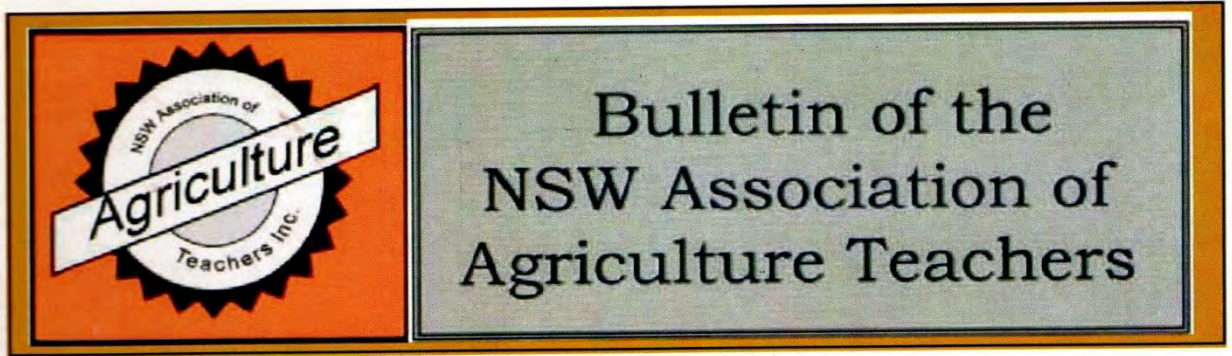




BAAT

2010



Dryland or Rain Grown?

Bogged in a Drought?

N.S.W. Association of Agriculture Teachers Inc

www.nswaat.org.au
ABN Number: 81 639 285 642



President:

Graeme Harris
Farrer Memorial Agricultural High School
Calala Lane
Tamworth, 2340 NSW
02 6764 8660 (w)
02 67 648 669 (f)
graeme.harris@det.nsw.edu.au

Secretary:

Nicolet Westerhof
Elizabeth Macarthur High School
Narellan NSW 2567
02 4646 1899 (w)
02 4647 1569 (f)
nicolet.westerhof@det.nsw.edu.au

Treasurer:

Laura Tolley
Farrer Memorial Agricultural High School
Calala Lane
Tamworth, 2340 NSW
02 6764 8660 (w)
02 67 648 669 (f)
treasurer.nswaat@gmail.com

Technology & Communication:

Ian Baird
Murrumburrah High
Murrumburrah NSW
02 9484 5732 (w)
ian.baird@det.nsw.edu.au

BAAT Crew:

Carl Chirgwin
Griffith High School
Coolah St,
Griffith NSW 2680
carl.chirgwin1@det.nsw.edu.au

Jade Smith
Dunedoo Central School
Digilah St
Dunedoo NSW 2844
jade.smith7@det.nsw.edu.au

Justin Connors
Bundarra Central School
Bowline St
Bundarra NSW 2359
justin.connors@det.nsw.edu.au

www.nswaat.org.au



1. From the Dam
2. President's View
3. The Rein that Was
4. J. A Sutherland Award
5. Classics @ Conference
6. What's Happen'ng in My Paddock
7. PI Across the State
8. HATA Conference in NZ
9. Membership Muster & Current List
10. Premiers Scholarship Report
11. Careers in Agriculture
12. NLIS Changes
13. Not just a Career
14. UNE Options
15. Land Learn Update
16. BBB
17. CEFA for You!
18. Ag in the Curriculum???
19. Trading Places
20. G O 4 Grains
21. PICSE
22. On a Sunbeam...
23. Butler's BAAT Blog
24. Us as One

Bogged in a Drought?

I got
feed.com



"FROM THE WATER IN THE DAM"

- Huey continues to deliver downpours – did the Winter BAAT footer work its wonder or what?
- Networking, invigoration and professionalism are the themes of this BAAT edition. We thank our outgoing committee and welcome a new breed of dedicated agricultural educators to facilitate this great association.
- A big congratulations to Graeme Harris and his willing conference helpers for staging the recent NSW AAT Conference in Tamworth – this edition is packed with photos and resources for you. Yes you, our committed members who may need to renew your association's membership???
- All in all, the association has being strengthened through the past two years on the back of dedicated Agricultural teachers. Teachers' who are not only distinct educators but, amongst other duties, farm managers and true believers in each and every student who walk through the farm gate each day.

One thing is known in our schools – everyone has a different agriculture setup.

The BAAT Crew – Carl Chirgwin (Griffith High School), Jade Smith (Dunedoo Central School) & Justin Connors (Bundarra Central School)

Grasses? Broadleaf?
Their all Green!



Bogged in a Drought?

Presidents Report

Firstly I would like to thank the outgoing executive for their efforts on behalf of the Association over the last two years. I particular thanks must go to Phil Hurst for his tireless efforts and the way he supported and advanced the cause of agricultural education in NSW.

The Biennial conference was a great success for all who attended and it was great to see a lot of new faces. The timing of the conference was discussed at length and it was decided that the next one will be at Tocal, Patterson in the second last week of the summer holidays 2013. Ivan Gant and others have agreed to host the conference and I have no doubt that there will be a number of topical issues to be discussed.

I would also like to congratulate the incoming executive for their interest and support. Nicolet Westerhof, Laura Tolley, Ian Baird, Carl Chirgwin, Justin Connors & Jade Smith.

The next two years will see significant challenges in several areas.

1. The impact of the national curriculum.
2. The impact of OHS particularly in DET schools.
3. The changing landscape of skills provision and VET.
4. The shortage of suitably qualified teachers.
5. Funding cutbacks.
6. The challenges of changing climate.

It is very important that teachers have a voice and that their views are listened to by government and decision makers. I will be sending regular emails to all members and asking for feedback. This is the only way that I know that I am representing your views, so please don't hesitate to contact me.

I would like to thank the band of helpers who made the conference such a great success. In particular I would like to acknowledge Carl Chirgwin, Tony Barnett, Belinda Pine, Prue Kesby, Bronnie Nielsen and Laura Tolley for stepping in, when my father passed away and I could not be present for the first two days of the conference.

The sponsors of the conference helped in providing an excellent learning and social event. The sponsors were AgriFood Skills Australia, Cotton CRC, Namoi CMA, Tamworth VETNetwork and Grain Growers Association.

Finally thanks for giving me the opportunity to represent you in enhancing the provision of quality agricultural education at a time when these skills and knowledge will be critical for food security and our economic and social survival.

Graeme Harris – NSW AAT President 2010-2013

It has been a great pleasure to lead our Association over the last 2 years. I have found it very rewarding, particularly the opportunities I have had representing the Association at workshops, forums and conferences.

I have had a fine team to work with and would like to take this opportunity to thank Nicolet Westerhof, Cathy Perri, Graham Quintal, Ian Baird, Carl Chirgwin and Nikia Collins plus the team who worked on this Conference, for all the work they have done.

The highlights of the two years were:

HURLSTONE AGRICULTURAL HIGH SCHOOL INQUIRY

We had a great result in helping to save the land that was earmarked for sale and gaining a huge amount of financial input into improving the facilities of the school.

HSC STAGE 6 AGRICULTURE SYLLABUS

I was pleased with the partnership we formed with the Board of Studies to get a significant change to the Stage 6 Syllabus. The Board sought and accepted our choices for the writing team and after some negotiations, supported this team with funding for their work. I would like to thank publicly Dave Randall, Libby Dawes, Deb Snaith, Owen McLoughlan and Stuart Hemmings for all the work they put in. I think you will agree that we ended up with a much better syllabus to work from.

PRIMARY INDUSTRIES EDUCATION FOUNDATION WORKSHOP (PIEF)

We have continued on the work that Tony Butler started with the PIEF. They have been of great assistance with our negotiations with ACARA in trying to get Agriculture embedded into the Australian Curriculum. They are also well on the way to getting a process in place to support teachers in delivering Agriculture in the curriculum.

We are also working with them to present workshops for teachers with the first one being delivered on 26th November at the RAS at Homebush.

NATIONAL ASSOCIATION OF AGRICULTURAL EDUCATORS.

NAAE continues to support us with their conference and lobbying of the various Governments particularly on the Australian Curriculum. They also have been a big part of the development of PIEF.

AUSTRALIAN CURRICULUM

The current position is that ACARA has said that we should be entitled to be part of the Australian Curriculum and we are waiting on their next Shaping paper which is due out at anytime. Things are looking a lot more positive in this area.

BAAT

Carl and Nikia have continued the fine tradition in delivering a magazine which keeps us up to date and provides us with excellent resources.

CAREERS IN AGRICULTURE

We were invited by the RAS to participate in their Careers in Agriculture Day at the Royal Easter Show. There were a number of visitors to our display and thanks to Carl, Cathy and Nicolet for their efforts.

STATE AGRICULTURAL ADVISORY GROUP

This group continues to work well for the State schools, distributing funds, lobbying for funds for the Tractor Replacement Scheme and providing expertise to the various units within the Department of Education.

We need to monitor what may happen to this group as one of the recommendations of the Peters Inquiry was "To facilitate and strengthen the development of agricultural education in New South Wales, it is recommended that the role, membership and status of the State Agricultural Advisory Group be expanded.

The Minister has passed this onto a Department Officer in the Hoxton Park District to put it in place.

WEBSITE

Ian Baird and Graham Quintal have been meticulous in keeping our website going. They had quite a challenge when the hosting company went bust but due to Ian's diligence we were not off the air for long.

EMAIL LIST

The thing which gave me the most satisfaction was the positive feedback that I have had regarding the use of the email list to keep Ag Teachers informed of the goings on around the state. I hope that the new executive can continue with this practice as it seems to be providing a benefit for all.

BIENNIAL CONFERENCE

I would like to thank all the people who have put this conference together. It shows by the number that have turned up that we still want and need the chance to get people from all over the State together to discuss Agriculture Teaching.

I would like to wish the incoming Executive well and thank you for the privilege of leading this wonderful Association



Phil Hurst
NSWAAT President 2009-10

Bogged in a Drought?

NSW Association Agriculture Teachers

J.A Sutherlands Award

Mr. Ian Baird

2010

Citation

Mr. Ian Baird is a dedicated and committed Agriculture teacher who has used his expertise in the field of Agriculture Technology to assist in the development and maintenance of the NSW Association of Agriculture Teachers Website over the past seven years from 2004 – 2010 inclusively.

Ian commenced teaching Agriculture Science in 1975 at Yanco Agriculture High School and by 1977 Ian was stock master.

In 1978 Ian had moved to Windsor High School where he taught Agriculture Science.

1979 saw Ian in charge of Agriculture in the New Hebrides. He established a Farm Club and became involved in Curriculum Development. Ian was appointed Chairman of the National Curriculum Development Committee and worked with Alan Sutherland who was a consultant to the committee.

Ian became Agriculture teacher at Murrumburrah High School in 1983 and MHS is his current school. Ian developed the school farm of 13 hectares. He was involved in sheep breeding (President of Gromark Sheep Society); Showed cattle at local and state shows: 1988 to 1999. Ian was the Principal organiser & coordinator of student workshops for the Murrumburrah High School Field Days which were a feature of the school for a 5 year period. In 1993 the field days hosted the National Treefest. In 2007 Ian focused his teaching on the Technology aspect including Animal & Plant units in an Agriculture context.

Ian has been a consistent HSC marker of agriculture from 1978 to 2005. Ian has been a long standing member of the NSW Association of Agriculture Teachers.

His involvement is as follows:

- A financial member from 1975 through to the present.
- Member of the State executive from 2004 to the present.

- Responsible for the Associations web site from 2004 – 2007 & has a joint role from 2008-2010.
- Committee member for organizing the 2006 State Agriculture Teachers Biennial Conference in Wagga Wagga.

As Website/ICT coordinator Ian has:

- Further developed and added enhancements to the website which was initially set up by Graeme Harris.
- Established new web-pages, maintained existing web-pages by keeping the information current and enhancing the pages with colour and graphics.
- Deleting obsolete text.
- Testing the updated web-pages in a browser to check user access.
- Checking links, redoing links.
- Uploading files to the website/organising PDF's and text documents into folders for webpage access.
- Checking on website traffic on a monthly basis.
- Providing the State Executive with statistical information on member access to the website.
- Troubleshooting technical issues with the website which involves communicating with the web-host, often over extended periods of time.
- Liaising with members of the State Executive to establish what is required to keep members up-to-date.
- Teaching materials, resources, Association newsletters, conference agendas and sponsor articles, agriculture correspondence, various reports, Association bulletins are among some of the information provided by the state executive which is uploaded to the Associations web site.

As Website/ICT coordinator, Ian has established a statewide network of current Agriculture resources which is readily accessible by teachers and anyone interested in Agriculture education.

Ian's reliable involvement with the Website facility has enriched the teaching of Agriculture by providing education materials required to deliver quality education to all students.

Evidence of Ian's valuable contribution to Agriculture education can be reflected in the Website hosting statistics which reflect an increasing 'hits' and 'traffic usage' to the Associations Website.

Ian Baird is an outstanding Agriculture worker and is a worthy recipient of the J A Sutherland's Award for his significant contribution to the teaching of Agriculture in NSW and for his contribution to the NSWAAAT website over the past seven years.

Compiled by Phil Hurst

Classics @ Conference

It a nutshell – it was a blast - four days where everyone was equal, invigorated and happy – well mostly, maybe the bus being towed was a serious moment...



We Thank Our Major Sponsors

AGRIFOOD
SKILLS AUSTRALIA



TAMVET



Bogged in a Drought?

Attendees

Surname	First	School	Email Address
Adams	Brian	Lithgow HS	bwadams@tpg.com.au
Barnett	Tony	Armidale HS	ian.barnett@det.nsw.edu.au
Butler	Tony	Tumut HS	tony.butler5@det.nsw.edu.au
Chirgwin	Carl	Griffith HS	carl.chirgwin1@det.nsw.edu.au
Collett	Peter	Calrossy, Tamworth	p.collett@calrossy.nsw.edu.au
Connors	Justin	Bundarra CS	justin.j.connors@det.nsw.edu.au
Coombes	Ben	Peel Tamworth HS	benjamin.coombes@det.nsw.edu.au
Cox	Nigel	Singleton HS	nigel.cox@det.nsw.edu.au
De La Monte	Anita	Bomaderry HS	rayanita@activ8.net.au
Gant	Ivan	Hunter DET	ivan.gant@det.nsw.edu.au
Harris	Graeme	Farrer, Tamworth	graeme.harris@det.nsw.edu.au
Hemmings	Stuart	Office of Schools	stuart.hemmings@det.nsw.edu.au
Hurst	Philip	Hawkesbury HS	philip.hurst@det.nsw.edu.au
Iqbal	Max	St Johns Park HS	pirmagsoon@yahoo.com
Jones	Peter	Windsor HS	psjones@zeta.org.au
Kesby	Prue	St Marys Gunnedah	mpkesby@harboursat.com.au
Melino	Mick	St Johns, Lismore	mmelino@lism.catholic.edu.au
Mukogo	Tendayi	Hennessy Catholic, Young	tendayi@mail.com
Neville	Simone	Tuggerah Lakes Sec. Coll	simone.neville@det.nsw.edu.au
Nielsen	Bronny	Calrossy, Tamworth	b.nielsen@calrossy.nsw.edu.au
Paul	Evan	Hawkesbury HS	evan.paul@det.nsw.edu.au
Pine	Belinda	DET Later Years	belinda.pine1@det.nsw.edu.au
Randall	David	Richmond HS	david.randall@det.nsw.edu.au
Rolfe	Warwick	Hunter River High	warwick.rolfe1@det.nsw.edu.au
Smith	Jade	Dunedoo CS	jade.smith7@det.nsw.edu.au
Swan	Jane	Dapto HS	jane.swan@det.nsw.edu.au
Tolley	Laura	Farrer, Tamworth	laura.tolley@det.nsw.edu.au
Webb	Gary	Finley HS	gary.webb2@det.nsw.edu.au
Westerhof	Nicolet	Elizabeth Macarthur HS	nicolet@ispdr.net.au



One for the Memory Bank – National Association of Agricultural Educators Conference
January 2012 – Adelaide

Bogged in a Drought?

So where do we start?



What is this game Laura?

Bogged in a Drought?

The start of a **HUGE** Day...



Playing
silly
buggers are
we?

We swear
this bloke
ate Cotton
— an
absolute
icon in the
industry,
so
passionate

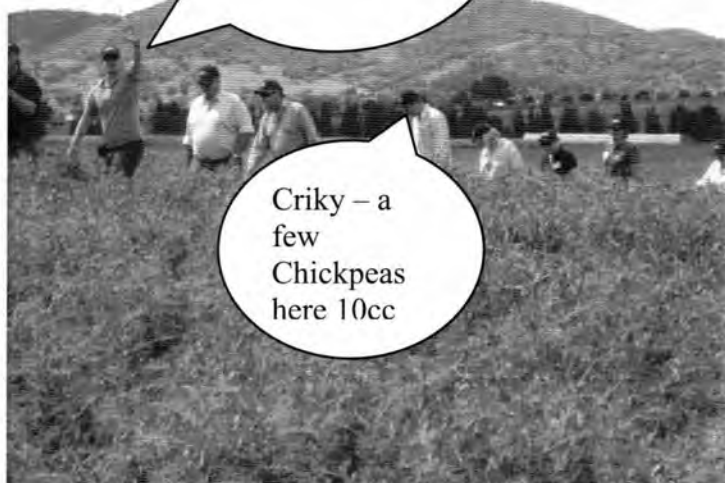


Adam Kay -
CEO



It's
not
Rust
folks

Over here Carl —
send my BAAT
over here



Criky — a
few
Chickpeas
here 10cc



Looks flatter than
Lismore anyway
Prue



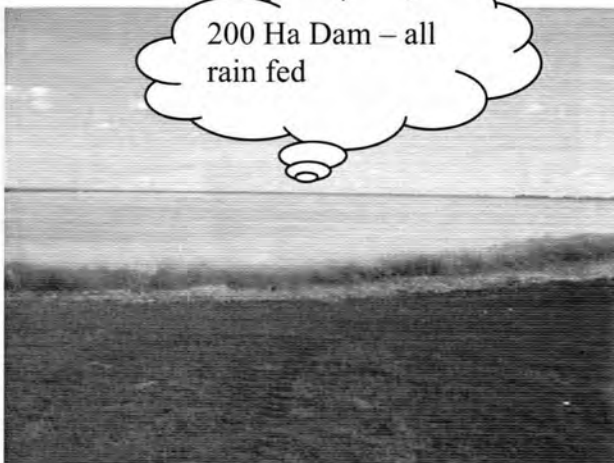
Bogged in a Drought?

