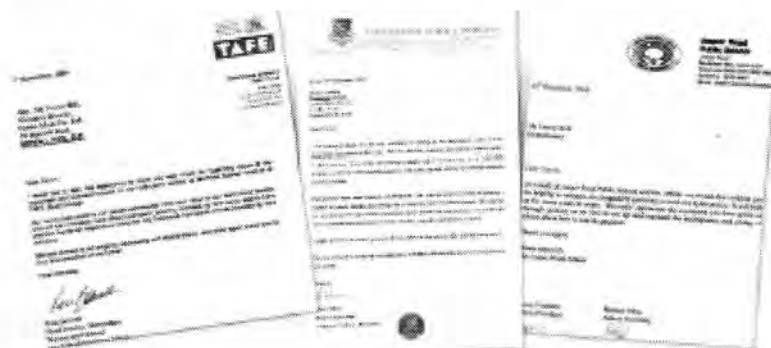


SCHOOL TESTIMONIALS...

"Our harvests have been frequent and bountiful. Our main production is growing a mixture of lettuce varieties and selling bags of salad mix..." – St Ignatius College, Riverina, 2005

"Our horticulture students will benefit enormously from your input...and will learn infinitely more about hydroponic growing..." – Northern Sydney Institute of TAFE, Ryde College, 2004

"We really appreciate the assistance you have given us through guiding us on how to set up and maintain the hydroponics..." – Jasper Road Public School, Baulkham Hills, 2004



Hydroponics provides total control with a successful harvest everytime!



FREE

with your first order

Hydro-Masta will provide everything you need to get your school project underway quickly.

- FREE plant supply with your first crop.
- FREE site evaluation to ensure its suitability.
- FREE Mini Farm support line and email.
- FREE student maintenance chart and maintenance check list.

FREE

when you purchase all 3 Mini Farms

HYDROPONICS FOR SCHOOLS

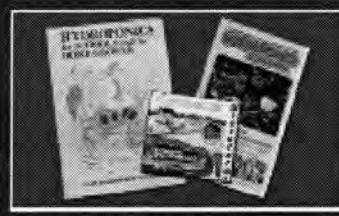
The ideal place to start for home growers, teachers and students. A fun and entertaining book that includes research information on hydroponics, as well as 'easy to create' projects to grow a wide variety of plants.

HYDROPONICS EXPLAINED

A very well presented video on the basics of hydroponics. Deals with many aspects of growing hydroponically, including nutrient, pH control, system types and lots more.

HYDROPONICS & MICRO FARMS

A comprehensive CD-ROM on hydroponics. It is an ideal information resource for schools wanting to develop a program for students to learn about alternative ways of growing edible produce using basic hydroponic principles.





Hydro-Masta Pty Ltd, located in Sydney, specializes in the supply of hydroponic products and services. We cater to all hydroponic interest groups – from home growers, market gardeners and commercial growers, to schools like yours wishing to educate students on alternative ways of growing fresh produce.

For the past 10 years, Hydro-Masta has been recognized as an industry benchmark in customer service, product display and technical expertise. We have over 20 years of experience in the hydroponic industry, and we pride ourselves on our ability to maintain and provide high service standards and quality products at competitive prices.

The hydroponic industry is already a major contributor to worldwide food production, with many countries relying completely on hydroponically grown produce. With land becoming increasingly expensive, and climatic changes so pronounced, *how is the world going to cope with the demand for edible produce in the future?* Hydroponics of course!!

Why risk a crop failure due to drought, flood and pest infestations when hydroponics provides a totally controlled and protected environment resulting in a successful crop everytime?

You will see by the information enclosed that our packages are ideally suited to schools wishing to pursue hydroponics as an ongoing project.

Kind regards
TREV & KAREN
HYDRO-MASTA Pty Ltd

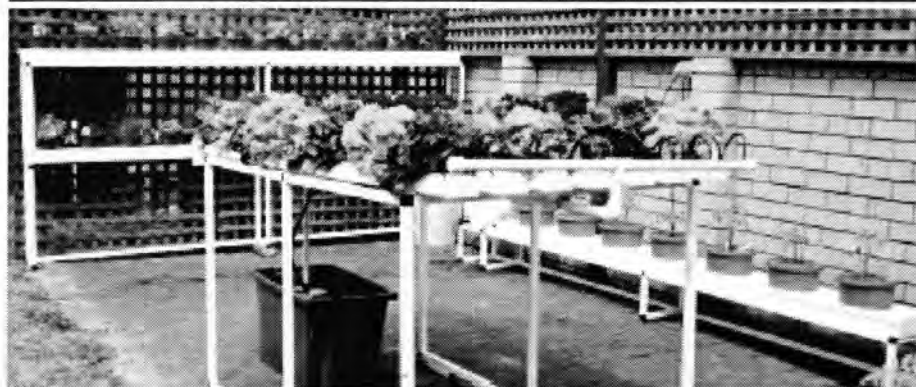


THE MINI FARM

How do we get started & what do we do next?