Field Trip Day

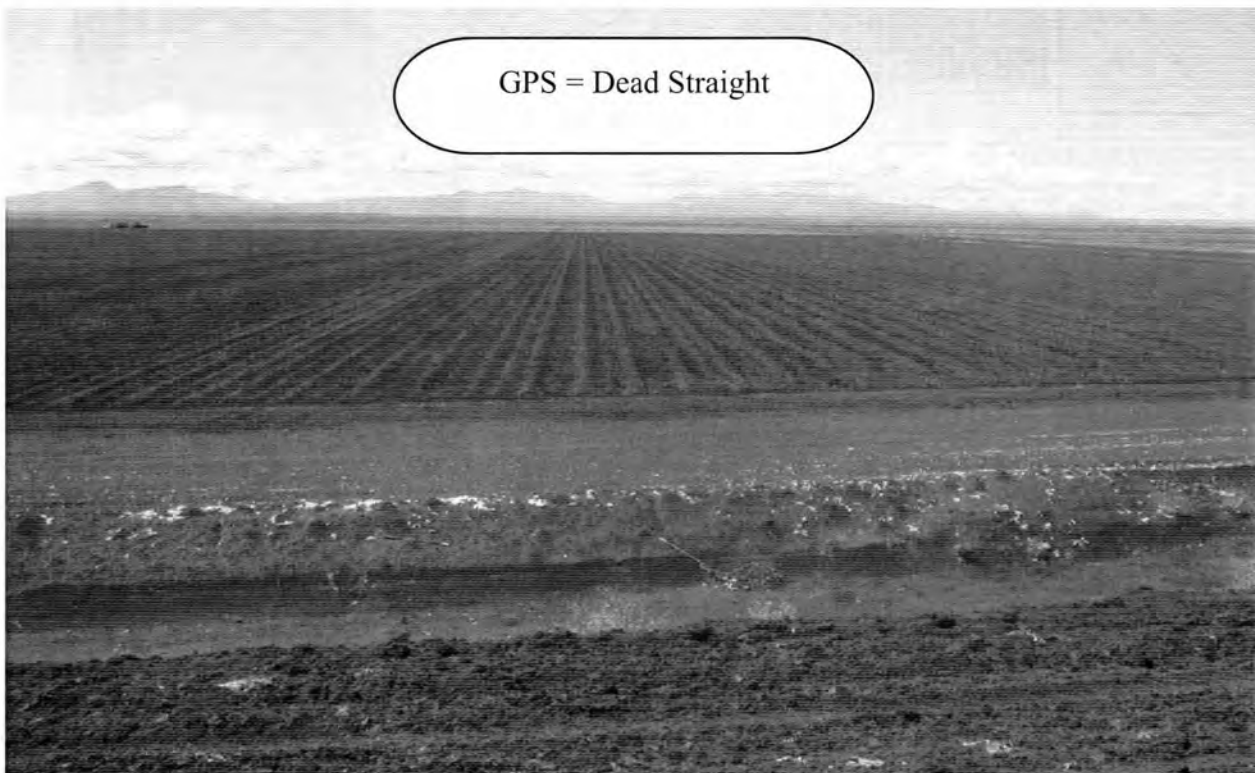
Hope
we are
all
wearing
Cotton



200 Ha Dam – all
rain fed

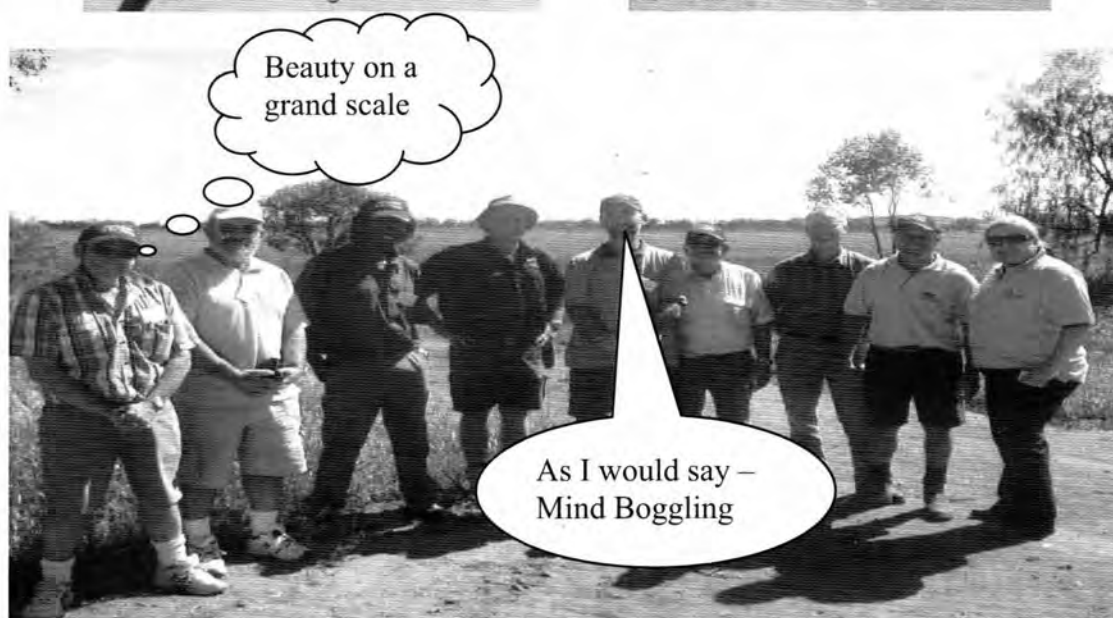
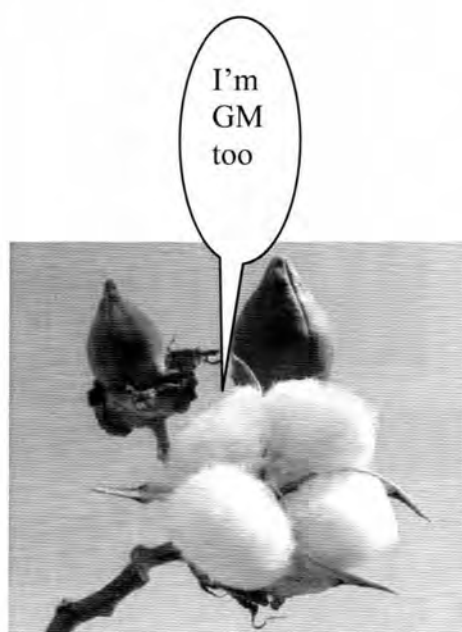


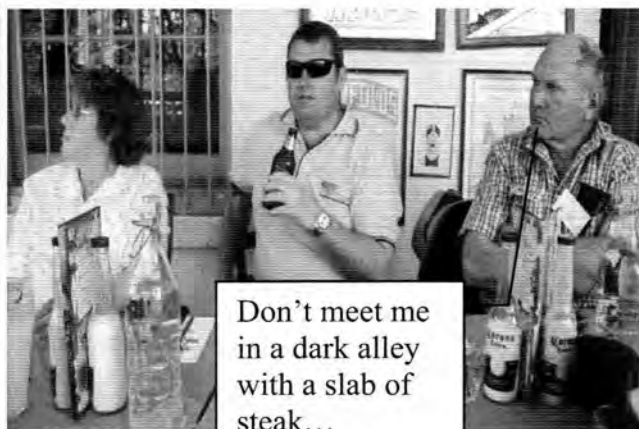
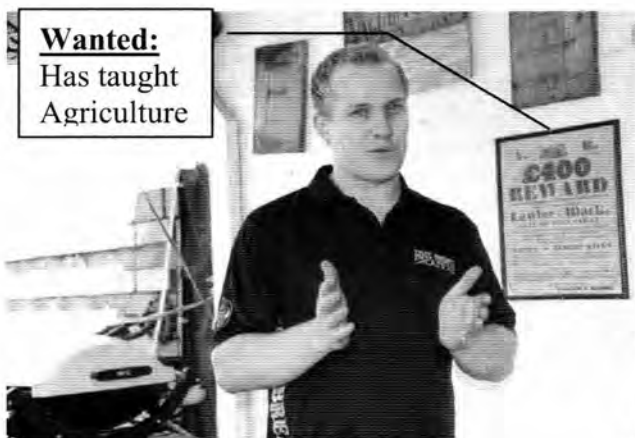
GPS = Dead Straight



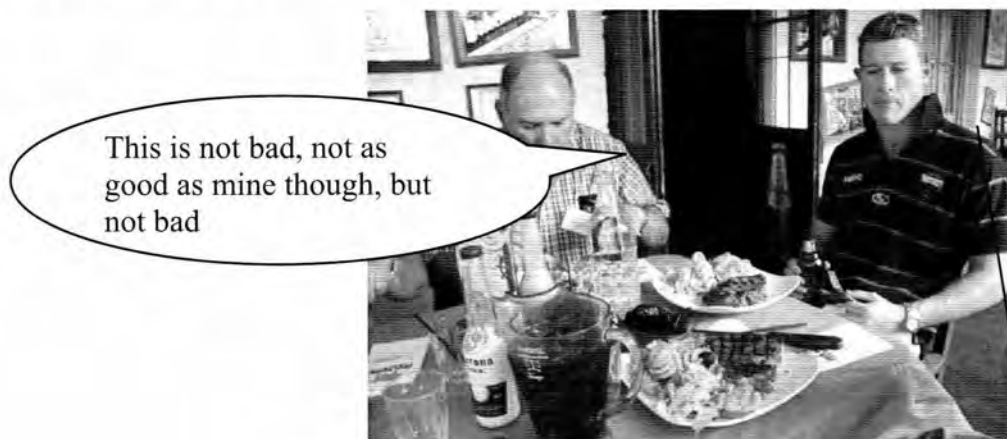
Way Out Here in the Cotton...

Bogged in a Drought?

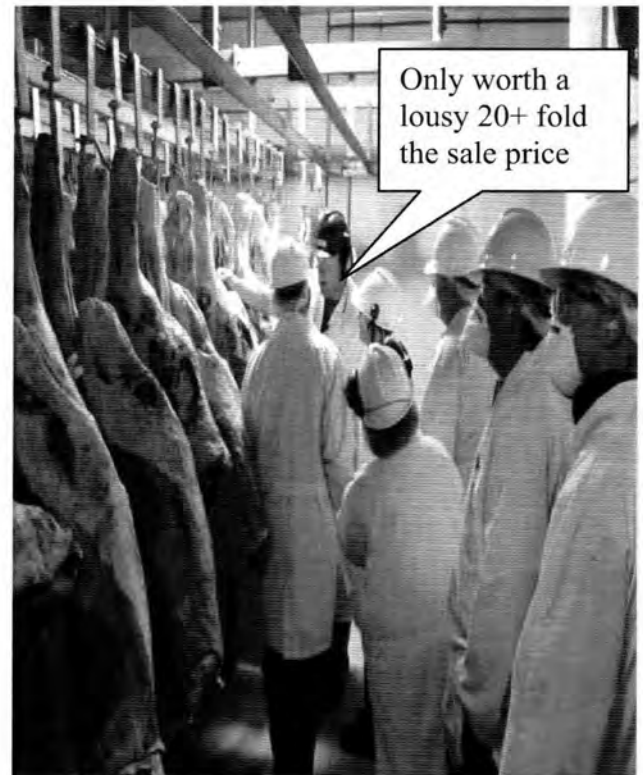
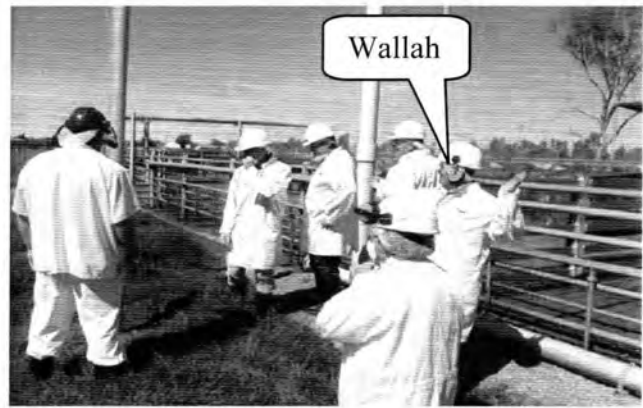
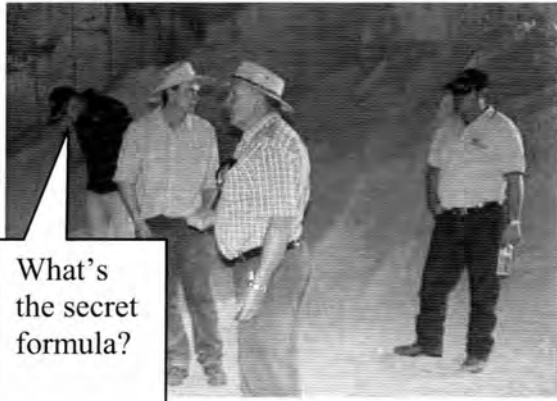




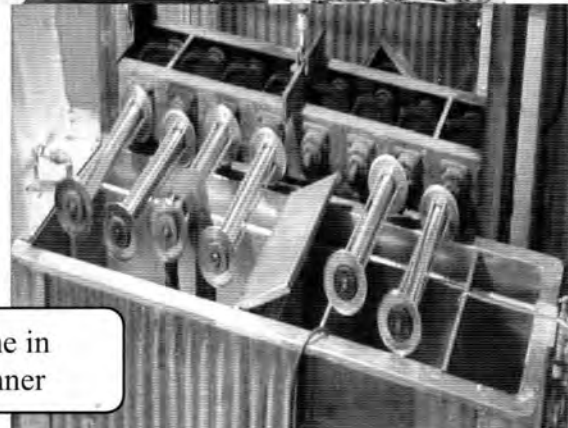
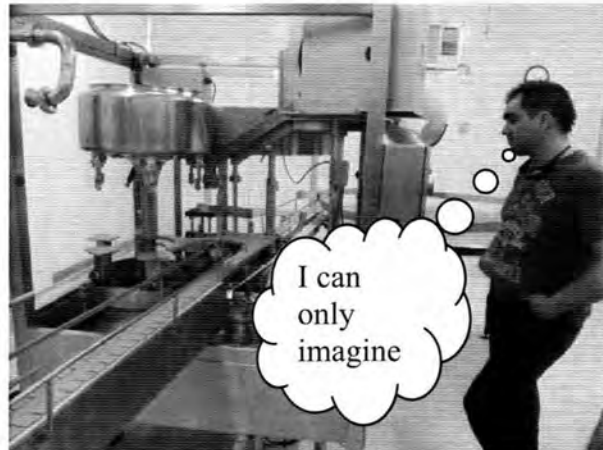
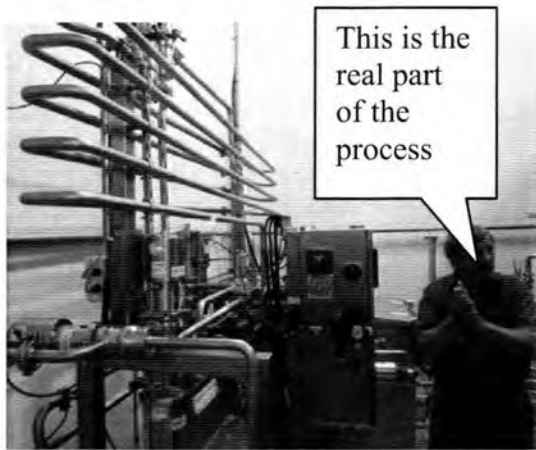
Cattle Trippers



Bogged in a Drought?



Bogged in a Drought?

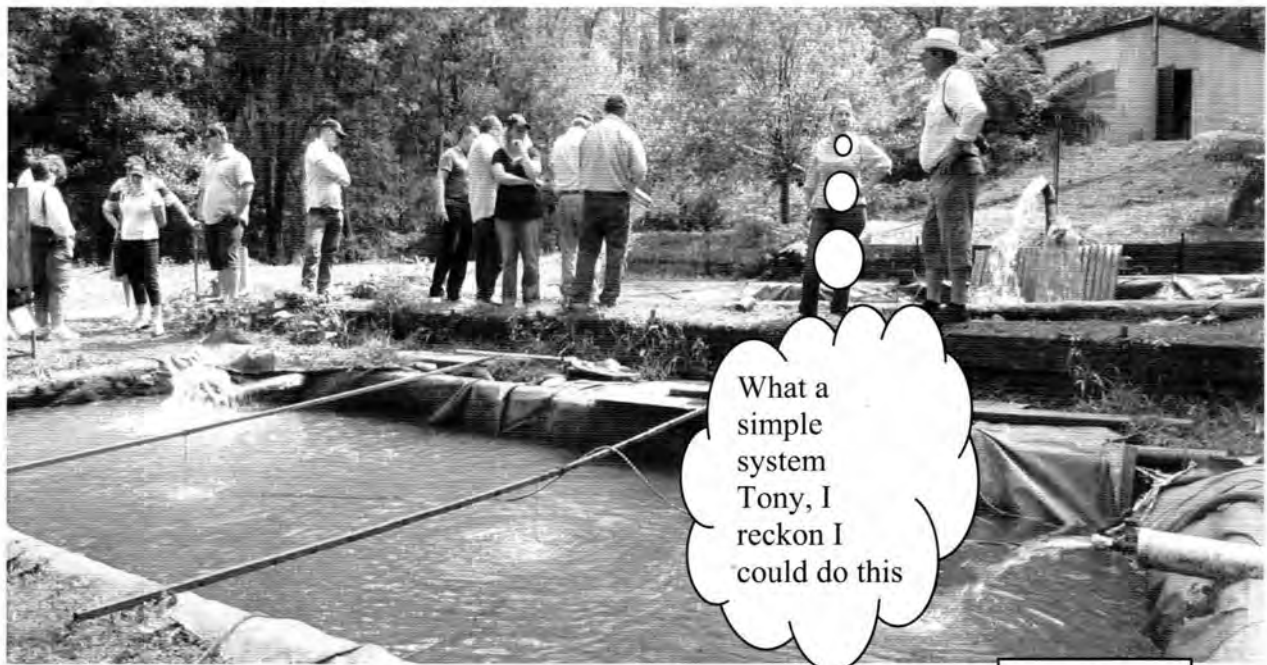


Come in Spinner



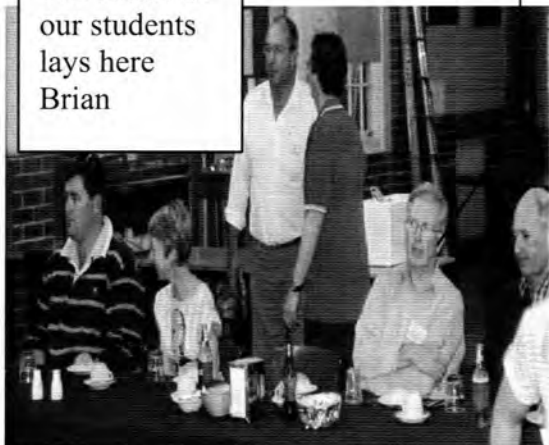
Bogged in a Drought?

Niche Trip



Bogged in a Drought?

The future of
our students
lays here
Brian



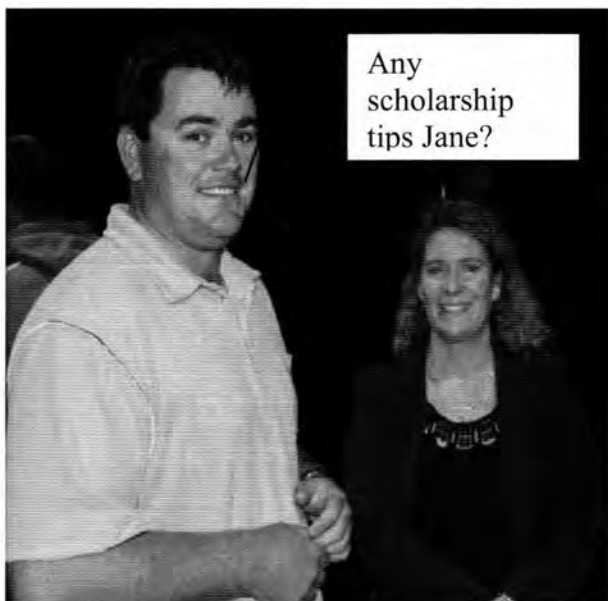
Peace
be with
you

And
also
with
you



Conference Dinner

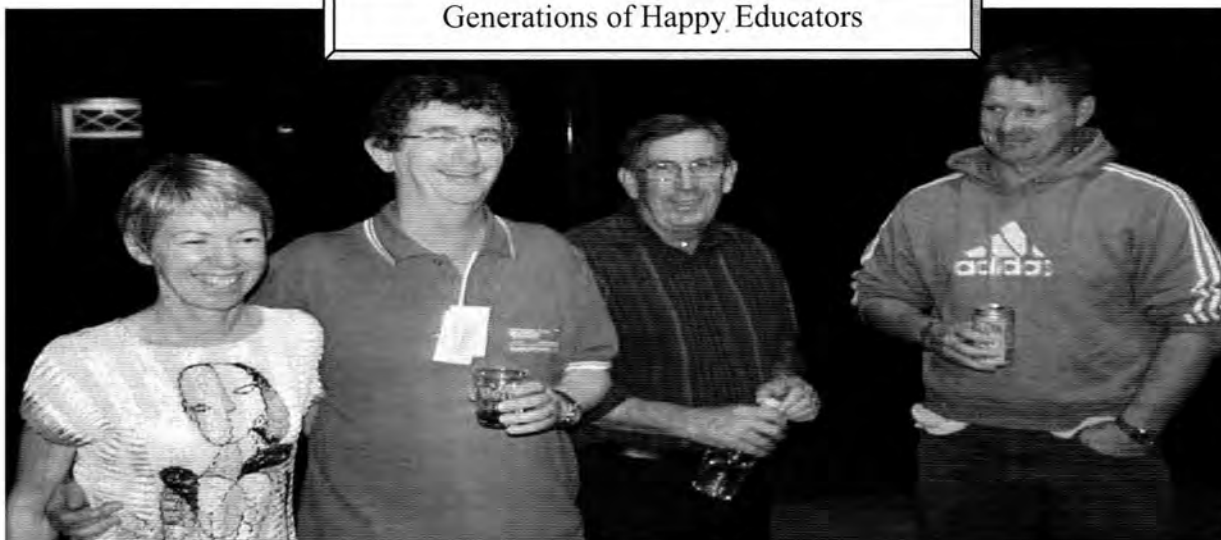
Any
scholarship
tips Jane?



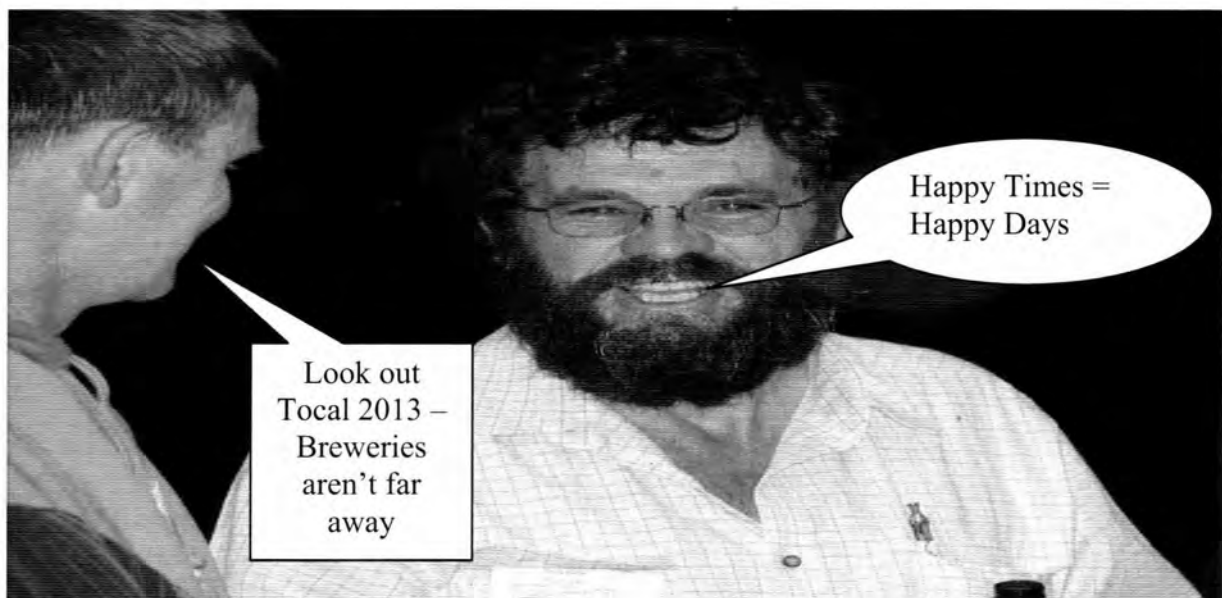
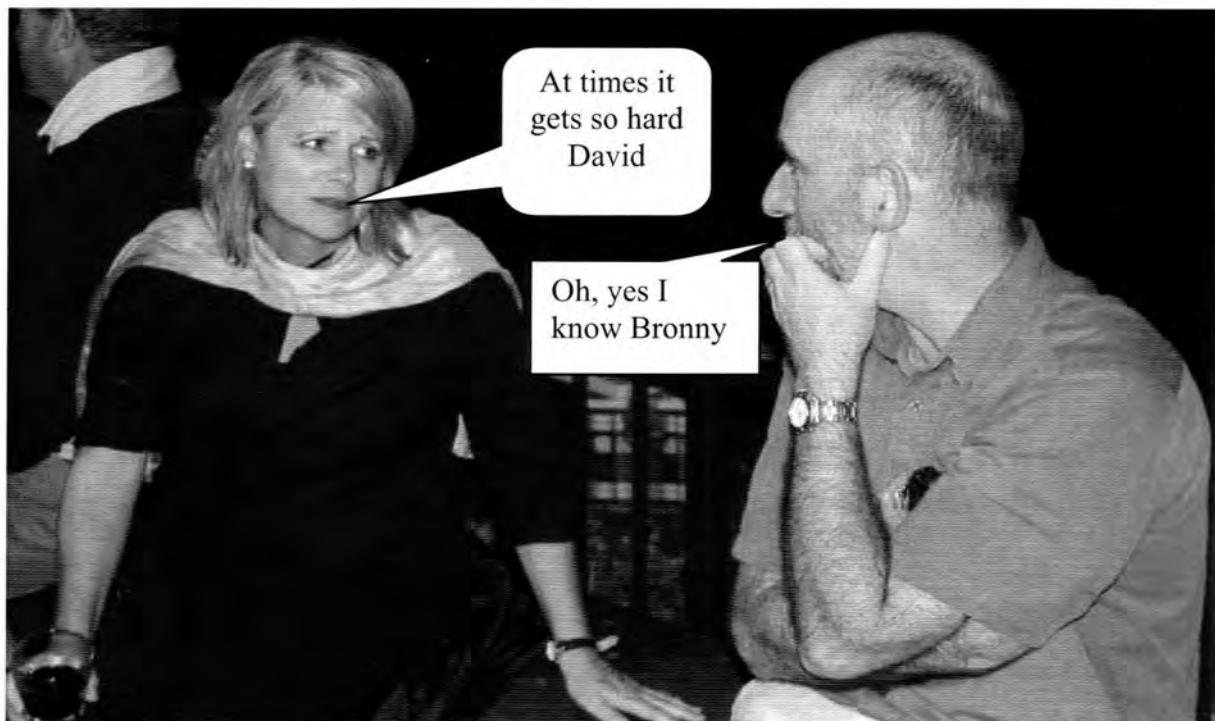
Just a few
light ones
for Big
Coxy?



Generations of Happy Educators



Bogged in a Drought?

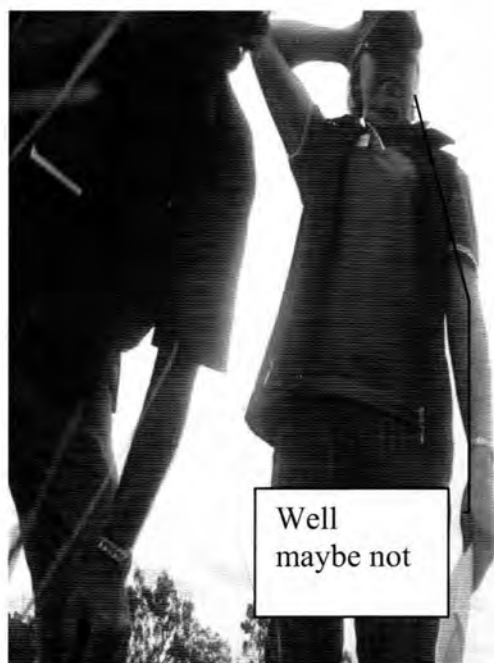


Bogged in a Drought?

Sustainability Thursday



Just there



Well
maybe not



Vegetation Tests in Action

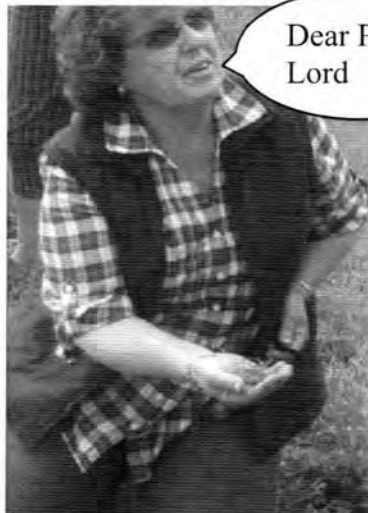


"Warwick",
'Yes Evan',
"This Rocks!!!"
'Ya' Reckon?"

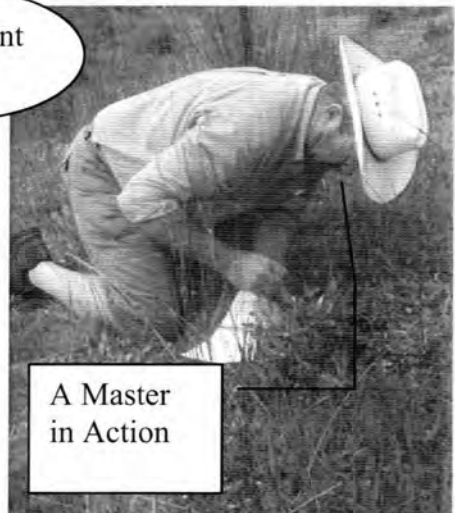
Bogged in a Drought?



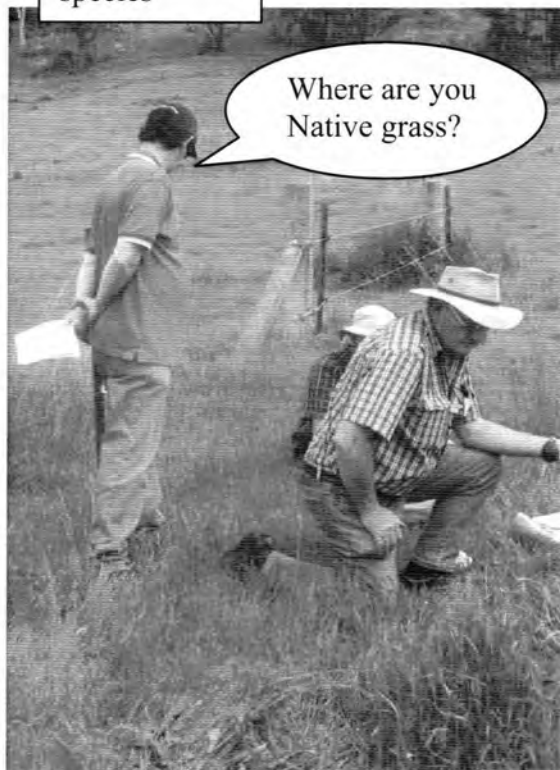
I'm spewing
that I can't
find these
species



Dear Plant
Lord



A Master
in Action



Where are you
Native grass?



A Bloody Big
Brother Here

BUGGER, BUGGER, BUGGER



Bogged in a Drought?

What's Happn'ing in My Paddock?

Anson Street Special School Agricultural Curriculum for Students with Special Needs

Anson Street Special School is situated in Orange on the Central Tablelands in NSW. It caters for students with special needs and disabilities from the Orange area. This includes Molong, Canowindra and Blayney. A total of 85 students access the school and this includes students with intellectual, physical and mental health disabilities. Classes exist for students with mild, moderate and severe intellectual and physical disabilities, along with classes for emotionally disturbed students and a tutorial centre for students with behavioural difficulties. Anson Street has a total of 12 classes for their K to 12 students with disabilities.

Anson Street's teachers have ambitious plans to improve the opportunities for their students' learning by increasing their access to a curriculum with a greater emphasis on Agriculture. The urge to bring an increased agricultural focus in the teaching of special education comes from the School Principal Garry Brotherton and the Agriculture/Special Education teacher David Gell.

Garry Brotherton says "Having Agriculture as a central part of the education of our students broadens their curriculum access by giving them more hands-on experience and access to practical activities."

"Caring for and raising plants and animals can help students with their motor skills, help them develop skills for life and can also be therapeutic for them" Garry said.

Bogged in a Drought?

Anson Street School is across the road from the Anson Street farm that is part of the Orange High School Farm. In a cooperative program with the high school, the Special School has taken it over and has been developing the site to be able to facilitate agricultural programs for the disabled.

Facilities are being developed on this land to enhance the school's cattle program, using Belted Galloways donated to the school. As well the new facilities will contain poultry housing, an established vineyard, a greenhouse, machinery shed and an Agriculture Skills Laboratory, designed to be capable of accommodating all students, including those with physical disabilities.



(Josh, Lottie, Matthew & Jessie from Anson St School Ready for Vintage)

David Gell is the Agriculture teacher and he is charting the future directions of the agricultural curriculum and the developments on the school farm needed to accommodate these directions. Early in his career David taught as the Ag teacher at Blayney High School, before leaving to follow other pursuits including experience in the building trade.

David returned to teaching Agriculture at Anson Street 3 years ago. His skills in the building trade have been very helpful, as he has managed and supervised the building projects on the school farm, ensuring that the building infrastructure is designed and built to deliver the agriculture curriculum to special education students.

David says "Planning these developments needs careful consideration to ensure that students, particularly those with physical disabilities, who made need assistance with mobility eg wheelchairs, can have easy access and be able to access all the facilities on the farm in a convenient and safe fashion."

"A good example is the work that has had to be done on the vineyard. The trestles supporting the vines had to be lowered and the laneways made narrower, to ensure easier access for students with mobility problems."

As well, the grassed pathways around the school farm have been widened and smoothed to remove the bumps and undulations, to allow students in wheelchairs to move around the farm in a stable manner. After the earthworks were done, we turfed it and we now mow it regularly to ensure that the integrity of the surface is maintained" says David.



Joe, Holly, Ash, Kim, David & Jackie ready for Cattle Parading

In addition to the Agriculture facilities, Anson Street has amenities for boating, automotive and small engine restoration, a student run canteen and student gym, modified for disabled students. These have all been developed with various government and community funding sources including BER grants.

Anson Street also hosts the Orange school's Return to School (Suspension Centre) facility. Peter Napier, formally the Agriculture teacher at Orange High School, has been running the Centre for the last 18 months. Peter also uses the Anson Street farm resources for the students from the local high schools who access his program at Centre. Peter has been working closely with David and the other staff at the school to help develop programs at the school, centred on the school farm and the teaching of agriculture perspectives.



David Gell (Anson St School) & Peter Napier (Return to School Centre)

Anson Street has been able to access a farm assistant in the last 12 months due to the demonstrated agricultural curriculum in the school. The difference this has made to the workload of the teachers is quite noticeable, they comment. Garry and David hope eventually that they will be able to get a "Teaching and Learning" tractor. Unfortunately they do not qualify under the current tractor replacement program.

The School's main farm vehicle is a Kawasaki "Mule" Utility Vehicle. Before purchasing the vehicle school staff consulted with "Farm safe" so that they could be advised as to what would be the most appropriate vehicle for the special education setting. Farm safe recommended the "Mule" as the best type of vehicle as, in their opinion, it met the safety and risk assessment criteria for use with young people. The vehicle is equipped with roll bars, flashing mobility beacon, safety harness, a low centre of gravity, low range gearing and dual operator/ instructor control as the photo below demonstrates.

Bogged in a Drought?



Anson Street Special School is involved in a number of programs that strengthens the school's connections with its local community. These programs include:

- 1) The E2 program where student from the local high schools are able to shift between schools to do courses that they otherwise could not do. The school's agricultural facilities and the tutorial centre are used one day per week to help facilitate this program.
- 2) Anson Street and the Orange High Schools are part of a management committee consisting of Hedberg Wines, Charles Sturt University, TAFE, local businesses and an accounting firm. This partnership administers the produce from the school's vineyard from harvesting until the wine making process is completed and the wine is sold.
- 3) A partnership with Newcrest Cadia Valley Goldmine will result in the school supplying saplings and tube stock to the mine for rehabilitation. This plant stock will be provided from stock propagated in the school's new Greenhouse.
- 4) The transition of the school's graduates to Wangarang Industries in Orange. Many of the school's partnership businesses are also partners with Wangarang. The experiences and skills the students obtain through the agricultural programs at Anson Street should ensure that the students will have a significant role to play in their local community when they leave school.

Many of us, as teachers, have special education units based in our schools or have students with special needs and disabilities integrated into mainstream classes. Programs with an agricultural emphasis present unique opportunities to improve outcomes for these students provided they are properly planned, resourced and implemented. My visit to Anson Street in August this year, demonstrated to me the great potential that the application of adapted agricultural curriculum, could have for equipping students with disabilities and special needs to skill and educate them for a more productive education and to prepare these students for life after they leave school.

Peter Crick

Muswellbrook High School

With the assistance of Garry Brotherton – Principal Anson Street Special School and David Gell – Teacher of Agriculture at Anson Street Special School



Jay feeding the Galloways



All Hands on Deck for Harvesting



Anson St School, Orange



Check out the wider rows – for wheelchair access

Central West Ag/PI Teachers Information Weekend April 2011

Bogged in a Drought?