- Step 1 ...** Call us or return the Fax Response form and we will visit your school and conduct a FREE site evaluation.
- Step 2 ...** Choose the Mini Farm package for your school.
- Step 3 ...** We will deliver the kit for you to assemble, or for a small extra cost, we can install it for you.
- Step 4 ...** Sit back and watch the students learn how to grow plants.

Please note: When choosing the right Mini Farm system, it is important to consider what type of crop you wish to grow, what area you have available, how much you wish to grow and what varieties you intend to grow as some crops conflict with others. Refer to our fact sheet enclosed for assistance.



Grow your own NOW and taste the difference!

Hydro-Masta Pty Ltd

P.O Box 1105, Epping, NSW 1710

Ph: 02 8812 2845 Fax: 02 8812 2843

Web: <http://www.hydomasta.com.au>

Email: hydomasta@iprimus.com.au

Agricultural Education & Australian National Field Day



This is a summary of a presentation from the Australian National Field Days (ANFD) to those attending the NSW Association of Agricultural Teachers Biennial Conference in Wagga earlier this year. (Bruce Carroll, Chairman – Education, Research and Development sub-committee)

What are the Australian National Field Days?

ANFD

~ The ANFD is an agricultural machinery field day which held its first exhibition in 1952. It is a not-for-profit cooperative run by a group of about 30 volunteers and a small paid staff. Education is a major part of the ANFD's charter. The committee has always been proactive in promoting agricultural education to farmers and related service industries, to students at all levels and to the public at large.

ANFD

Focus: Farmers

~ For the farmer, comparative machinery demonstrations have always been a popular activity. So too has the Feature Demonstration which highlights new or significant changes in agricultural production. Other farmers may be more interested in participating in or seeing the results of either wether or steer production trials. The Guest Exhibit, be it an overseas nation or a group of local manufacturers, highlight innovations in agriculture for both farmers and the general public.

ANFD

Focus: Visitors

~ A number of visitors to the field days are not directly involved with agriculture, but the field days can provide them with the opportunity to appreciate the economic importance of agriculture in Australia and to understand where their food and fibre comes from. Many of these people are also parents and are interested subject choices and possible career paths for their children.

ANFD

Focus: Students

~ Students, especially those from secondary schools, TAFE and tertiary institutions are encouraged to visit the ANFD. Many of them will eventually be directly involvement in some areas of agriculture, be it farming, marketing, manufacturing, consulting, research or something else. But all students (the citizens and decision makers of tomorrow) will benefit from a strong agricultural economy and will rely on agriculture to produce their food, wine and clothing.

ANFD

Sponsorship

~ For many years the ANFD has sponsored prizes for TAFE students and for students attending the once Orange Agricultural College, now part of CSU. The committee has also supported a CSU research project, the "shelter belt project", with a \$10,000 sponsorship. Visitors are able to discuss the results from this research at the field days. The committee is currently considering the sponsorship of another project which will examine some new aspects of soil profiles.

ANFD Education Resources

~ Students attending the ANFD are not only welcomed, but are supported so that their visit becomes a purposeful and meaningful experience, rather than just an exercise in collecting pamphlets from exhibitors. The committee is very conscious of OH&S issues, making the ANFD site a safe environment for student visitors. Each year the ANFD produce an Educational Resource Booklet (specifically written for the current year) and which can be downloaded from the ANFD web site and used to give students some directed activities.

ANFD School Education Exhibition

~ Schools are also encouraged to become involved with the School Exhibition. This is different from the commercial sites used by some schools, usually private schools, to promote their school. The School Exhibition is located at a site within the main exhibition area and provides an opportunity for any school to show-case agriculture in their school. The ANFD will provide schools participating in this exhibition, under-covered sites (both indoor and outdoor), power, water etc at no cost for the site and no entry fees for the people involved with the display. The October date for the field day may be a problem for some schools, but the committee will assist you in every possible way to help you with your display.

For your
attention

ANFD Agriculture Education Exhibition 2007

Great
opportunity
for Agriculture

~ During the field days this year the committee would like to discuss with all interested parties some of the key issues in agricultural education. The ANFD does not have all the answer to the problems which have been raised recently and are looking for guidance from agriculture educators.
~ With this in mind the committee has proposed that a:

- # **Workshop:** Thursday 19th October 2006 (last day of the field days)
- # **Time:** 12noon to 2 pm
- # **Agenda:** ~ consider key issues to possibly have the ANFD feature exhibition for the 2007 field day.
"Education in Agriculture"

~ Any interested parties will be invited as the committee wants the proposed feature to be as broadly based as possible. Any participant at the workshop will be provide with lunch and will have their entry fee to the field days reimbursed.
~ The ANFD want this to work and will be relying on people like you to make it work. As the field days get closer the committee will be looking for people to register for the workshop so that various logistic and catering arrangements can be made.