P.I Across the State

Bogged in a Drought?

PI Report from Bundarra Central School: Northern Schools Steer Competition

Each year the Northern Schools Ag/PI teachers group hold a steer competition. This involves the students selecting, feeding/maintaining and preparing the cattle for a hoof and hook competition.

This year's competition was held in Inverell (organised by 3 Inverell high schools; Macintyre High School, Inverell High School and Holy Trinity School). Several schools attended with over 100 students involved. Students were able to participate in parading, junior judging and finally the main event, the steer competition.

The preparation of the competition entails schools selecting cattle which will hopefully meet the Woolworths grid specifications by the end of their 100 days on grain, whereby the cattle are then sold to Cargill (Tamworth) who provide industry professionals to judge the carcass part of the competition.



Classes range from Lightweight (>325kg – sold via an auction at the end of the competition due to not meeting Woolworths Specs) through to Heavyweight (<650kgs). Students are required to organise feed rations, maintain livestock health and finally train cattle to parade. This involves the grooming, leading and final presentation of animals.

This event runs hand in hand with the Primary Industries VET framework course; RTE3133A (Prepare Livestock for Competition) and others while also running very close to the NSW curriculum (animal production). This has proved to be a great resource in the New England region allowing students and schools to compete at an industry level while also providing a social forum for students and teachers.

Next year's Northern Schools Steer Competition is to be held at Coonamble with the organising teacher Mr Adam McRae. If any other schools wish to participate in October 2011 please contact Adam on adam.macrae@det.nsw.edu.au

Justin Connors (Bundarra Central School)



PRIMARY INDUSTRIES

Broken Hill High School

Quality Education in a Caring & Pleasant Environment

Primary Industries, at Broken Hill High School, is only offered through Stage 6 VET. Approximately 10-15 students choose this course as part of their senior studies each year, and in doing so attempt to achieve their Certificate II in Agriculture over 240 hours (2 years). In addition to the main student body, students from the school's support unit (special ed. unit) are also regularly keen to participate in this course.

Students are required to complete the core components of the course, including:

- Install, maintain and repair fencing
- Treat weeds
- Follow OHS Procedures
- Observe environmental work practices
- Provide basic first aid
- Work effectively in the industry
- Apply chemicals under supervision
- Participate in workplace communications
- Observe and report on weather



Jhordan Whitehair practising his end ties and figure of eight fencing knots.



Gavin Brook and Sophie Wardle monitoring the local weather.

In addition to these components, students also achieve the following competencies:

- Operate tractors
- Carry out basic electric fencing operations
- Operate basic machinery and equipment
- Maintain properties and structures
- Handle livestock using basic techniques
- Pot-on plants
- Plant trees and shrubs
- Assist agricultural crop establishment
- Lay irrigation and/or drainage pipes



Gavin Brook, Krystal Morton, Dylan Trebilcock and Sophie Wardle attaching the PTO and rotary hoe to the tractor.

Students achieve these competencies on and off the school site and participate in two work placements, both of at least 35 hours. It is often difficult for students to find work placements that are accessible, due to long distances, and that cater to the required skills for this course. This year, students worked at several local Stations, including “Tempo”, “Willangee” and “Nandooka”; at two local nurseries, Pots and Plants and Picton Plants; and with the parks and gardens crew of Broken Hill City Council.

Dylan Trebilcock, Gavin Brook and Krystal Morton planting new olive trees in our olive grove.



The sole trained Agriculture teacher in all of the ‘Hill’, Di Toynton, believes that PI is an extremely beneficial course for those students who love agriculture, but are more suited to the practical aspects of the industry. Both students and staff enjoy this course greatly and are looking forward to continuing their industry based knowledge and skills into the distant future. ☺



Dylan Trebilcock inserting supporting stays for our newly establishing olive trees.



Our special education student, Gavin Brook, demonstrating his skill on the tractor.

Primary Industries at Dunedoo Central School

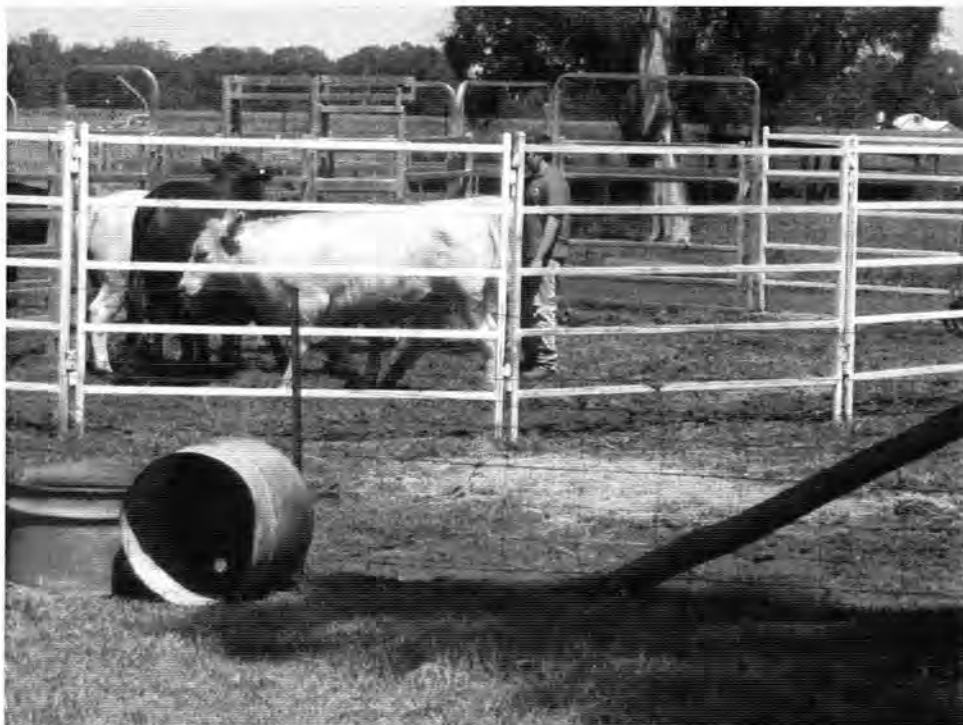
Primary Industries at Dunedoo is taught in both Year 11 and 12 and as part of the Western Access Program. The Western Access Program involves the use of video conferencing to deliver the course to students across other central schools in the Dubbo and Warrumbungle's areas.

Students undertake a program that incorporates competencies related to animal and cropping, with horticulture being an area of study for the students on the Western Access Program. Students who study Primary Industries at Dunedoo, complete work placement in the local area or around the Dubbo or Mudgee areas.

Students on the Western Access Program also complete work placement in their local area or complete a weeks' block in Dubbo. Students in the past have completed work placement on local properties, stock and station agents or the local produce store.



DCS PI & The DCS Show Team Preparing Cattle for Scone Beef Bonanza



Simulated workplace is also used for students on the Western Access Program in Year 11 to assess their practical skills before completing work placement in Year 12 on farms. In the past, students have completed this simulated work placement at Condobolin Research Station in more recently at the Trangie Agriculture Research Station. Student during this time follow farm workers and have participated in activities ranging from sheep and cattle work, fencing, tractor driving and tree planting.

Students on the Western Access Program complete a weeks' training at Dubbo TAFE during term 2 of Year 11. During this week students are assess by TAFE staff in the competencies of treat weeds, apply chemicals under supervisions, operate tractors and operate ride on vehicles. This year students at Dunedoo have also completed training through the Dubbo TAFE, with students completing a bike course with Gulgong High School at Gulgong and with a Tractor course to be completed later in the year.



Bogged in a Drought?

Primary Industries at Griffith High School 2009/2010



RTC2701A – Follow OHS Procedures



RTC2704A – Provide basic first aid

Bogged in a Drought?



RTC2309A – Operate Tractors



RTE2308 – Operate Ride on Vehicles



RTE2115A, RTE2118A – Livestock

Bogged in a Drought?



RTE2011A – Assist Agricultural Crop Establishment



RTC2209A – Install, maintain and repair fencing

(By Aaron Flagg – Man of Few Words)

Bogged in a Drought?



Primary Industries at Dapto High School

Our local area

Dapto High School is on the South Coast of New South Wales about 15 minutes South of Wollongong. We are in an area that was predominantly dairy country however Dapto's population is expanding and many of the farmers now farm houses instead of dairy cattle. In the immediate area there are no working dairy farms and any remaining farms run beef cattle.

We are within half an hour of coastal towns such as Kiama and Gerringong and dairy farms at Albion Park and Jamberoo. There are a couple of vineyards within half an hour and several nurseries, golf courses, a mushroom farm, olive grove and the Wollongong Botanic Gardens.

There is also a thriving race horse industry at Kembla Grange.

The school

We have about 15 acres of farmland at the school with Mullet Creek as our boundary. We have a poultry laying enterprise, beef cattle a dairy cow and usually run about 5 cows and calves, and 5 ewes and a ram. We also have a large vegetable garden and a small orchard. Students gain a variety of experiences at the school.

The course

Primary Industries is run in both Year 11 and 12 where the class sizes usually start off with about 12- 16 in year 11 and finish with between 4 and 6 completing and attaining their HSC and Certificate II in General Agriculture. Students all complete the mandatory units of the course over year 11 and 12 and the electives we do are:

- Feed Livestock
- Muster and move livestock
- Handle livestock using basic techniques
- Operate tractors
- Operate basic machinery and equipment
- Carry out basic electric fencing operations
- Operate ride -on-vehicles
- Establish horticultural crops



Cattle in the school cattle yards



Our sheep used in a prime lamb enterprise



Students grooming the calf



The school cattle yards with calf cradle



Student parking the ATV in the shed



Weather observations with our Kestrel

Work-placement

Work placement positions are varied, however unfortunately there are not many "real" Agricultural placements available as many farmers are reluctant to take students and many students don't like to get up early to milk on dairy farms or have transport to get there and back.

Bogged in a Drought?

Students go to nurseries (usually spending their time potting up plants and weeding), golf courses (green keeping), bowling clubs (green keeping), Wollongong Botanic gardens (where they do horticultural related activities), Veterinary clinics (animal care) and some go to a couple of local dairies. We also have a fantastic local bloke who does bush care related work and subcontracting where students learn weed control and bush regeneration.

Awards received by students

Over the last 6 years that Primary Industries has run at Dapto High School some of our students have been lucky enough to receive awards at our local Illawarra Workplace Training Awards. Students can either be nominated by their teacher or the workplace. All nominated students are invited to attend a gala event where they have a beautiful dinner and receive a certificate. Successful recipients are given another certificate and a gift voucher.

In 2006 our first year 12 went through and Joel Dorries was awarded Vet Student of the Year in Primary Industries at the workplace training awards. Joel was a keen student who went on to complete a dairy traineeship and then a dairy apprenticeship at the farm he completed his work placement at.

Joel was also successful at winning the Premiers' Vet Student of the Year Primary Industries award where he received a cheque for \$2000.

In 2007 Adam Rupa was successful enough to be awarded Vet Student of the Year in Primary Industries at the workplace training awards. He went on to work in the land conservation field.

In 2008 it was Adam Johnson. In 2009 Aaron Smith was successful and he went on to work for a local dairy farmer and a stockfeed merchant before gaining an electrical engineering cadetship.

Compiled by 2009 NSW Premiers Agriculture Scholarship Recipient Jane Swan

The Autumn Muster

For Agriculture & Horticulture Teachers



This is an opportunity for Agriculture and Horticulture teachers to update their knowledge and skills, and discuss current developments.

You will:

- Gain confidence when aligning requirements of the NZ Curriculum with Agriculture and Horticulture teaching.
- Engage in workshops and field trips.
- Participate in new developments in Agriculture and Horticulture production.
- Network with Agriculture and Horticulture educators and industry personnel.

Dates: 17 – 21st April, 2011
Venue: Telford Rural Polytechnic, Balclutha
Cost: Live in only \$464 (If paid by Early bird date 25/02/11, if paid after this date an additional \$100 applies)
Course Organisers: Andrew Thompson, Ross Redpath, Mike Woodlock & Kerry Allen
Registrations close 11 March 2011



TRCC assists most teachers with travel costs. Please register early to ensure travel assistance. TRCC is supported by the teachers' unions: TEU, NZEI and PPTA.

For more information and to register online please visit www.trcc.org.nz, call 0800 872 211 or email info@trcc.org.nz

Subscribe free online to hear about courses specific to your areas of interest @ www.trcc.org.nz

Bogged in a Drought?

N.S.W. Association of Agriculture Teachers Inc



www.nswaat.org.au

ABN Number: 81 639 285 642

President:

Graeme Harris
Farrer Memorial Agricultural
High School
Calala Lane
Tamworth, 2340 NSW
02 6764 8660 (w)
02 67 648 669 (f)
graeme.harris@det.nsw.edu.au

Secretary:

Nicolet Westerhof
Elizabeth Macarthur High
School
Narellan NSW 2567
02 4646 1899 (w)
02 4647 1569 (f)
nicolet.westerhof@det.nsw.edu.au

Treasurer:

Laura Tolley
Farrer Memorial Agricultural
High School
Calala Lane
Tamworth, 2340 NSW
02 6764 8660 (w)
02 67 648 669 (f)
treasurer.nswaat@gmail.com

Technology & Communication:

Ian Baird
Murrumburrah High
Murrumburrah NSW
02 9484 5732 (w)
ian.baird@det.nsw.edu.au

BAAT Crew:

Carl Chirgwin
Griffith High School
Coolah St,
Griffith NSW 2680
carl.chirgwin1@det.nsw.edu.au

Jade Smith
Dunedoo Central School
Digilah St
Dunedoo NSW 2844
jade.smith7@det.nsw.edu.au

Justin Connors
Bundarra Central School
Bowline St
Bundarra NSW 2359
justin.connors@det.nsw.edu.au

www.nswaat.org.au

2010

The Association needs **YOU** to become a financial member.

To maintain the viability of the Agriculture Teachers Association in NSW & allow the executive to address the issues confronting education we require your financial support by you becoming a financial member.

Do not delay; send your completed membership form & payment to the **treasurer:**

Laura Tolley
Farrer Memorial Agricultural
High School
Calala Lane
TAMWORTH
NSW 2340
Phone: 02 6764 8660
Fax: 02 67 648 669



**A
g**



TREASURER

Laura Tolley
FMAHS
Calala Lane
TAMWORTH
NSW 2340

**M
e
m
b
e
r
s
h
i
p**

From the President's Desk:

Membership of the Association

[^] *Membership fees to the NSW Association of Agriculture Teachers are now due:*

If you are:

- *not financial or*
- *a new graduate or*
- *your membership status has elapsed*

& you require

- *Resources.*
- *Aggie contacts.*
- *Information on Agriculture Teachers conferences.*
- *Assistance in your professional duties.*

**COMPLETE THE
"APPLICATION FOR
MEMBERSHIP"
FORM ON THE
NEXT PAGE
&
SEND TO THE
ASSOCIATION'S
TREASURER WITH
YOUR PAYMENT.**

then you need to join the Association to assist in maintaining:

- *the Association's strength & support across the state,*
- *the place of your subject in the school curriculum,*
- *networking throughout the state,*
- *delivery of a BAAT twice a year,*
(Bulletin Association of Agriculture Teachers)
- *your say in Agriculture & PI teaching issues,*
- *access to professional readings,*
- *use of nswaat.ning.com for resource sharing.*

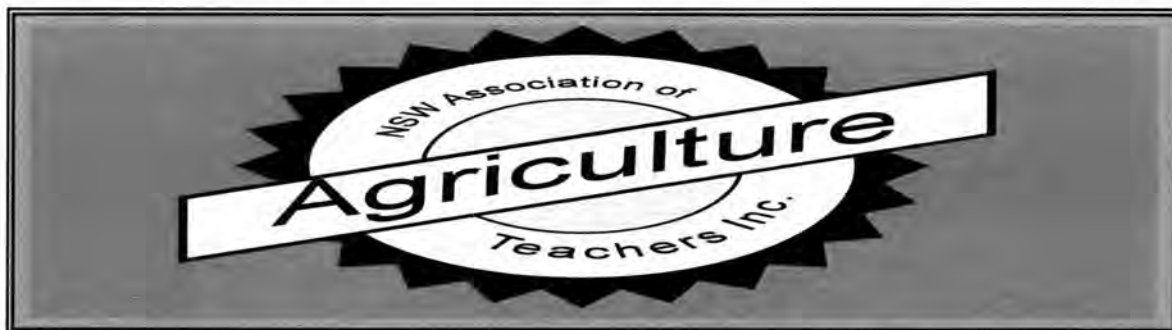
NSWAAT WEBSITE

www.nswaat.org.au

Please visit the website and catch up on what has been happening.

There are lots of photos from the Biennial Conference and many resource links to assist your teaching of Agriculture and Primary Industries.

Please use nswaat.ning.com



THE N.S.W. ASSOCIATION OF AGRICULTURE TEACHERS

TITLE: _____ NAME: _____

SCHOOL: _____

PHONE: _____ FAX: _____

EMAIL: _____

POSTAL ADDRESS: _____

Post Code: _____

MEMBERSHIP FEES:

* 1 YEAR: _____ \$60 (2011)

* 2 YEARS: _____ \$120 (2011-12)

N.B. Subscription applies for period from January 2010 for either one or two year period.

Subscription Required: _____ Year(s)

Amount Enclosed: \$ _____

Direct Deposit Option: To pay via direct deposit, please post this membership form and use the following details for internet banking transfers.

BSB: 082 939

Account Number: 63975 7522

Reference: Your name and "membership".

Please forward completed form with payment to:

Laura Tolley

Farrer Memorial Agricultural High School

Calala Lane

Tamworth NSW 2340 treasurer.nswaat@gmail.com

*"The NSW Association of
Agriculture Teachers is not
registered to collect GST"*



Membership

• **Current Association
Membership**

• **Membership Application**

*14th November
2010*

Valid Until 31/12/of stated year	Given Name	Surname	School
Associate Lifetime	Sally	Bannerman	SACEC
Lifetime	Ian	BAIRD	Murrumburrah High School
Lifetime	Tony	BARNETT	Armidale High School
Lifetime	Don	BARTHOLOMEW	
Lifetime	Lisle	BROWN	
Lifetime	Tony	BUTLER	Tumut High School
Lifetime	Rod	FRANCIS	Charles Sturt University, Wagga
Lifetime	Phil	HURST	Hawkesbury High School
Lifetime	Peter	JONES	Windsor High School
Lifetime	John	LEE	Glen Innes High School
Lifetime	Robyn	O'LEARY	Finley High School
Lifetime	Norm	ROBINSON	
Lifetime	Trevor	SEWELL	
Lifetime	Jenni	WILKINS	Birrong Girls High School
Lifetime	Gail	ROBERTS	James Ruse Agricultural High School
2010	Teacher of Ag		Bomaderry High School
2012	Teacher of Ag		Broken Hill High School
2011	Teacher of Ag		Camden High School
2010	Teacher of Ag		Colo High School
2011	Teacher of Ag		Griffith High School
2010	Teacher of Ag		Koorringal High School
2010	Teacher of Ag		Lithgow High School
2011	Teacher of Ag		Mudgee High School
2011	Teacher of Ag		Scots School, Albury
2011	Teacher of Ag		St Francis College, Leeton
2011	Teacher of Ag		Wauchope High School
2011	Teacher of Ag		Wyong High School
2011	Teacher of Ag		Young High School
2012	Australian National Field Days, Orange		
2010	Bryon	ADAMSON	Corowa High School
2010	Bob	ANDERSON	Knox Grammar School
2010	Graeme	ANDERSON	Primary Industries Centre, Wagga
2010	Phil	ARMOUR	Yass High School
2011	Billinda	AULD	La Salle Academy
2011	Fiona	BAILEY	Musselbrook High School
2010	Carolyn	BAKER	The Henry Lawson High School
2010	David	BAKER	St Gregory's College
2010	Naomi	BAKKER	Hay War Memorial High School
2011	Colin	BARKER	Lyndhurst
2010	Norm	BALZER	Casino High School
2011	Barbara	BANNISTER	XSEL Virtual Selective High School
2010	Dianna	BEALE	Student Teacher
2010	Craig	BOURNE	Singleton High School
2011	Graham	BRAMLEY	St Paul's College
2010	Louisa	BRIGGS	Brisbane Waters Secondary College
2010	Jacquie	BROOKSBY	Student Teacher

2010	Eddie	BUCKINGHAM	Mullumbimby High School
2011	Tracey	BURTON	Plumpton High School
2011	Melanie	CAMPBELL	Moree Secondary College
2010	Dale	CHADWICK	Gundagai High School
2010	Megan	CHANDLER	Narara Valley High School
2011	Carl	CHIRGWIN	Griffith High School
2010	Caroline	CLATWORTHY	Macquarie Fields High School
2010	Caroline	COLEMAN	Northholm Grammar School
2010	Jack	COLLINS	Wingham High School
2010	Nikia	COLLINS	Hillston Central School
2010	Helen	COLMAN	Molong Central School
2010	Ben	COOMBES	Peel High School
2010	Justin	CONNORS	Bundarra Central School
2010	Nigel	COX	Singleton High School
2011	Ian	CRABB	Queanbeyan High School
2010	David	CRICK	Barham High School
2011	Peter	CRICK	Musselbrook High School
2010	Elena	DAGHER	Bossley Park High School
2011	Anita	DE LA MOTTE	Bomaderry High School
2010	Gerard	DELANY	St Columba's High School
2010	Robert	DOLMAN	Dunedoo Central School
2010	Catherine	DOVE	Oak Flats High School
2010	David	DRURY	Waldobo Community School
2010	Christine	DUVER	Student Teacher
2011	Nicole	DWYER	Gloucester High School
2010	Max	EDEN	Taree High School
2010	Cameron	ELLISON	McAuley Catholic School Tumut
2011	Ian	FAWBERT	Northholm Grammar School
2010	Mark	FISHER	Walcha Central School
2010	Rob	FORSBERG	St Josephs College
2012	Ivan	GANT	Hunter Central Coast Regional Office
2010	David	GELL	Anson Street School
2010	Cliff	GEORGE	Peak Hill Central School
2010	David	GILLARD	Wagga Wagga High School
2010	Genevieve	GITTOES	NSW Farmers Federation
2010	Helen	GLOVER	Macarthur Anglican School
2010	Milton	GOWER	Macarthur Anglican School
2010	Melissa	GRABHAM	Ashford Central School
2011	Richard	GRANT	James Ruse Agricultural High School
2010	Neil	GRIFFITH	Irrawang High School
2010	Nicky	GUNNING	Junee High School
2010	Stuart	HEMMINGS	DET, Sydney
2011	Graeme	HARRIS	Farrer Memorial Agricultural High School
2010	Adrian	HARRISON	St Gregory's College
2010	Lois	HARRISON	Blayney High School
2010	John	HAWKINS	Wingham High School
2011	Colin	HAWTHORN	Red Bend Catholic College
2010	Robert	HENDERSON	Tomaree High School
2010	Stuart	HILL	Pennant Hills High School
2010	Brian	HOLLINGWORTH	Mendooran Central School
2012	Sue	HOPE	Goulburn High School
2010	Mark	HOPKINS	Bega High School

2010	Peter	HUMPHRIES	Deniliquin High School
2011	Judith	ING	Student Teacher
2011	Maqsood	IQBAL	St Johns Park High School
2011	Grant	JACKSON	Gosford High School
2010	Karen	JOHNSTON	James Ruse Agricultural High School
2012	Ken	JONES	Blayney High School
2010	Ian	JUDD	Kyogle High School
2011	Prue	KESBY	St Mary's College
2010	John	KILLEEN	Bossley Park High School
2010	M	KOLLER	Nagle College
2010	Brian	LAWRENCE	The Riverina Anglican College
2010	Tracey	LEE	Albury High School
2011	Adam	MACRAE	Coonamble High School
2010	Scott	MACKENZIE	GRC Penshurst Campus
2010	Steve	MAGINNITY	Alstonville High School
2010	Bruce	MANKTELOW	Scone High School
2011	Jenni	MANNA	St. Joseph's College
2010	Diana	MARTIN	Murwillumbah High School
2010	Patrick	MCCANN	Flinders Christian Community College
2010	Ross	McGREGOR	Hurstone Agriculture High School
2010	Jacqueline	McINTOSH	Crookwell High School
2011	Owen	McLAUGHLAN	Canowindra High School
2010	Allan	McMILLAN	Wagga Wagga High School
2010	Mick	MELINO	St Johns College
2011	Luciano	MESITI	Student Teacher
2010	Christina	MIKAN	St Ignatus
2010	Tim	MINEHAN	Young High School
2012	Tendayi	MUKOGO	Hennessy Catholic College
2010	Fiona	MULHALL	Chevalier College
2010	David	MULLER	St John Evangelist Catholic High School
2011	Rochelle	MUTTON	Mackillop College
2010	Peter	NAPIER	Anson St School
2010	Mufutau Afolabi	NASIRU	Sarasas Witaed Suksa School, Bangkok
2010	Simone	NEVILLE	Tuggerah Lakes Secondary College
2010	Trevor	NEWMAN	Nowra High School
2010	Bronwyn	NIELSEN	Calrossy Anglican School
2010	Steve	NOTT	Carinya Christian School
2011	Craig	O'BRIEN	Moss Vale High School
2010	Nicole	O'BRIEN	Chevalier College
2010	Phillip	OLIVER	Bankstown Grammar
2010	Fiona	PAIN	Student Teacher
2010	Evan	PAUL	Hawkesbury High School
2010	Emily	PEARN	Deniliquin High School
2010	Cathy	PERRI	Wollondilly Anglican College
2010	Belinda	PINE	DET Office, Tamworth
2011	Georgina	PRICE	Coleambally Central School
2010	Graham	QUINTAL	Pennant Hills High School
2010	David	RANDALL	Richmond High School
2010	Stephen	RAWLINSON	Pittwater High School
2010	Gail	ROBERTS	James Ruse Agricultural High School
2010	Warwick	ROLFE	Hunter River High School
2010	Paul	ROSS-NEW	Kingswood High School

2010	Katie	ROWE	Gulargambone Central School
2011	Maryann	SCHILLER	Hennessy Catholic College
2010	Nadine	SIBBALD	McCarthy Catholic College
2010	Nicole	SIMMONS	Student Teacher
2010	Warwick	SHAW	Woodenbong Central School
2010	Jade	SMITH	Dunedoo Central School
2010	Paul	SMITH	Cowra High School
2010	Deb	SNAITH	Macintyre High School
2010	Geoff	SPENCE	Brisbane Waters Secondary College
2010	Gianni	STANDING	Binnaway Central School
2010	Stuart	STOUT	Leeton High School
2011	Jane	SWAN	Dapto High School
2010	A.J	THOMAS	Armidale High School
2010	Laura	TOLLEY	Farrer Memorial Agricultural High School
2010	Stephen	TRICKETT	Billabong High School
2010	Ron	VICTOR	Morisset High School
2010	Tracey	WATSON	Oaks High
2010	Gary	WEBB	Finley High School
2010	Nicolet	WESTERHOF	Elizabeth Macarthur High School
2012	Wayne	WHALE	St Paul's College
2010	Doug	WHITE	Manilla Central School
2011	Richard	WHITE	Balranald Central School
2011	Maurice	WOODMAN	Murray High School
2011	Jennifer	WOODWARD	Byron Bay High School
2012	Beth	WORTHY	Sapphire Coast Anglican College
2010	Jan	YOUNG	Murrumburrah High School

*31/12 of the stated year is the cut off -
Please renew your membership ASAP for
2011 and beyond*

Implementing Organic Farming Techniques into a School Farm- An Investigation of Organic Farming Principles and Practices and the Food for Life Program

Jane Swan – 2009 NSW Premiers Agriculture Scholarship Recipient

Organic Farming principles and their practical application

The basic principles of Organic farming are to:

- 1. Work as close as possible within a closed system, using minimal off-farm inputs, where the farmer tries to grow all of their own stock feed and silage, breed resistant strains of livestock and replacement stock**

During my study tour of the United Kingdom and Ireland, I visited an organic research station, various organic farms such as dairies, mixed beef, poultry and sheep farms and organic vegetable production enterprises. I also visited schools which were involved in the Food for Life Program which encouraged the growing and use of organic vegetables in the school, as well as two high schools which taught Agriculture as part of the curriculum. Through these visits I learnt about the principles of organic farming and how they had been put into practise on working farms.

Farms produce their own pasture silage from good quality pastures, whole crop silage or haylage, from cereals grown on the farm. Hay was very difficult to produce because of the unsatisfactory drying conditions. Most farms had enormous silage pits which were filled to capacity from one to four cuts during spring. Some farms produced round bales of silage and sold surplus for a premium price.

Sheep were generally kept on the pastures as they do less damage to cattle, except for six weeks prior to lambing where they were sometimes housed in poly tunnels and turned out straight after lambing. On the dairy farms organic concentrates fed in the bails were usually sourced off farm as the farms I visited were not large enough to grow enough grain and pasture. Straw for the bedding was sourced off farm and does not have to be organic. Farmers found this input of benefit in improving and maintaining soil fertility. The poultry enterprises I visited were an exception with most of the food, apart from the grass, sourced off farm. All of the birds were free range with very large enclosures.

With livestock farms, farmers generally used their own breeding stock and replacements were bred on the farm.

On the organic vegetable farms, green manure crops were grown to provide nutrients to improve soil fertility. Paddocks were spelled with a pasture ley* and crops were rotated to conserve nutrients in the soil.

*A pasture ley is a period of time where a paddock is planted down to pasture, usually a clover rich pasture, to rest the paddock and give it a chance to increase nitrogen and other nutireint levels in the soil.

- 2. Avoid using chemicals and rely instead on natural methods to control weeds, pests and diseases**

The use of herbicides and pesticides was avoided using natural methods. Weeds such as daisies were often ignored by livestock farmers. Dock was often a problem and this was controlled with slashing or topping* and, if the problem was sufficiently serious, ripping. On

vegetable farms, weeds were controlled using a variety of barrier methods such as weed mat and plastic; hand weeding, burning off weeds with gas burners, ripping, and other forms of cultivation. Insect pests were controlled using different methods. For example, covers may be fitted over the Brassicas to control cabbage white moth; slug traps and bran around the base of plants to control slugs; biological controls and even hand picking off of some insects.

Companion plants and colourful flowers were also planted around the vegetable crops to encourage beneficial insects and thus help control the pests as well as propagate bees for pollination.

Chemicals such as pesticides, herbicides, fungicides, antibiotics and other pharmaceuticals are not used on livestock farms unless there is an animal welfare need. A farmer must obtain a veterinary certificate and apply for a derogation* from the certifying body. For example liver fluke is quite a problem in low lying and wet areas and if the farm is found to have a problem, the farmers can dose for liver fluke using an approved conventional treatment. Vaccination is also allowed if there is a certain disease tendency, however the certifying bodies prefer the use of single vaccines targeting a specific disease rather than "5 in 1" vaccines.

There were several ideas for preventing and treating calf scours and hence the use of antibiotics in young dairy and beef calves. These included feeding Johne's free colostrum* to dairy calves for ten days preventing the occurrence of rotavirus; feeding natural organic yoghurt to scouring beef calves; and pasteurising calf milk with an on-farm pasteuriser.

To reduce worm burden* and prevent and control worms in sheep, chicory, a natural anthelmintic had been sown with clover for grazing at the Warriner School, Bloxham, Oxfordshire. Other methods were close grazing management, in which paddocks were rotated and young stock given access to a paddock before adult animals.

Homeopathic formulations such as udder mint (a rub) were used to prevent and treat mastitis on dairy farms and this was generally found to be adequate. In severe or persistent cases of mastitis, antibiotics were used. Then only as a one off treatment and after the farmer applied for derogation, accompanied by veterinary advice. Certifying bodies prefer the use of lactating cow antibiotics, not for use in dry cows. When chemicals are used, organic farmers must adhere to a longer withholding period which would usually be twice to three times the recommended duration.

*Derogation is a partial revocation of a law. In organic farming refers to permission use a certain chemical or use a non organic practice which is different to the regulations.

*Johne's is a wasting disease of cattle and it can be passed onto calves through the milk. Hence feeding colostrum that is not from a Johne's affected cow, will prevent this disease being passed onto calves through the milk

* Worm burden is the number of worms an individual animal carries.

* Slashing or topping is the mowing of grass to remove dead or dried grass to allow the pasture to come back with fresh growth.

3. Avoid the use of artificial fertilisers and use pasture improvement and nutrient recycling to maintain high soil fertility levels and biodiversity in the soil

Nutrients were recycled using slurry from the sheds which was kept in slurry tanks or underground pits and collected during winter when the cows were shedded. The slurry was stored and spread on paddocks just before cows returned to the sheds in winter. Used straw bedding was left in the sheds for a period of time once the cattle were turned out, then when the sheds were cleaned out; it was piled up outdoors and turned over periodically to compost

down. This compost was then spread on the fields using muck spreaders when the cows were returned to the shed for autumn and winter.

The only farm I visited which did not shed cattle in winter was in the Burren National Park in Corofin, Ireland. Here cattle were turned out onto winterages where they grazed species rich wild flowers and grasses during winter. To address soil fertility here, the farmer was able to apply phosphate rock fertiliser after the soil tests came back showing the soil lacked this nutrient.

The other method of maintaining and improving nutrient levels in the soil was pasture improvement using clover which was reseeded every four to five years. Most farmers reduced stock numbers substantially when they initially converted to organic production. After two or three years they found they could start to increase stocking rates. A decrease in profit was noticed for the first couple of years but this was offset with the bonus subsidies received to convert as well as a reduction in costs of fertilisers, pesticides and other chemicals. Once farmers had sown and established clover into many of their paddocks, they noticed that soil fertility, pasture production and silage increased substantially.

4. Maintain a high level of animal welfare

A high level of animal welfare was maintained by farmers. To be certified organic, often farmers need to modify their sheds and provide more suitable housing for their stock. Sheds must have adequate ventilation, natural light and some solid walls. The space requirement was generally 2.5 times more than with conventional farms, in the shed with animals having specific dimensions depending on their age and weight (approximately 1m²/100kg of body weight). Animals must spend a certain amount of time outside grazing. Stocking rates are generally reduced with organic production.



Mattress housing system Low Sizergh Farm Straw bedding at Slack House Farm

An Overview of Organic Production and Marketing

I visited organic beef farms in England, Ireland and Wales. I noticed that the size of the farms here were relatively small compared to those in Australia, with smaller stock numbers. Organic farmers receive more subsidies than conventional farmers, based on amount of land owned. Most beef farmers housed their cattle in winter mainly to prevent damage to the pastures rather than on animal welfare grounds.

Returns on organic beef compared to conventional beef varied between farms and countries. In Ireland, farmers received 15- 20 percent premium on organic beef. Beef was sold in box schemes where the meat was frozen, and delivered directly to customers at farmer's markets or sold on to other organic farmers. In England the premiums for organic meat were not as

high. Some farmers marketed their organic beef as conventional, owing to the extra processing costs for organic meat. Meat was sold at farmer's markets, fresh in box schemes, through farm shops, frozen, or live through the sale yards.

In the UK, farmers received a premium for organic milk of about 5 pence per litre; however the increase in organic cost of production is about 6 pence. The higher costs of production are due to the high cost of organic concentrates (over 100 pounds per tonne more than non-organic feed). Many of the dairy farmers I visited had diversified their farm businesses by either producing and marketing cheese (for example, Slack house farm) operating as a Bed and Breakfast, or holiday cottage providers; operating farm shops and tea rooms (for example, Low Sizergh Farm) One farm- Cream 'O' Galloway- ran a successful tourism business encompassing a visitors' centre with a farm shop, cafeteria and organic ice cream factory, a restaurant and an adventure playground for both children and adults.

In the UK, the organic sheep production that I saw was that which was being only farmed for meat rather than wool. Shearing costs were more than the return received for the wool and the meat was often sold through farmers markets or direct in box schemes.

Organic egg production was generally as part of a mixed farming enterprise and chickens were housed in free range enclosures. Eggs were generally marketed locally as organic eggs either on their own or as part of a box scheme. Farmers received a premium for the eggs and they were usually sold in small cartons of six.

Organic vegetables were either grown in "polytunnels" all year round or in the field during spring and summer. Most farms had a box scheme where customers were supplied with a weekly box of organic vegetables home delivered. To make up for shortages in vegetables at certain times of the year, organic vegetables were imported to fill the boxes and ensure supply for customers. Organic vegetables were also sold at farmers markets.

*Polytunnels are tunnels covered with plastic which act as glasshouses to maintain warmer temperatures for plants to grow in. They can also be used to house sheep and lambs during winter.

Food for Life Program

The Food for Life Program has been established in 1200 schools in the UK. The Program aims to increase the numbers of participating schools to 5000 by 2012. Through this program, students learn about where their food comes from and how to make healthy choices by growing organic fruit and vegetables for use in school lunches and cooking lessons, and by visiting farms close to the school.

The program is a joint venture between Garden Organic, The Focus on Food Campaign, Health Education Trust and the Soil Association*. Each of the four partners contributes expertise in different areas. Teachers and schools are supported with resources and assistance in setting up their own gardens.

St James Primary school is involved in The Food for Life Program. A SNAG (School Action Nutrition Group) made up of students from various grades, is involved in promoting healthy eating and trying to encourage students to partake in the healthy school lunch program. On my visit I met with members the SNAG team who demonstrated food preparation skills (in their purpose built student kitchen which can accommodate about 12 children). Students from Reception (4-5 year olds) to Year 6 learn a variety of cooking techniques including knife skills, weighing and measuring, baking and other skills. (See bibliography for a link to the resources). Students complete a minimum of 12 hours of cooking lessons per year and, after

their seven years at school, they will have cooked a variety of meals using all of the recipes and cooking techniques in the Program.