~ Further details from the ANFD office as follows:

- **General Manager:** David Lamrock
- **Phone:** 6362 1588
- **Web-site:** www.anfd.com.au
- **Email:** info@anfd.com.au

^ The Association supports this proposal.
^ Lets show case our subjects:
* Agriculture & Primary Industries
to the general public in this unique way.

Conference Agricultural Practicals

What's
happening
with those
Agriculture
practicals
from the
conference?

Dr John Harper
Senior Lecturer in Plant Sciences
Microbiology & Biotechnology
Charles Sturt University

^ Dr John Harper CSU, is liaising with the NSW Association of Agriculture Teachers to assist in the coordination of the many Agricultural practicals which delegates were exposed to at the conference.

^ These practicals are a valuable resource for Agriculture teachers & will be available to be downloaded from the Associations web site www.nswaat.org.au for people to trial with their students over the next 12 months.

^ John would like people to complete the evaluation form about the value of these practicals in achieving specific outcomes of the agriculture curriculum.

^ Please spend the time to trial these practicals & complete the evaluation form {also available from the Associations web site}

^ The Association is grateful to John for the time & effort he has put towards ensuring we have a fantastic resource for our students.

^ The aim eventually is to have these practicals collated in an electronic & a hard copy form for Agriculture teachers across the state.

^ John has also asked that if you have a practical that meets the outcomes of either the junior or senior agriculture curricula & is successful in its aims; then please send a copy to John: jharper@csu.edu.au for inclusion in this resource.

CHARLES STURT
UNIVERSITY



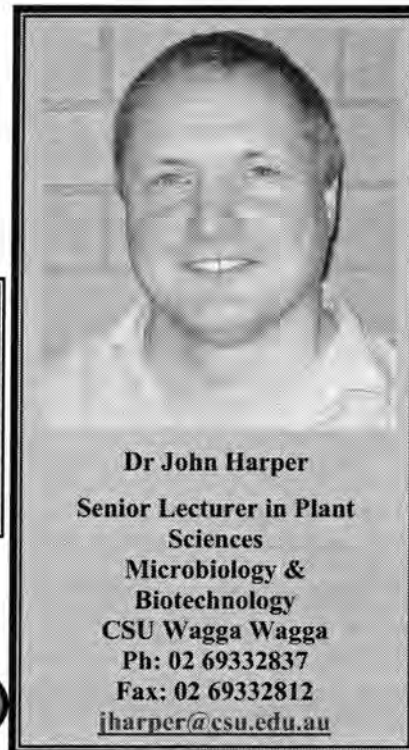
Thanks to
John for
all your
efforts.



**NSW DEPARTMENT OF
PRIMARY INDUSTRIES**

The Association is appreciative to the staff at CSU & the EH Graham Centre for their professional assistance with these practicals.

Please contact Dr John Harper CSU regarding the conference practicals or any junior & senior agriculture practicals you may wish to add to the resource package.



A reminder of some of those practicals

PLANT PATHOLOGY

- Study of Nematodes

COMPUTER ACTIVITY

- Investigation: Plant Breeding Computer Activity

PLANT PATHOLOGY

- Plant Diseases: Rust

PLANT BIOSECURITY

SALINITY / SOIL WORKSHOP

- Salinity Units
Salt Bag & taking an ECw
- Calibrating a Salinity Meter
- Soil Tests

PLANT & ANIMAL SYSTEMS

- Light & Photosynthesis

PLANT HORMONES

- The role of ethylene in abscission & cytokinin on senescence.

SILAGE

- Measuring dry matter content of forages
- Field Assessment of Silage
- 10 key steps to successful silage

WHEAT QUALITY

- Self Raising Flour
- Enzyme Activity of Wheat
- Gluten & Bread Making

a. Visual & Manual Assessment of Fatness in Beef Cattle.

SCORE	DESCRIPTION
1 (0-1mm 12 th rib)	Animal is emaciated. No fat tail head.
2 (2-3mm 12 th rib)	No fat tailhead/ribs. Spines feel round.
3 (4-7mm 12 th rib)	Fat felt either side of tailhead
4 (8-12mm 12 th rib)	Short ribs can't be felt. Small mounds of fat/soft to touch at tailhead.
5 (13-18mm 12 th rib)	Tailhead & hip bones buried in fat.
6 (18mm+ 12 th rib)	Can't see short ribs. Tailhead & hips buried in fat. Brisket & udder are heavy.

b. Muscle Scoring Beef Cattle.

SCORE	DESCRIPTION
A	Extreme thick thru stifle area/muscle seams between muscle. Hindquarters bulge. Loin muscle higher than backbone.
B	Thick stifle. Rounded thigh from behind. Flat/wide on topline.
C	Flat down thigh from behind. Flat to angular over top line.
D	Narrow stance. Flat to convex down thigh. Thin thru stifle. Sharp, angular over top line. (except when very fat)
E	Dairy type-very angular. No thickness thru stifle. Stands with feet together. Concave thigh. Sharp 'tent topped' over topline.



This assessment card can be modified for your particular application.

NAME: _____



cut along this line/ backed on each & folded with Name page 1 & page 4 is muscle & score tables

**BEEF CATTLE
LIVE ASSESSMENT
COMPETITION**

Task:

- Visually assess the 3 steers selected from a pen of 12 steers provided.
- You need to record the following information for each steer selected in the table opposite:
 - Identification tag/number of the animal.
 - Estimate the Liveweight (kg) for the selected animals.
 - Estimate the Fat Score for the selected animals.
 - Estimate the Muscle Score for the selected animals.
 - Estimate the 'Dressing Percentage' for each beast as a %

VISUAL ASSESSMENT FOR 3 STEER SELECTED.

Steer No.	Estimated Liveweight (kg)	Fat Score (1-6)	Muscle Score (A-E)	Dressing Percentage (%)	YOUR SCORE (24)
					/8
					/8
					/8
TOTAL SCORE:					/24

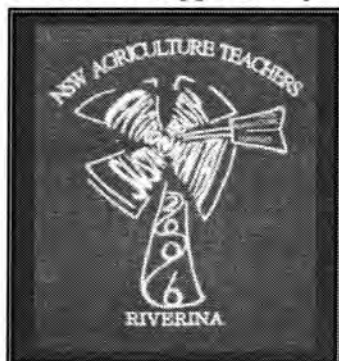


Tumut Mayor: Gene Vanzella welcoming delegates to the Tumut Shire.

^ Researchers have called for canola to be reintroduced to crop rotations in parts of southern NSW.

^ CSIRO conducted 35 field trials between 1988 & 2003; wheat crops after canola rotation yielded an average 20% more than wheat following wheat.

Section 13 supported by:



13

"MEDIA RELEASE"

1. "Conference" *Pre Media Release*



2. "Conference" *Post Media Release*



Ag teachers here for first hand look at forestry

FIFTY THREE agricultural teachers from across NSW will take a first-hand look at forestry when they attend a five-day NSW Association of Agriculture Teachers biennial conference which is based at CSU Wagga.

As part of the conference, Forests NSW, a silver sponsor, will conduct a one-day tour of its forestry operations in the Hume Region around Tumut and Tumbarumba on Wednesday 26 April. The delegates will also visit the Visy Pulp and Paper mill site near Tumut.

Forests NSW regional manager Bob Germantse said the field trip would give teachers a look at site preparation and harvesting in the pine plantations plus a tour of Forests NSW state-of-the-art nursery at Blowering.

"Forestry and agriculture have a lot in common and sponsoring this conference is an excellent way for us to give teachers a better understanding of a dynamic industry that is renewable, recyclable and responsible," he said.

The NSW Association of Agriculture Teachers executive consists of agriculture teachers from Riverina schools including Tumut, Wagga, Culcairn, Murrumbur-

rah and Cootamundra.

The theme for the conference is 'Environmental Sustainability' and president of the Association and conference organiser Tony Butler said agriculture teachers would witness first-hand how businesses such as the timber industry utilised natural resources while maintaining sustainable work practices.

"After seeing these practices teachers will be able to incorporate what they have learnt into the way they teach agriculture," he said.

Mr Butler said the extensive conference program would utilise the expertise of specialised staff from CSU and NSW Department of Primary Industry (DPI).

"Cargill Beef at Wagga Wagga is providing 12 steers for delegates to undertake a live cattle assessment and carcass appraisal measurement workshop."

"NSW DPI beef officers from Wagga Wagga and Mudgee will conduct the workshop detailing skills required for live assessment in the areas of muscle and fat scores, live weight and cutability," he said.

Agricultural workshops provided by NSW DPI and CSU staff will cover such things as microbiology, botany, olives,

lavender, biotechnology, plant pathology, soils and salinity, wheat quality and bread production, weeds, entomology, silage and animal nutrition.

Conference dinner speakers include Visy Pulp and Paper manager Lex Kingma who will speak on industry and agriculture working together; and director of the Centre for Rural Social Research Professor Margaret Alston, who will talk about the impact of rural issues on families in the bush.

Other guests speakers include Dr Scott Williams from Australian Wool Innovation, who will discuss current research in the sheep and wool industry; Laurie Kirk, Murray Darling Basin Commission, who will speak about accountability for the Murray Darling Basin and future developments for sustainability; and Dr Simon McKirdy, Greenhouse Accounting/National Plant Biosecurity and

Agrifood Awareness, who will speak on the importance of these Cooperative Research Centres to Australian

agricultural industries.