Students in Year 2 showed me how they filled plant modules and planted dill seeds with Jane, one of the volunteer mums. They work in small, withdrawal groups for this activity.

All students are involved in the growing and harvesting of fruit and vegetables and they produce a vast array of salad and winter vegetables which the school cook then uses in the preparation of school lunches, as well as the students' own cooking lessons. During my visit I saw a very enthusiastic class come out to the garden with their bowls to harvest lettuce, coriander, broccoli florets, celery and various other ingredients which they then prepared and ate for lunch. The students were all engaged in learning and were excited about harvesting their produce and enjoying the fruits of their labour.



Vegetable beds

*Garden Organic is the UK's leading organic growing charity involved in researching and promoting organic gardening, farming and food.

*The Focus on Food Campaign was established in 1998 and is the leading practical food education and outreach programme in the UK.

* Health Education Trust is an expert information centre for healthy eating in schools and the wider education sphere.

*Soil Association- is the UK's leading organic organisation and organic certifying body.

Hunten Primary School was a much smaller school, comprising only 74 students. School lunches were made offsite; thus the produce grown at the school was used in celebration meals. These are occasions when parents were invited into the school to partake in either a picnic for the older children or a feast with the younger ones. Once again, parent volunteers help with the gardening and this makes the job easier for teachers.

The school had hosted a pumpkin growing competition, attracting over 70 entries from other schools. The competition was very successful and incorporated a competition for the best pumpkin soup. Students were engaged and enjoyed the process of growing, harvesting, cooking and competing. Students here were also learning about water harvesting, designing an irrigation system for their garden and observing bees and other insects in their bug house.

Recommendations

I feel that we are leading the way in general agricultural education in Australia, as Agriculture does not form part of the curriculum in High Schools in the UK and Ireland. The only form of Agricultural Education is in Primary schools and then at colleges or specialist High schools. I did find excellent resources (included in the bibliography) for primary schools and we can learn a lot from the Food for Life Program which is well established in the UK.

I would love to see primary schools in Australia implement a similar, in which students can establish an organic vegetable garden in the school grounds and be exposed to an across curriculum program which can address various syllabi, for example.

Syllabus	Ideas
Maths	- Counting numbers of germinated seeds - Measuring the length of vegetables, garden plots and water - Weighing produce - Calculating plot sizes -area and perimeter, numbers of plants required
English	- Report writing skills - Create a diary of plant growth - A story about life as a vegetable, following the production chain - Creating surveys about types of vegetables students like or eat.
Science and Technology	- Researching plant and germination requirements, - Learning about parts of the plant and photosynthesis. - Experimenting with different plant varieties - Soil Experiments - Learning about the climate. - Designing and making the garden beds - Design and make a plastic bottle glasshouse where students can grow vegetables out of season and propagate seedlings - Designing labels for the vegetables and fruit
Environmental education.	Learning about the environment, conserving water, recycling nutrients, composting, weeds
HSIE	- Look at the history of vegetables and their uses - Marketing of fruit and vegetables - Vegetables and herbs used in other cultures - Learning about produce grown in other countries.
PDHPE	- Physical work students do in the garden digging, shovelling, moving soil, harvesting the produce. - Team work - Healthy eating choices.
Languages	Students could learn the names of vegetables and associated materials (soil, tools) in another language.
Creative arts	Students could design advertising posters and pamphlets for the vegetables, herbs and fruit.

In New South Wales we generally do not have school lunches but any school-grown produce could be used in the school canteen to make healthy lunches. Excess produce could be sold to parents or staff in a vegetable box advertised via the school newsletter or through a stall in the afternoon when parents pick up their children. This teaches students marketing, communication and enterprising skills.

Both schools I visited had parents who were very involved and who actually took students out of class to assist with planting, as well as contributing a lot of time to ensuring the smooth running of the garden. For a similar type of program to run in our primary schools it would be advisable to seek parental involvement and assistance. Raised seed beds would be ideal and can be formed on top of concreted areas if space is limited.

New South Wales primary schools may be able to seek support from local hardware stores, nurseries and other businesses.

Acknowledgements

NSW Premier Kristina Keneally Premier's Teachers Scholarships

Mr Andrew FitzSimons (Principal Dapto High School)

The farmers I visited in UK and Ireland for their time, passion and willingness to share their expertise.

Pat Barry from Teagasc in Ireland for assistance organising farm visits in Ireland and Frank Kelly.

Collette Bond at Garden Organic

The Teachers and Head Teachers at the schools I visited who welcomed me into their schools and classrooms to share with me what they were doing in their schools and their passion for getting the most from their students.

Bibliography

Teagasc Organic Farming Advisory newsletter May 2009

http://www.teagasc.ie/ruraldev/docs/programmes/organic_production/newsletters/OrganicFarmingNewsletterMay2009.pdf

Teaching Resources

Farming and Countryside Education <http://www.face-online.org.uk>

Soil Association <http://92.52.112.178/web/sa/saweb.nsf/farmshome?openform&cat=all>

Food for Life Partnership <http://www.foodforlife.org.uk/>

Focus on Food <http://www.focusonfood.org/>

Cooking techniques- downloadable document with pictures and descriptions of student food preparation techniques <http://www.focusonfood.org/cookingtech.html>

Garden Organic <http://www.gardenorganic.org.uk>

Garden Organic - Information on Growing Fruit and Vegetables

http://www.gardenorganic.org.uk/growyourown/growing_cards.php

Garden Organic - Downloadable gardening related games and activities.

<http://www.gardenorganic.org.uk/growyourown/activities.php>

Plan to build a plastic bottle greenhouse.

<http://www.reapscotland.org.uk/reports/greenhouse%20v1.pdf>

Games and activities about the grain industry. <http://www.grainchain.com/>

Schools

St James Primary School <http://www.st-james-clstead.surrey.sch.uk/>

The Warriner School Farm <http://www.atschool.eduweb.co.uk/warrinerfarm/>

Cardinal Wiseman Catholic School and Language College

<http://www.cardinalwiseman.coventry.sch.uk/index.php?page=RuralDimension>

Hunton CEP School <http://huntonschool.schnet.org/>

Farms

England

Hill Farm - Non Organic Farm <http://www.stayathillfarm.me.uk>

Beechenhill Farm - Dairy Farm <http://www.beechenhill.co.uk/>

Low Sizergh Farm - Dairy Farm, Poultry and Vegetables <http://www.low-sizregghbarn.co.uk>

Low Luckens Organic Resource Centre <http://www.lowluckensfarm.co.uk>

Slack house Farm Dairy Farm and Cheese making <http://www.slackhousefarm.co.uk>

Millbank Farm –Beef Farm

<http://92.52.112.178/web/sa/saweb.nsf/1e4767380886109e80256e35004e9b50/a0cde9e0a1e35521802575200040ff71?OpenDocument>

Scotland

Cream o' Galloway -Dairy Farm, Ice cream factory and tourism business

<http://www.creamogalloway.co.uk>

Ireland

Clanwood Farm- Beef www.clanwoodfarm.com

Teagasc Organic Research Centre <http://www.agresearch.teagasc.ie/athenry/>

Green Earth Organics –Vegetables www.greenearthorganics.ie

Wales

Penyrallt Home Farm -Dairy <http://www.penyral.lt.co.uk>

Felin Ganol Watermill – <http://www.felinganol.co.uk>

Caws Cenarth Organic Hand crafted Cheese factory.

<http://www.cawscenarth.co.uk/visitors.htm>

Mairs Bakehouse- <http://www.mairsbakehouse.co.uk>

Other Visits

Teagasc - The Irish Agriculture and Food Development Authority www.teagasc.ie/



Jane Swan with Richard Benge from Millbank Farm East Sussex England

Congratulations Jane!!!

Bogged in a Drought?

Genuine career path in meat/wool industry




Fletcher International Exports Pty Ltd is accredited by VETAB to deliver nationally recognised training qualifications in the Australian Meat Industry (MTM07) and Textiles, Clothing and Footwear (LMT00) training packages.




Employment applications are available online: www.fletchint.com.au

EMPLOYMENT OPPORTUNITY

FLETCHER

INTERNATIONAL EXPORTS

The Fletcher Group of Companies

Head Office:
Fletcher International Exports Pty Ltd
Locked Bag 10, Dubbo NSW 2830 Australia
Telephone: +61 2 6884 5833
Fax: +61 2 6884 2965
E-mail: mailbox@fletcher-international.com.au

Albany Abattoir:
Fletcher International WA
P.O. Box 680, Albany WA 6331
Telephone: +61 8 9892 4000
Fax: +61 2 9892 4080
E-mail: mailbox@fletcher-international.com.au




FLETCHER

INTERNATIONAL EXPORTS

Offers successful applicants:-

- ✓ Job security
- ✓ Permanent Employment
- ✓ Above award wages
- ✓ Set hours
- ✓ Shift work

- No Experience necessary.
- All training is provided.
- 100% Australian owned company.
- Capacity to process over 80,000 sheep/lambs per week.
- Genuine career path in meat/ wool industry.
- Currently employs over 1250 people.
- Indigenous employment program in place.
- Fletcher International is a registered training organisation.
- Able to deliver training qualifications that are nationally recognised.
- Provide a safe work place of work.
- Supervision and continued monitoring to ensure our products meet world wide standards.







Bogged in a Drought?

CAREERS

Total graduates are in high demand for a range of positions including Farm and Station Hands, Stud Grooms, Trainee Farm Managers, Horse Breakers, Livestock Authority Rangers, Trainee Stock and Station Agents, Shearers, Vet Nurses and Woolclassers.



STUDENT SUPPORT

The College provides single room accommodation for resident students and motel style accommodation for visitors and short course clients. The dining room provides meals for students and visitors.

Staff provide advice and support to assist the personal development of students.

FINANCIAL SUPPORT

A large number of scholarships are available for students to attend Total. Most students also qualify for Youth Allowance.

OPEN DAYS

Open Days are held every Friday during the July and October School Holidays. These provide information about college courses and include a tour of the College farms. Prospective students and parents can also arrange to visit the College at other times.



Total College Campuses

Total CB Alexander Campus, near Paterson, Hunter Valley is located about 180km north of Sydney

Murrumbidgee Rural Studies Centre, Yanco near Leeton, is located about 600km southwest of Sydney

TOTAL

Total College
CB Alexander Campus
Paterson NSW 2421
Australia

Phone: 1800 025 520
Fax: 02 4938 5549
Email: info@total.com
Website: www.total.nsw.edu.au



Industry &
Investment



For a **FREE** copy of the
Total Prospectus
Phone: 1800 025 520 or
Email: info@total.com



TOTAL

LEADER IN
AGRICULTURAL TRAINING

ABOUT TOTAL

Total Agricultural College has an excellent reputation for training people for careers in the agriculture and horse industries. The College's large commercial farms are used to provide practical hands on training.

Farms and rural businesses throughout New South Wales, Queensland, other states and New Zealand also provide relevant industry experience for students.

Total offers full-time, part-time, home study and short courses in agriculture, horse husbandry, conservation and land management.



TOTAL FARMS

Total's 2,200 hectare commercial farm runs a large beef enterprise of up to 1,400 cattle as well as stock horses, sheep, dairy cattle and chickens. The practical training program assists students to develop a wide range of skills required by employers.

CERTIFICATE III IN AGRICULTURE

This one-year full-time course provides hands-on training in units such as beef cattle, sheep, horses, pastures and crops, farm safety, safe use of chemicals, fencing, dairy cattle, environmental issues, tractors, motor bikes and chainsaws.

During the course, students develop self confidence, improved communication skills, appropriate attitudes and the ability to work cooperatively with others.

Enrolment Criteria

Completion of year 10, 11 or 12 and a strong interest in agriculture.

CERTIFICATE III IN HORSE HUSBANDRY

This one-year course focuses on practical training in horse handling, horse health and nutrition, horse breaking and training, horse breeding and foal handling. The course also covers general farm skills training in tractors, fencing, motorbikes, quads, pastures and beef cattle.

It includes work experience on Hunter Valley horse studs.

Enrolment Criteria

Completion of year 10, 11 or 12 and experience with horses, sound riding skills and a desire to work in the horse industry.



CERTIFICATE IV IN AGRICULTURE

Elective studies cover Beef and Sheep Production, Cropping, Pastures, Machinery, Farm Butchery, Irrigation, Quality Assurance, Organic Farming, Farm Safety, Shearing and Wool classing, Feedlot, Cattle Showing and a range of other units.

Practical work experience is gained on large commercial farms and rural businesses in New South Wales, Queensland, other Australian states and New Zealand.

Enrolment Criteria

Certificate III in Agriculture or equivalent industry experience.

Note: Certificate IV students may also enrol in the Diploma. This course is suitable for more experienced students who have previous farm experience or have studied agriculture to year 12.

DIPLOMA COURSES

Total runs diploma courses in Agriculture, Conservation and Land Management. These are self-directed courses with students studying at their own pace.

Courses cover topics such as Farm Planning, Livestock Breeding and Management, Wildlife Conservation and Natural Resource Management.

TRAINEESHIP PROGRAM

This is a part-time course for trainees working on farms in New South Wales. Trainees come to Total for a number of 5-day blocks during the year. The program includes farm visits and at least one tour to another state or New Zealand.

Substantial subsidies are available for employers who take on trainees.

SHORT COURSES

Total offers a large number of practical one and two-day courses on topics such as: Farm Chemicals, Horse Handling, Beekeeping, Pastures, Beef Care and Handling, Fencing and Safe Operation of Tractors and Chainsaws.

SKILLS RECOGNITION

Total has developed an excellent program to give farmers and others recognition for the skills and knowledge they have developed on the job. This can lead to substantial credit towards a Certificate or Diploma qualification.

ENTRY TO UNIVERSITY

Total courses allow students to enrol at most universities offering degrees in agriculture and related areas.

A Total Diploma can give students credit that will shorten the time (and cost) to gain a degree.

Universities that have articulation arrangements with Total include: University of Western Sydney, University of New England, Charles Sturt University, University of Newcastle and Queensland University.



Careers in Agriculture Expo

14 April 2011



Photograph by Jay Murray

Working to Promote Careers in Agriculture

Agriculture is one of Australia's most technologically advanced sectors, tackling issues of environmental sustainability, food security and climate change. These challenges create demand for new and diverse roles, giving young people the opportunity to develop exciting career paths in fields as varied as economics, science and communications.

The Royal Agricultural Society of NSW Careers in Agriculture Expo works with the agricultural sector to promote career opportunities to young people by bringing industry and trade employers, industry groups, educational institutions and government together.

The Expo provides an excellent forum for students, parents and teachers to learn about and discuss the long term career options available in agriculture. Ensuring young people are given good advice on education, training and career progression.

Hold the date in your diary and make sure your students participate in this exciting opportunity to kick start their careers in agriculture.

Date: 14 April 2011 (Sydney Royal Easter Show launch day)
Time: 9:30am – 3:30pm
Venue: President's Plaza, Sydney Showground
Sydney Olympic Park NSW 2127

The Expo will also host a Careers Information Seminar for School Careers Advisors and Agricultural Teachers. Keynote speakers to be announced.

For further information

Tel: 02 9704 1160
Email: pcape@rasnsw.com.au
www.rasnsw.com.au



Royal Agricultural Society of NSW

Bogged in a Drought?

Dear All

I would like to make you all aware of the recent changes to the National Livestock Identification System (NLIS). As of 1 July 2010 all movements of sheep and goats to a property with a different Property Identification Code (PIC) will need to be recorded on the NLIS database in what is known as a 'mob based movement'.

This means you will need to log onto the NLIS database on the internet to record sheep and goat movements every time you receive animals, unless they have been purchased from a saleyard or public auction. If you purchase sheep privately you will need to enter the movement on the database. You don't need to record a mob based movement when you sell animals through a saleyard, send them direct to an abattoir, feedlot or export depot as it will be done for you.

It is the responsibility of the receiver to enter the movement on the database. When you send sheep on agistment the owner or person in charge of the stock at the agistment property is responsible for ensuring the movement is recorded on the NLIS database. The stock owner and the agistee must agree who is in charge of the sheep and therefore who will do the upload.

When you send sheep to a show it is the responsibility of the owner or person in charge of the stock to check that the movement has been recorded on the database, even though show societies are being asked to upload movements for their exhibitors.

When your sheep return from agistment or a show to the property they came from, it is your responsibility to enter the movement on the database. If stock moving from agistment or a show don't go back to their original property, the person receiving the stock, i.e. the abattoir, saleyard operator or new owner, is responsible for entering this movement on the database.

Remember a mob can be just one (1) animal. All sheep and goat movements, regardless of number, need to be recorded on the NLIS.

As well as logging the movement of sheep on the NLIS database a movement document ('national vendor declaration' or 'transported stock statement') must be fully completed and accompany the sheep.

For more information visit <http://www.dpi.nsw.gov.au/agriculture/livestock/nlis>
Or <http://www.mla.com.au/Meat-safety-and-traceability/Livestock-identification>

There are NO exceptions to these regulations. I constantly meet teachers who tell me all sorts of interesting reasons why they don't need to comply with these regulations. ALL OF THEM ARE INACCURATE. FINES ARE BEING ISSUED. PLEASE DON'T BE ONE OF THE RECEIPIENTS OF A FINE.

Sally

Sally Bannerman
Schools Animal Welfare Officer
R/Manager Technology
Curriculum K-12
3A Smalls Rd
RYDE NSW 2112
Tel: 02 9886 7426

Careers in Agriculture Website Project

Summary

Stakeholder Meeting 30 July, 2010

University House, ANU

Present: Nigel Crawley (Rimfire Resources), Colin Medway (Landmark), Angela Byron (DAFF), Olivia Bartlett (DAFF), Natalie Sabadasz (DAFF), Robert Wilson (Agrifood Skills), Ric Sinclair (Forest and Wood Products Australia), Melissa Houghton (Forest and Wood Products Australia), John Kent (ACDA), Carl Chirgwin (**NSW Association of Agriculture Teachers**), Lea Edwards (RIRDC), David Russell (PICSE), Tony Dwyer (Rural Skills Australia), Ben Heaslip (Project Officer), Jim Pratley (ACDA)

Background

Discussions between the Australian Council of Deans of Agriculture (ACDA) and Rimfire Resources identified the need for a comprehensive website that provides information on career options in the agricultural industry.

ACDA subsequently approached Minister Burke for funds to develop such a website and funds were made available through the Department of Agriculture, Fisheries and Forestry during the 2010 - 2011 financial year.

The components of the project include the collection of information, the creation of the website, a launch of the website and its promotion.

The project requires the input of stakeholders, a process which is the subject of these minutes.

Agenda

Stakeholders were provided with a briefing on the project and its progress thus far. A series of workshop questions were evaluated and outcomes recorded. The following is a report of the stakeholder deliberations.

1. Website Name & Introductory Message

Stakeholders were asked to provide suggestions on an appropriate name for the website and views on what the introductory message should contain.