Tony Butler and Bob Germantse discuss plans for the conference.

Tumut and Adelong Times

AND BATLOW DISTRICT NEWS

Festival feature
next issue

\$1.20 Inc. GST

Friday, April 21, 2006



Tumut and Adelong Times

AND BATLOW DISTRICT NEWS

\$1.20 inc. GST

Friday, May 19, 2006

Post
Conference

TUMUT & ADELONG TIMES

Friday, May 19, 2006



Delegates observing the harvesting of pines in the local area.



Ag teachers visited the Forests NSW nursery on a trip to Tumut.



Agriculture teachers had lunch at the Tumut Racecourse.

Pine in the spotlight as 55 Ag teachers attend conference

Pine in the spotlight as 55 Ag teachers attend conference

FIFTY-FIVE State-wide Agriculture teachers visited the Tumut region as part of a five day biennial conference held at Charles Sturt University.

Delegates attended the conference from throughout the Riverina; Albury, Deniliquin, Finley, Yanco, Wagga Wagga, Hay, Walla Walla, Tumbarumba, Coleambally, West Wyalong, Culcairn, Cootamundra, Gundagai, Tumut and Murrumburrah.

Agriculture teachers also attended from throughout NSW: Lismore, Walcha, Orange, Woodenbong, Cooma, Orange, Trangie, Queanbeyan, Tamworth, Young and the Sydney region.

Planning for the conference has been continuing since 2004 with

the Associations executive consisting of Agriculture teachers from Riverina schools including Tumut, Wagga Wagga, Culcairn, Murrumburrah and Cootamundra.

The theme of the conference was 'Environmental Sustainability' which focused on investigating the links between Industry and Agriculture that demonstrate environmental practices in business.

The Association received fabulous support from its sponsors, including:

Gold Sponsor: Visy Pulp and Paper; Silver Sponsor, Forests NSW, TeamPoly, John Deere; Bronze Sponsors: Tumut Shire Council, Wagga Wagga City Council CRT, Incitec Pivot, Yates.

The conference was well supported by: Charles Sturt University, E.H. Graham Centre for Agricultural Innovation at Wagga Wagga; Department of Education; Batlow Fruit Co-Op; and Tumut Mensland.

The extensive program utilised the expertise of the specialised staff from Charles Sturt University and NSW Department of Primary Industry.

The conference will commenced with a field trip to Tumut investigating Forests NSW pine operations including the nursery, site preparation, planting, harvesting and logging.

While in Tumut the

delegates visited the Visy Pulp and Paper mill site and Visy property at Gilmore. At both locations Agriculture teachers witnessed at first hand how industry utilizes natural resources while maintaining sustainable work practices.

Having seen these practices delegates will be able to link these examples into the teaching of Agriculture.

Cargill Beef at Wagga Wagga provided 12 steers for delegates to undertake a live cattle assessment and carcass appraisal measurement workshop. NSW DPI beef officers from Wagga and Mudgee conducted the workshop detailing skills required for live assessment in the areas of muscle and fat scores, liveweight and

dressing percentage.

Agricultural workshops provided by NSW DPI and CSU staff were in the areas of Microbiology, Botany, Olives and Lavender, Biotechnology, Plant Pathology, Soils and Salinity, Wheat quality and bread production, Weeds, Entomology, Soil Water and Rhizolysimeters, Silage and Animal Nutrition including sheep.

A visit to the CSU winery and Cheese factory was a highlight for the delegates attending the conference.

Special guests to the conference were

• Dr Scott Williams: Australian Wool Innovation; who discussed the current research in the sheep and wool industry; focusing on the mulesing debate.

• Mr Laurie Kirk:

Murray Darling Basin Commission: spoke on the accountability of the Murray Darling Basin and its future developments for sustainability.

• Mr Lex Kingma: Visy Pulp and Paper Manager: Conference Dinner Speaker: Industry and Agriculture working together.

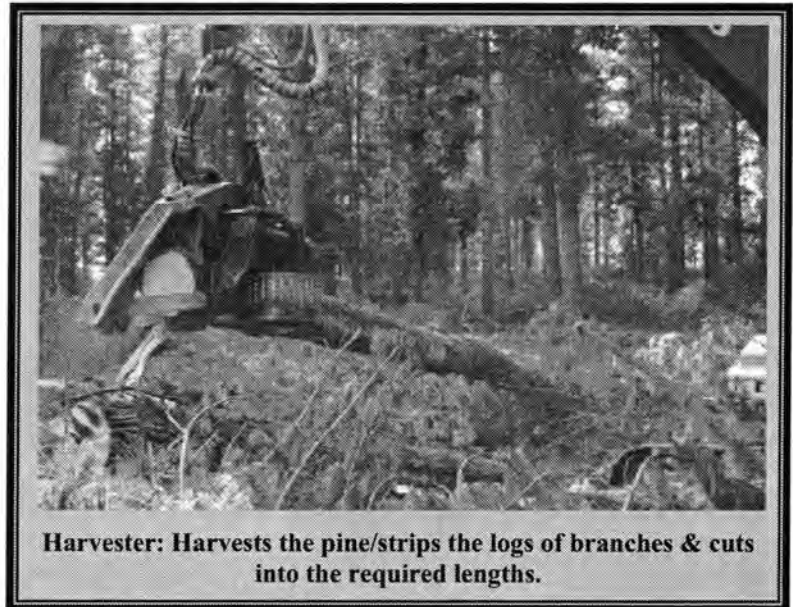
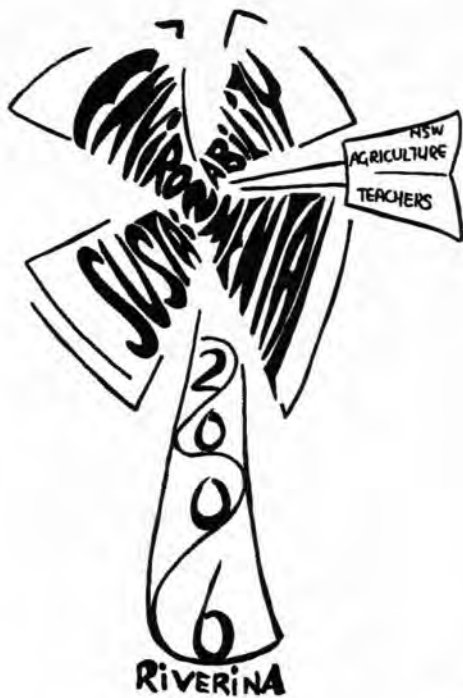
• Professor Margaret Alston: Director of the Centre for Rural Social Research: Conference Dinner Speaker: Impact of rural issues on families in the bush.

The NSW Association of Agriculture Teachers has extended its thanks for the support and commitment of many people both in agriculture and industry who have made this conference a success.



Agriculture teachers find out about the pasture management programmes at Visy.





Harvester: Harvests the pine/strips the logs of branches & cuts into the required lengths.

14

MEMBERSHIP

^ Why become a member?

- *Maintain networking throughout the state*
- *Member of your professional teaching association*
- *Current information on:*
 - o *Next Agriculture Conference*
 - o *Syllabus updates/ programs/resources*
 - o *Issues that effect your Agriculture teaching*
 - o *Professional reading*
 - o *Organisations that can assist in delivery of Agriculture to your students*
 - o *Have a say about Agriculture & P.I teaching issues*

^ Application for Membership 2006-2007

^ Membership is now due for 2006-2007

^ The NSW Government has made a decision to require all government vehicles to use biofuels where available.

^ This decision could open the door further for expansion of the ethanol and biodiesel industry.

^ This move would save about \$50 million on vehicle lease and fuel costs and cut greenhouse gas emissions by 55,000 tonnes by 2008.

Section 14 supported by:

APPLICATION

FOR

MEMBERSHIP



To:

THE N.S.W. ASSOCIATION OF AGRICULTURE TEACHERS
ABN Number: 81 639 285 642

TITLE: _____ NAME: _____

SCHOOL: _____

PHONE: _____ FAX: _____

EMAIL: _____

POSTAL ADDRESS: _____

Post Code: _____

MEMBERSHIP FEES:

* 1 YEAR: _____ \$60 (2006)

* 2 YEARS: _____ \$120 (2006-07)

N.B. Subscription applies for period from January 2006 for either one or two year period.

Subscription Required: _____ Year(s)

Amount Enclosed: \$ _____



Please forward completed form with payment to:

Stephen Trickett
Billabong High School
Gordon Street
Culcairn NSW 2660

Phone: 02 60298377
Fax: 02 60298833

CURRENT MEMBERSHIP

JUNE 2006

*Membership list
as of
1st June 2006*

^ Any issues with membership please contact:

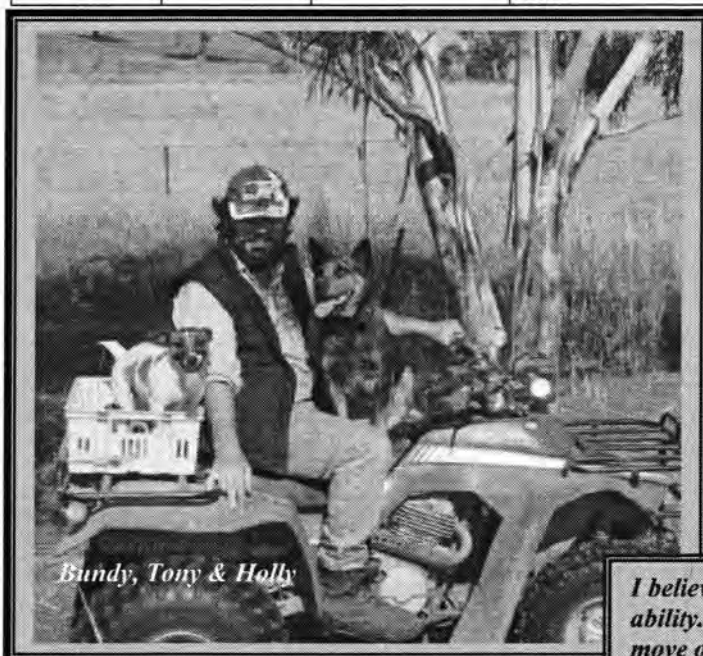
Stephen Trickett
Billabong High School
Culcairn Ph: 02 60298377
Fax: 02 60298833