(a) Name

The following suggestions were made:

- | | |
|-----------------------------------|----------------------------------|
| • Australian Careers | • Agricareers |
| • Careers in Agriculture | • Food & Fibre |
| • Ag Choices | • Careers/Pathways/Opportunities |
| • Ag Options | • Agri |
| • Secure your future in Ag | • Careers/Pathways/Opportunities |
| • Careers Ag Info | • Primary Industries |
| • Ag Careers Info | • Careers/Pathways/Opportunities |
| • Ag Career Choices | • 'Growing' Careers |
| • Opportunities for me | • Growing Future |
| • My Opportunities | • Ag life |
| • Food and Fibre Careers/Pathways | • Food & Fibre Choices |

In the discussion, the word 'choice' had strong support. There was much discussion about the use of 'agriculture' as it was considered as a turn-off for those who had little knowledge of the industry. The website should be about attracting others into the website to see the opportunities available.

(b) Introductory Message

Suggestions made by the stakeholder groups comprised:

- Make Agriculture your future!
- Careers information for agricultural related industries
- Window into the opportunities in the Australian food and fibre industries

2. Project Boundaries

Two aspects dominated the discussion in respect of drawing the 'industry' boundary. These were:

- That there were already useful sites at the VET level and it made little sense to duplicate those. Activity should be concentrated at the tertiary level where the gaps in information are most apparent. However there should be strong links to VET level career websites.
- That agriculture, forestry and fisheries needed to be included because of the funding support by DAFF

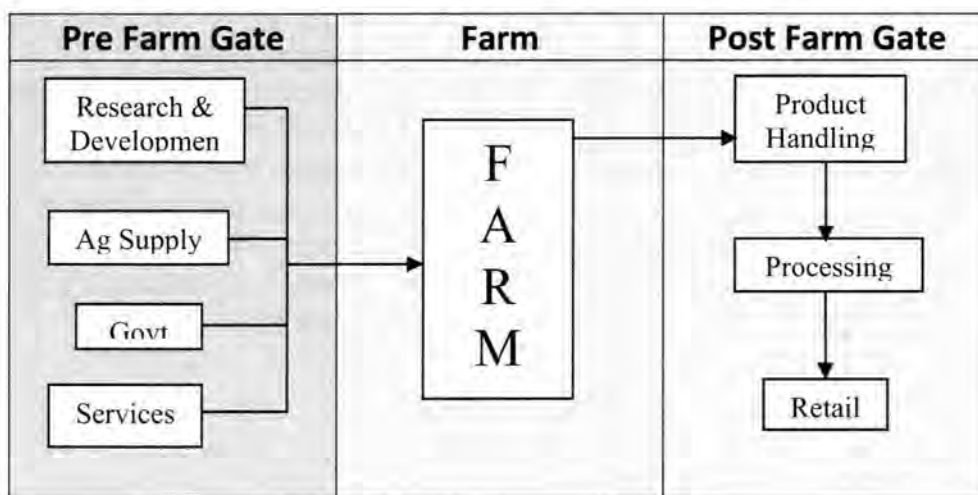
3. Careers Range

Attendees were asked to peruse lists of careers to identify any obvious omissions or those to be deleted. Given the consensus that VET positions be left to other websites, the lists provided were of limited use and it was agreed that a revised list would be circulated for comment. Other comments included:

- Food & fibre careers should include food processing
- Animal and veterinary sciences need to be included
- Distinction should be drawn between agricultural commerce & agricultural business

4. Website Concept

Attendees were provided with a range of concepts for comment. There was general support for the concept of providing a context for the careers such as the supply chain as portrayed below.



Other suggestions included:

- The need for multiple entry points into the information such as:
 - Lifestyle
 - Interests
 - Commodity Groups
 - Sectors
- A search function that allows users to search for jobs fitting different criteria
- Expanding on the windows themed introductory message whereby each window provides a different search option such as:
 - Job type – actual jobs/roles
 - Industry – livestock, cropping
 - My Skills – eg. analytical, good communicator
 - My Interests – eg. work outdoors, with animals
- The need for a feedback function – if job was not listed this should generate general feedback
- Provision for data collection to enable evaluation of the site – eg hit counter, other user data

5. Website Launch

There were numerous suggestions as to how the website could be launched. These included:

- Ministerial launch based on his/her availability
- Pilot project
- Prominent identity involvement
- A competition to name the website
- ABARE Outlook Conference in March 2011
- Follow up launch at regional conferences
- Royal Easter Show – Agricultural Careers Day
- Canberra Show
- Video conference of agricultural deans with the Minister

Website Promotion

Attendees were asked for suggestions for the promotion of the website. It was identified that there was a modest component for promotion but there were numerous prospects for utilising existing networks and working with other players. Suggestions included:

- | | |
|---|--|
| • Utilise the promotion activities of industry | • Alumni |
| • Use stakeholder existing promotional activities to promote site | • Develop a recognisable logo |
| • Articles in newsletters | • Careers Fairs |
| • Roadshows | • State Education Departments and school principals |
| • Ag Teachers Association network | • Ensure correct Search Engine Optimisation, paid search (Search Engine Marketing) |
| • Science Teachers Association network | • Banner Advertising (Performance Network) |
| • Brochures | |
| • Partner with Agrifood Skills Australia | |
| • Social Media – Facebook/Twitter | |
| • Media release | |

Key Outcomes

- Website name not determined but suggestion that 'agriculture' not be used. 'Choice' was a word supported for use
- Introductory message to contain critical key words for recognition by search engines
- Website to be inclusive of primary industries except for mining. Veterinarian should also be included
- Careers described to be those where a university education is required or desired, as existing websites adequately cover careers requiring VET level education
- Website to have links to sub-tertiary career websites so that visitors can access from the "one-stop shop" approach
- Website to include flexible search function options, allowing people to search from different perspectives eg. interests, lifestyle, job, industry, skills
- Launch options exist depending on rate of progress and availability of the Minister
- Website promotion dependant largely on available budget but includes utilisation of existing networks

Network and talk
Ag Careers –
Ben Heaslip
(Joint Website
Creator with CSU)



Oooh yes!
That is an Ag
Career! –
Jim Prately
(CSU)



We love this work – **John Kent**
(ACDA) & **Lea Edwards**
(RIRDC)

Careers in
Agriculture are so
fun too –
**Melissa
Houghton**
(Forest & Wood
Products Aust)

**A focus group
working hard to
Make Agriculture
Your Future!!!
Tune into the
website soon**





There's a lot of sameness out there, but an Animal Science degree from the University of New England will help you stand out from the rest.

Our Bachelor of Animal Science provides scientific training for a wide range of careers associated with the livestock, wildlife, equine, pet care and service dog industries.

The degree has three specialist majors:

▪ **Livestock Production**

Choose your own electives or specialise in Sheep and Wool Science; Animal Health and Nutrition; Intensive Animal Production; Animal Genetics; or Consultancy and Advisory services.

▪ **Canine and Equine Science**

Particularly suited to students wishing to pursue a career in the service dog, equestrian or companion animal industries.

▪ **Wildlife Management**

Ideal if you are interested in the management and sustainable use of wildlife and threatened species.

The degree is offered on campus or via distance education, meaning you can tailor your study to suit your lifestyle.

Apply now for 2011

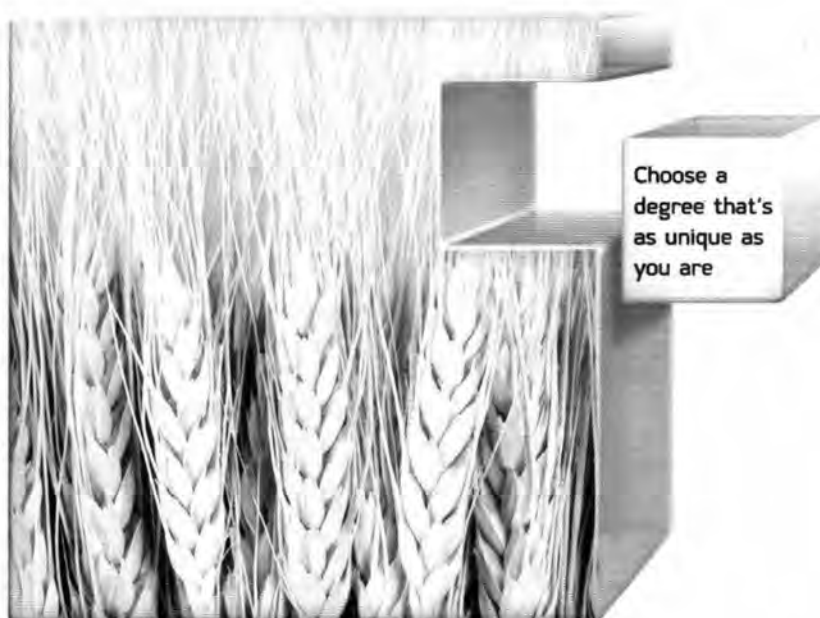
Visit www.une.edu.au/animalscience

or call 1800 818 865



Now you're thinking

Bogged in a Drought?



Want a degree that's different to the others?
A **Bachelor of Rural Science or Agriculture**
from the University of New England will really
set you apart.

Our **Bachelor of Rural Science** has a long tradition of excellence in training agricultural scientists. The degree is adaptable to a wide range of careers and students who complete a research project in their fourth year may be awarded an honours degree. Graduates will have a sound scientific understanding of the interactions between:

- Soils
- Plants
- Animals
- Agricultural systems in a changing environment

The **Bachelor of Agriculture** teaches the skills necessary to help address the growing demand for skilled employees in the rural sector. It is a hands-on degree, which particularly suits students interested in agricultural management. It also offers the chance to specialise in a range of areas, including (but not limited to):

- Animal breeding and nutrition
- Crop and pasture science
- Soil science
- Marketing and agribusiness
- Agricultural extension

The flexibility of our courses means you can study in your own time, from the comfort of your own home. So no matter where you are in Australia, you'll never feel distant.

Apply now for 2011
Visit www.une.edu.au/agriculture
or call 1800 818 865



Now you're thinking

Bogged in a Drought?



Update

Term 4, 2010

News

LandLearn NSW Speech Spectacular

Do you have students who:

- Can talk the leg off a chair? or
- Just like the sound of their voice?

Then this speaking competition is for you. Entrants are asked to prepare a two minute response to a given topic. One of the topics is: *That working in the country is better than working in the city.* <http://www.landlearnnsw.org.au/>

Locust plague information

Did you know this spring a locust plague is due to hit NSW? One of the biggest we've seen for a while. The presentation: *From little things* introduces the problem and includes great video footage. It can be viewed at:

<http://www.slideshare.net/LandLearnNSW>

Tocal Field Days education program

Get in early to be part of the all new education program at next years Tocal Field Days April 29 – May 1, 2011. An exclusive education hub will operate for booked school groups featuring fabulous hands on activities. Find out more:

<http://www.tocalfielddays.com/>

Spotlight:

Narrandera Fisheries Centre (NFC)

NFC is the home of freshwater research in NSW as well as a productive hatchery, providing fingerlings of four native fish species (Murray cod, trout cod, golden perch and silver perch) to improve freshwater recreational fisheries and conservation initiatives.

The centre caters for visiting school groups with live fish exhibits, guided tours and beautiful grounds. Fishing workshops for kids are held regularly.

Find out more:

<http://www.dpi.nsw.gov.au/research/centres/narrandera-fisheries-centre>

Websites

Focus on soil carbon

CSIRO – soil carbon basics

<http://www.csiro.au/resources/soil-carbon.html>

LandLearn NSW – soil carbon & climate change

<http://www.landlearnnsw.org.au/sustainability/climate-change/agriculture/crops-pastures/soil-carbon>

Meet Lynne Strong

What do you do? My family and I are seventh generation dairy farmers. We have developed a highly efficient, sustainable and profitable farming enterprise that supports both agricultural production and biodiversity enhancement. I also spend part of everyday driving programs which engage youth in deep thinking about the processes and people who deliver food to our tables. I run Dairy Youth Australia, a youth group dedicated to delivering education programs which utilise art and technology to convey messages about fresh food, agricultural production and natural resource management. The groups latest undertaking the *Archibull Prize* will see high school students across south western Sydney create an artwork about food production in a time of climate variability, declining resources and urban expansion.

Best part of my job? The inspirational people I meet every day. They light my fire, feed my soul and challenge me to be my very best. It means I am living a life that makes me happy, allows me to share my gifts and make a unique contribution to the world.

Dairy Youth Australia - <http://www.dairyouthaustralia.com.au/aboutus/>



Catriona Rowntree Lynne Strong (centre) and Heather Campbell CEO of Landcare at the National Landcare Awards at Parliament House

www.landlearnnsw.org.au

Bogged in a Drought?

Activity

Soil and water

Objective: To introduce students to the water retention properties of soils.

Introduction: Plants take in water by their roots. Different soils contain and hold different amounts of water. This can be shown in the following experiment.

Materials:

- 3 funnels & 3 bottles
- 3 pieces of blotting paper 8cm square
- sand, clay and garden loam (use dry samples)
- jug of water

What to Do:

1. Fold the blotting paper to fit into the funnels.
2. Place one piece in each funnel.
3. Half fill one funnel with sand, one with clay and one with loam.
4. Place each funnel in a bottle.
5. Pour the same amount of water into each funnel.



Deep, well drained red soil profile. Photo from the LandLearn NSW digital image library for schools.

<http://www.flickr.com/photos/landlearnnsw>

References:

- **Soil health and fertility (AUS)**
<http://www.dpi.nsw.gov.au/agriculture/resources/soils>
- **CSIRO soil education links (AUS)**
<http://www.clw.csiro.au/education/soils/links.html>
- **UNE Living Soils website (AUS)**
<http://www.une.edu.au/livingsoils/>
- **Soil-net (UK)**
<http://www.soil-net.com/>
- **Department of Agriculture (USA)**
<http://www.sidney.ars.usda.gov/sidebar/justforkids6.html>



4. Which soil lets water through most rapidly?
5. Which soil lets water through least rapidly?
6. Which soil holds the most water?
7. Which soil holds the least water?
8. Which soil do you think would be best for plants? Why?
9. What soil does your school ground have?
10. Which dam would be best for holding water?



Activity adapted by LandLearn Victoria from the Soil Magic Landcare Activities for Middle Primary and from Our Land Landcare Activities for Upper Primary.

Upper Hunter Beef Bonanza

The Upper Hunter Beef Bonanza was held from the 29th to the 31st of October in Scone. This year there were approximately 400 paraders and 250 steers (both led and unled).

Students from Dunedoo prepared 7 steers for the show this year. The steers came from a number of local breeders as well as a breeder from Dubbo and students in years 9 and 10 prepared a schools challenge steer.

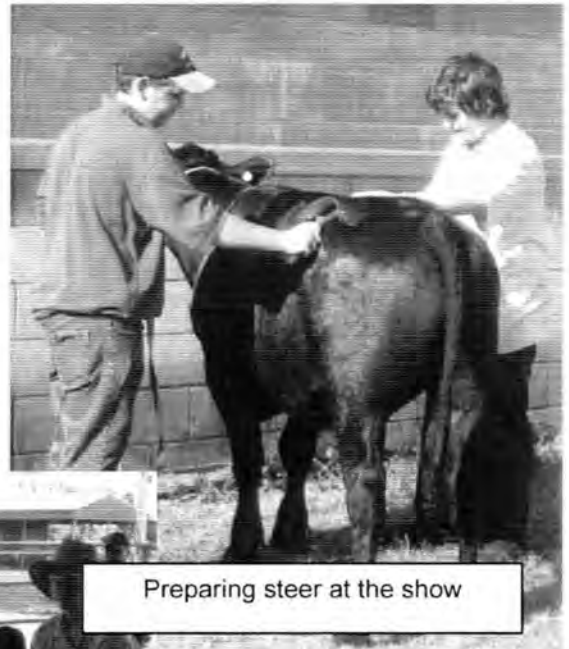
The students started preparing the steers from the being of term 3. The initial phase of breaking in the steers took a while due to the wet weather. Once the steers where trained to lead, the students then began to wash the steers and learn the finer points of parading steers in the ring.

Year 11 students in Agriculture and Primary Industries also helped in the preparation of the steers. In Agriculture the steers were used to introduce the basics of growth and development, nutrition and animal welfare.

At the show, students had two full days of competition, with the steers being judged on Saturday and junior judging and paraders competitions being held on Sunday.



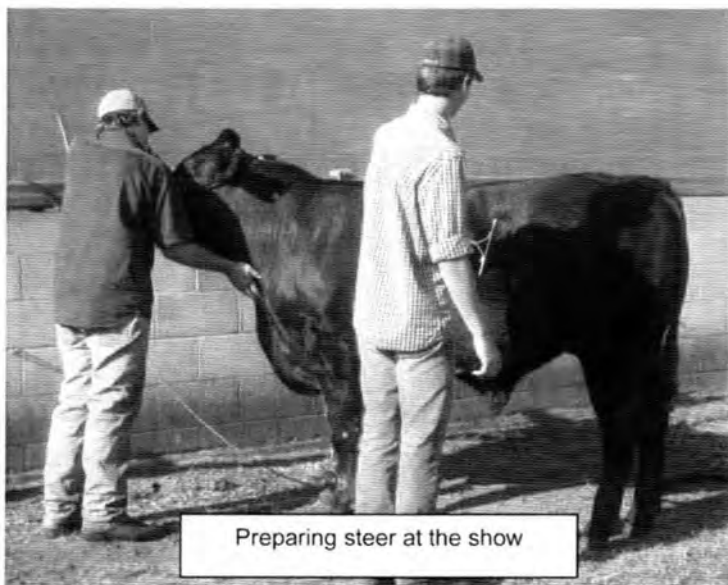
Preparing steers before the show



Preparing steer at the show



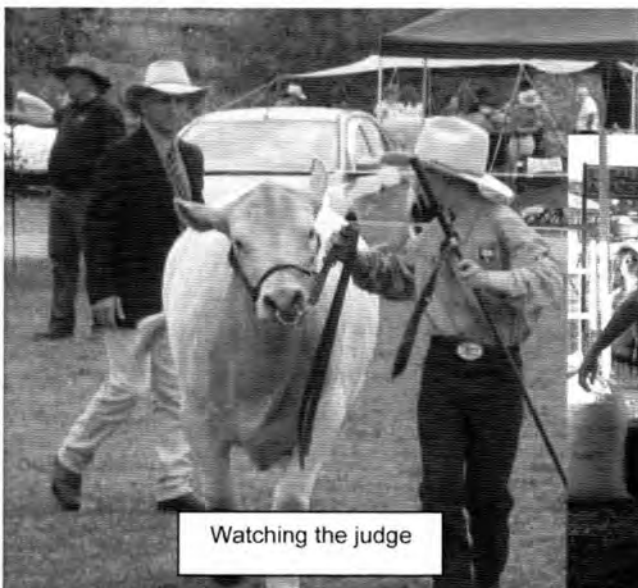
Waiting instruction of what to do next



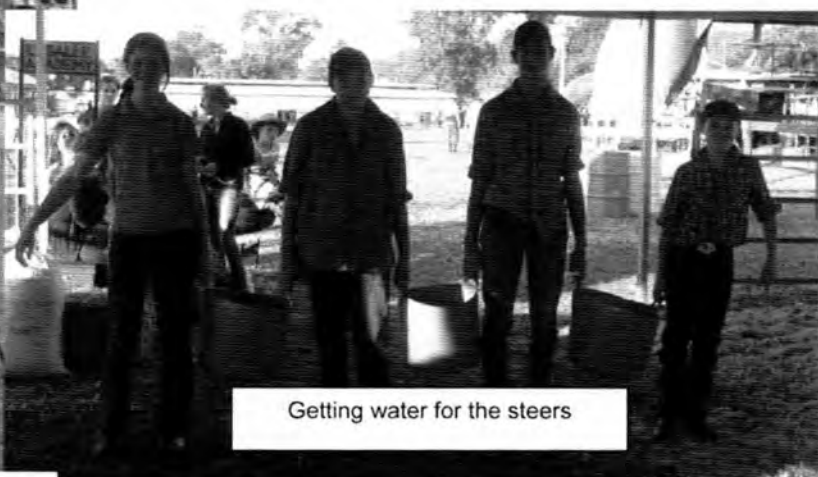
Preparing steer at the show



Receiving prize in junior judging



Watching the judge



Getting water for the steers



Waiting to enter the ring



Paraders competition



Above: Adam, Yass – Policy & Technical Officer

The Country Education Foundation of Australia

**Grant Applications Now
Open For Rural Students!**



*Above: Jessica, Yass – Medicine/Surgery
Above Right: Zoe, Clermont - Vet Science*



*Above: Jeremy, Eudunda - Professional Diver
Right: Kloe, Boorowa - Journalist*

The Country Education Foundation of Australia (CEFA), through its local Education Foundations, provides support and financial assistance to rural youth to assist them with their post high school educational aspirations.