2006	2007	Other	Name	School
		Life Member	Tony Barnett	Walcha Central School
		Life Member	Don Bartholomew	Tweed Heads
		Life Member	Tony Butler	Tumut High School
		Life Member	Rod Francis	Charles Sturt University: Wagga
		Life Member	Phil Hurst	Hawkesbury High School
		Life Member	Peter Jones	Chifley College Dharruk
		Life Member	John Lee	Glen Innes High School
		Life Member	Robyn O'Leary	Finley High School
		Life Member	Norm Robinson	Dundoon
		Life Member	Trevor Sewell	Gorokan
		Life Member	Jenni Wilkins	Holroyd High
		NAAE	Andrew Cosby	Langwarrin: Vic.
		NAAE	Nigel Grant	Warwick: Qld
		NAAE	Mal Jurgs	Meningie: S.A.
		NAAE	Lindsay McNeill	Cundedin: W.A.
✓	✓		Royal Agriculture Society	of NSW
✓			Teacher of Agriculture	Albion Park High School
✓			Teacher of Agriculture	Goulburn High School
✓			Teacher of Agriculture	Hay High School
✓			Teacher of Agriculture	James Ruse Ag High School
✓			Teacher of Agriculture	John Paul College Coffs Harbour
✓	✓	2008	Teacher of Agriculture	Kingscliff High School
✓			Teacher of Agriculture	Monaro High School
✓			Teacher of Agriculture	Mudgee High School
✓	✓		Teacher of Agriculture	Narooma High School
✓	✓		Teacher of Agriculture	St. Joseph's Aberdeen
✓			Teacher of Agriculture	St Paul's Grammar School Penrith
✓			Teacher of Agriculture	Tomaree High School
✓			Teacher of Agriculture	Toormina High School
✓			Teacher of Agriculture	Wagga Wagga Christian College
✓			Teacher of Agriculture	Wyong High School
✓			Brian	ADAMS
✓			Bryon	ADAMSON
✓			Peter	ALCORN
✓	✓		Bob	ANDERSON
✓	✓		Charles	ANDERSON
✓			Graeme	ANDERSON
✓			Phil	ARMOUR
✓	✓		Attila	BABOS
✓			Karlene	BAILEY

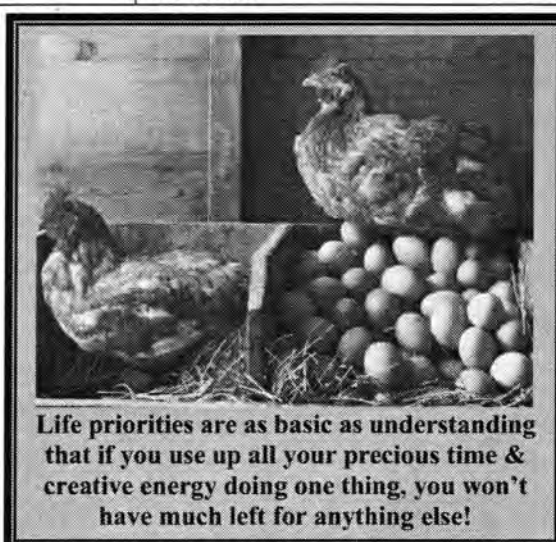
2006	2007	Other	Name	
✓	✓		Ian	BAIRD
✓			Colin	BARKER
✓			Sue	BEHAN
✓	✓		Ian	BISHOP
✓			David	BLOWES
✓			Georgina	BOLAM
✓	✓		Karen	BROOK
✓			Craig	BOURNE
✓			Graham	BRAMLEY
✓			Keith	BROWN
✓			Lisle	BROWN
✓			Shane	BROWN
✓			Ron	BRYANT
✓			Denis	BURNS
✓	✓		Leeta	CAIGER
✓			Robert	CAIN
✓			Carolyn	CARDEN
✓			Charles	CASELS
✓	✓		Dale	CHADWICK
✓			Sue	CHALLACOMBE
✓			Megan	CHANDLER
✓			Caroline	CLATWORTHY
✓			Lloyd	CLEAVER
✓			Caroline	COLEMAN
✓			Helen	COLMAN
✓	✓		Ben	COOMBES
✓			Nigel	COX
✓	✓		Ian	CRABB
✓	✓		David	CRICK
✓	✓		David	CROFTS
✓			Elena	DAGHER
✓			Alison	DAHLENBERG
✓			Anita	De La MOTTE
✓	✓		Michelle	DOWSETT
✓	✓		Cameron	DUSTINE
✓			John	EGGLESTON
✓			Guy	FAHEY
✓	✓		Aaron	FLAGG
✓			Greg	FULLJAMES
✓	✓		Ivan	GANT
✓			Cliff	GEORGE
✓			Milton	GOWER
✓			Simon	GRAHAM
✓			Susanna	GREIG
✓			Clinton	GRIBBLE
✓			Neil	GRIFFITH
✓			Stewart	GRIMMETT
✓			Andrew	HARRIES
✓			J	HARRIS
✓			Leonie	HARRIS
✓			Adrian	HARRISON
✓	✓	2008	Ian	HATHERLY

2006	2007	Other	Name	
✓			Colin	HAWTHORN
✓			Stuart	HEMMINGS
✓			Ian	HEFFERNAN
✓			Janet	HOLMES
✓			Peter	HOOD
✓	✓		Sue	HOPE
✓			Mark	HOPKINS
✓	✓	2008	Peter	HUMPHRIES
✓			Stuart	IRWIN
✓			Lachlan	JAMES
✓			David	JOHNSON
✓	✓		Kennedy	JONES
✓			Ian	JUDD
✓			Joan	KEIGER
✓	✓		Howard	KENNEDY
✓	✓		Pru	KESBY
✓			Graeme	KIDD
✓			John	KILLEN
✓			Kristina	KING
✓			Ilka	KLEPPER
✓			Steve	LANGMAN
✓			Judy	LAWSON
✓	✓		Lynne	LEOTTA
✓			Adam	McCRAE
✓			Greg	McALPIN
✓			Lisa	McCALLUM
✓	✓		Lynda	McCALLUM
✓			Angela	McCANN
✓			Patrick	McCANN
✓			Johana	McCARTHY
✓			Terry	McGOLDRICK
✓			Melinda	McCOLL
✓	✓		Ross	McGREGOR
✓			Jacqueline	McINTOSH
✓			Owen	McLAUGHLAN
✓	✓		Allan	McMILLAN
✓	✓		Maryann	McRAE
✓	✓	2008	Bruce	MANKTELOW
✓	✓	2008	Jennifer	MANNA
✓			Philip	MATAR
✓	✓		Peter	MATUS
✓			Mike	MELINO
✓			David	MULLER
✓			Peter	NAPIER
✓	✓		Simone	NEVILLE
✓			Trevor	NEWMAN
✓			Craig	O'BRIEN
✓			Lisa	O'BRIEN
✓			Philip	OLIVER
✓	✓		Adrian	PALMER
✓			Belinda	PINE
✓			Graham	QUINTAL

2006	2007	Other	Name	
✓			Stephen	RAWLINSON
✓			Leisl	REDMOND
✓			Rosemary	REILLY
✓			Dave	ROBINSON
✓	✓		Peter	ROBINSON
✓	✓		Warwicke	ROLFE
✓			Brian	SAWYER
✓			Brett	SHAROCK
✓	✓		Warwick	SHAW
✓			Alex	SKLADNEV
✓			Jade	SMITH
✓			Paul	SMITH
✓			Peter	SMITH
✓			Geoff	SPENCE
✓			Mandy	STATHAM
✓			Janet	SWAN
✓	✓		Vanessa	TAYLOR
✓			Brian	THOMAS
✓	✓	2008	Ian	THOMPSON
✓			Stephen	TRICKETT
✓			W.	VANRYSWYK
✓			Peter	WEARNE
✓			Gary	WEBB
✓			Michelle	WEBB
✓			Nicolet	WESTERHOF
✓	✓		Wayne	WHALE
✓	✓		Rick	WHEATON
✓	✓		Doug	WHITE
✓			Richard	WHITE
✓			Gary	WINTER
✓			Paul	WITHERS
✓	✓		Beth	WORTHY
✓			Ron	VICTOR
✓			Jan	YOUNG



Bundy, Tony & Holly



Life priorities are as basic as understanding that if you use up all your precious time & creative energy doing one thing, you won't have much left for anything else!

I believe that if you take on a job, you do it to the best of your ability. I have enjoyed this one & now its time to 'log off' & move onto another one....at home with Bundy & Holly!!

NSW Association of Agriculture Teachers

Conference Sponsors

Conference Sponsors



"GOLD"



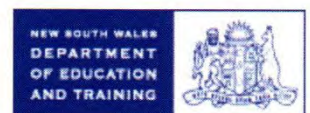
"SILVER"



"BRONZE"



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