The grants we provide are not academically-based – we support a diverse range of pursuits including university degrees, cadetships, diplomas and certificates, trades and apprenticeships.

Further, the students do not receive cash grants; the local Education Foundations reimburse the goods and service providers or refund recipients for a pre-agreed expense.

Our local Education Foundations are currently calling for grant applications. The selection criteria are simple: the student must have a local Education Foundation in their hometown; have a realistic goal; demonstrate commitment to achieving past goals; and be in financial need. That's it!

So if you know any local school leavers or current students/workers under the age of 21 who require a helping hand to achieve their goals, encourage them to contact CEFA. We can put them in contact with their local Education Foundation and help them achieve their dreams

CEFA / P: 1300 652 144 / W: www.cef.org.au



*Left: Amy, Narrabri - Diagnostic Radiography
Below: Matthew, Cowra - Conservatorium of Music*



*Left: Lisa, Narrabri - Vet Nurse
Above: Tyrone, Narrabri - Jackaroo*

Bogged in a Drought?

Growing the Business of Farming.



17 November 2010

President Graeme Harris

Dear NSW Association of Agriculture Teachers,

Re: Inclusion of a Sustainable Food and Fibre Policy into the National Curriculum

The food and fibre produced by Australia's agricultural industry has a fundamental place in our society, and in our economy. However there exists a significant disconnect between consumer and producer, such that there is little knowledge of the resources required to produce food and fibre, and therefore no value attributed these.

The Association believes it is critical that future generations are equipped to make informed decisions, predicated by the understanding of the resources required to sustain our agricultural capacity. Urban expansion, environment, and mining are examples of competing interests for those resources.

The NSW Farmers' Association (the Association) believes there needs to be a renewed focus on teaching where our food and fibre comes from and the resources required to produce this food and fibre.

The Association has identified a 'Sustainable Food and Fibre Policy' (SFFP) that it believes provides the pathway to achieve this. The imperative behind the policy is to provide a foundation by which important messages of food and fibre production can be incorporated into the national curriculum via its implementation as a fourth cross-curriculum perspective. As a fourth cross-curriculum perspective it will retain its own identity and ensure clarity of messages without confusion by including it with other messages. A cross-curriculum perspective provides the framework for teachers to include food and fibre messages across curriculum strands, and ensures that this learning is provided to all Australian children.

A greater emphasis on agricultural education across the curriculum will ensure that Australian children are taught where their food and fibre comes from and understand how and where it is grown. The Association believes that providing all students with this understanding of food and fibre production at an early age will encourage them to study agriculture and its associated subjects. This approach would go a long way to provide the next generation of scientists, agronomists and farmers that will be needed to meet the growing demand for food and fibre, against competing demands for a finite resource base.

The Association will be reviewing the development of the national curriculum and we are seeking your support for the incorporation of a SFFP as a fourth cross-curriculum perspective.

Yours sincerely

A handwritten signature in dark ink, appearing to read "Sarah Thompson".

Sarah Thompson
CHAIR RURAL AFFAIRS COMMITTEE

**NSW
Farmers
ASSOCIATION**

Growing the Business
of Farming

*"The whole purpose of
education is to turn
mirrors into windows."*

— Sydney J. Harris



Educating Our Children About Food & Fibre Production

PROCESS • VALUE • SUSTAINABILITY

Bogged in a Drought?

TODAY'S CHILDREN ARE TOMORROW'S DECISION MAKERS

EDUCATING OUR CHILDREN ABOUT FOOD & FIBRE PRODUCTION

Food security, population growth, environmental sustainability and economic prosperity are all issues confronting Australia's future. However they cannot be viewed in isolation and they cannot be considered without recognising the role of food and fibre production.

The NSW Farmers' Association believes that all students from Kindergarten to Year 12 should learn where food and fibre comes from and the resources required for production.

To do this the Association believes that sustainable food and fibre production must be included as a cross curriculum perspective to achieve an underlying policy mandate to ensure it is captured in all components of the curriculum.

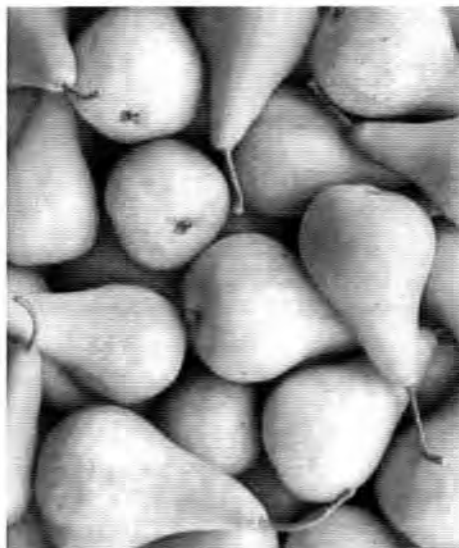
WHAT IS NEEDED

- Children need to be taught where the food and fibre that sustains our lives comes from.
- Children need to acquire an understanding of the resources required to produce the food and fibre.
- We need a long term commitment to this learning, to ensure that future generations can make informed decisions about these resources.
- We need engagement of future generations at vocational, extension, research, academic and policy levels.

64% of 25-34 year olds in Sydney have never been on a farm, while 73% have little knowledge of the agricultural industry

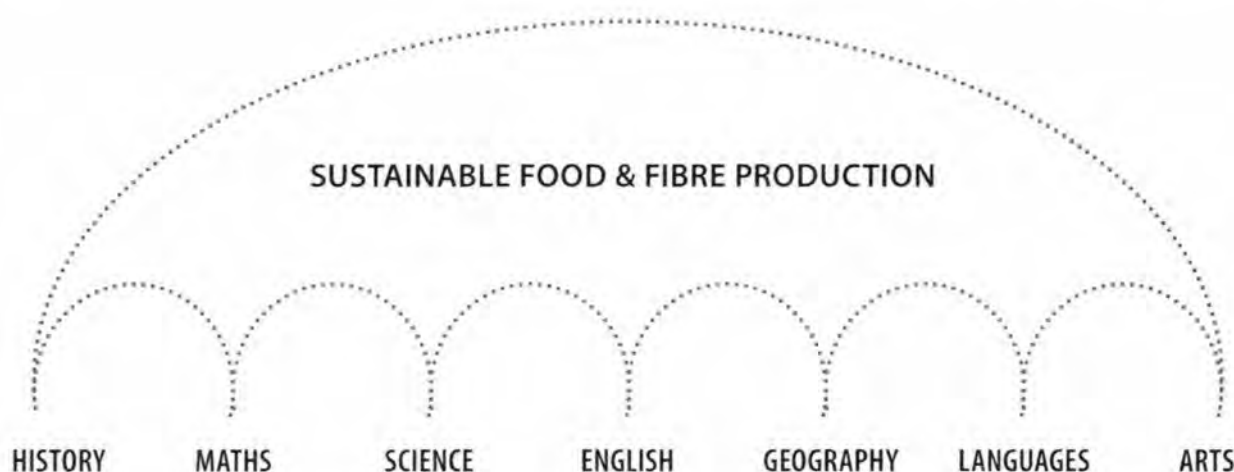
It is critical that children know where food and fibre comes from. Children need to know what resources are used and the sustainable land and water management Australian farmers undertake. This will ensure future generations can act on informed decisions about sustainable food and fibre production.

Every Australian farm business is responsible for providing food for around 600 people every year - 150 of them here in Australia and another 450 people overseas.



FOOD & FIBRE PRODUCTION

Bogged in a Drought?



GETTING IT INTO THE CURRICULUM

Incorporating food and fibre production into the curriculum as an overarching message will provide the education system, teachers and students with the best opportunity to access the diverse and wide ranging information of our farming systems and gain an understanding of sustainable food and fibre production.

For example:

- If students are learning about geography they could learn soil science.
- If students are learning about biology they could learn the reproductive cycle of a chicken.
- If they are learning history they could learn about the pioneers and early farming settlers in Australia.

The world population is expected to reach 9 billion people by 2050 and world food production will have to increase by 70 per cent. Australia will play a key role in this production.

LEARNING RESOURCES

There are a range of organisations that can provide resources to support the implementation of a sustainable food and fibre cross-curriculum perspective. These include industry bodies such as the Primary Industries Education Foundation (PIEF), Meat and Livestock Australia (MLA), Dairy Australia, LandLearn and other organisations.

HOW IT CAN BE DONE

NATIONAL LEVEL

The Australian Curriculum, Assessment and Reporting Authority is currently reviewing the National Curriculum. As part of the review they have identified three cross-curriculum perspectives;

- Indigenous perspectives,
- Sustainable living; and
- Australia's engagement with Asia

The NSW Farmers' Association believes that sustainable food and fibre should become a fourth cross-curriculum perspective.

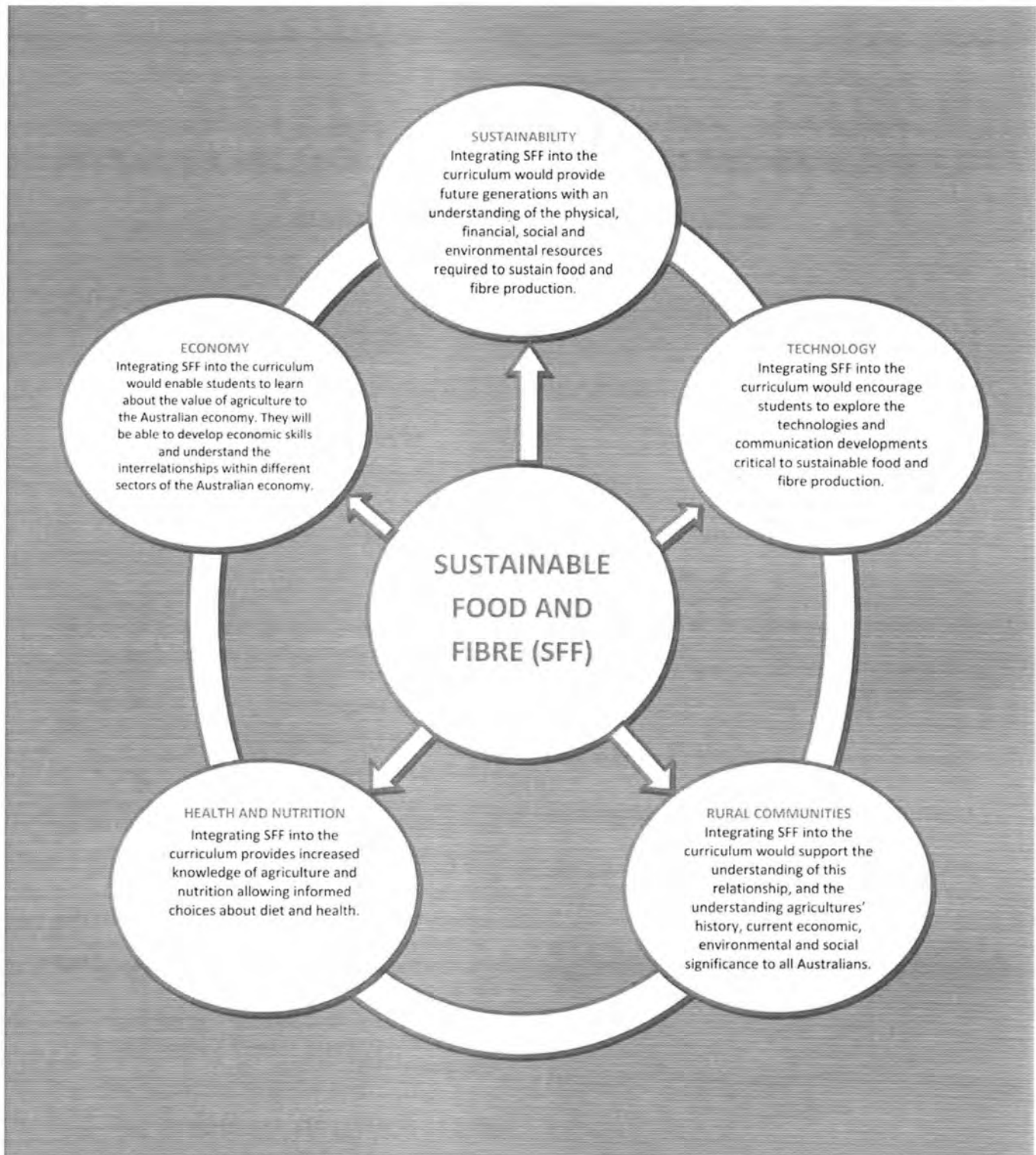
STATE LEVEL

At the state level the NSW Department of Education and Training has a number of cross-curriculum policies and priorities including environmental education and road safety education.

The NSW Farmers' Association believes that sustainable food and fibre should be included as one of these cross-curriculum policies.

MULTIFACETED RELATIONSHIPS OF SUSTAINABLE FOOD & FIBRE PRODUCTION

The NSW Farmers' Association believes the sustainability of food and fibre production, and therefore food security, falls across many facets of government policy. Future decision makers in any of these core areas must have an underlying knowledge of the interrelationships and impacts of resource allocation upon food and fibre production to secure Australia's capacity to meet future requirements.



Growing
the Business
of Farming | **NSW Farmers
ASSOCIATION**

For more information about our organisation please visit:
NSW Farmers' Association
Level 25, 66 Goulburn St, Sydney NSW 2000
T: 1300 794 000
www.nswfarmers.org.au

Bogged in a Drought?



RuralBiz

Training

**!! SPECIAL STUDENT
DEAL !!**



CHEMICAL CARD PLUS

**Chemical User
Accreditation (AQF3)
designed
for farmers and pesticide
users.**

**PLUS 1080 Handling
PLUS On Farm Fumigation
for WorkCover Exemption
1 day face to face workshop**

SPECIAL STUDENT PRICE

\$150

*(student price valid if student is referred
by their school)*

CHEMICAL CARD PLUS ONLINE

**Complete the same
training in the
comfort of your own
home!**

SPECIAL STUDENT PRICE

\$150

**P: 02 6884 8812 E: admin@ruralbiztraining.com.au
www.ruralbiztraining.com.au**

Go 4 Grains

kids' design challenge



Promoting healthy eating at school

Healthy eating is important for everyone, especially for teenagers throughout their active, growing years. Grain-based foods play an important role in a nutritious, balanced diet for teenagers. They are 'powerhouses' of nutrients, tasty, versatile and easy to make into delicious snacks and meals.

In this exciting and fun challenge, students will be presented with the following scenario:

A new grain-based food product is to be produced for the school canteen, in line with the Fresh Tastes @ School NSW Healthy School Canteen Strategy.

- Students will develop a food product and/or promotional strategy to communicate the '4+ serves a day' message.
- Food products and promotional strategies will be pitched at the Go 4 Grains event.
- As with all Kids' Design Challenges, students have the opportunity of working with professionals and will have their campaign assessed by Challenge judges.

Implementation in Terms 2-4, 2010

Stage 4 - Technology (Mandatory) - Food Design and/or Promotional Design

Teacher workshops: 7 May

Celebration Event: 3 November

Partners: Go Grains Health & Nutrition Ltd, Grain Growers Association and Healthy Kids Association

www.gograins.com.au

www.graingrowers.com.au

www.healthykids.com.au



Bogged in a Drought?

Go 4 Grains
kids' design challenge



Fax back registration 2010

9886 7154

Please list all participating classes

A Teacher Support Pack will be provided to all registered classes

Professional learning and briefing workshops:

7 May - Strathfield - Term 2/3 implementation

The briefing workshop will outline the processes and requirements of participation in the challenge. Teachers will receive expert input on aspects of nutrition and marketing and participate in hands-on activities from the KDC Go 4 Grains Challenge teaching and learning unit.

Go 4 Grains Kids' Design Challenge workshops are Registered with the NSW Institute of Teachers

** Schools are responsible for the cost of teacher relief attendance at for the briefing workshop. Standard workshop fees apply **

Go 4 Grains Kids' Design Challenge - STAGE 4

Name of school:

Contact teacher:

School phone: Fax:

Classes participating:

Class:	Teacher:	Workshop attendance ☐
	e-mail:	

Class:	Teacher:	☐
	e-mail:	

Please copy this sheet for additional classes, if needed.

Principal's approval: Date:

Please return BY Wednesday 28 April

Fax to: (02) 9886 7154

Attn: Susan Harriman

Kids' Design Challenge Coordinator

e-mail to: susan.harriman@det.nsw.edu.au

Phone: (02) 9886 7108 (Mon, Thurs, Fri)

Postal Address:

Curriculum K-12 Directorate

Private Bag 3

RYDE NSW 2112

www.kdc.nsw.edu.au



Bogged in a Drought?

Teacher Resources

Order your FREE copy today!



The Primary Industry Centre for Science Education (PICSE), with its national centre in Burnie, has developed a range of teaching and learning resources over the last few years. These resources have been produced in partnership with the funding providers. Each of the resources contains teacher and student materials, demonstrates links with local industries and several have a focus on scientific investigations.

Organic Chemistry its role in industry

Using a range of resources, including
interactive CD-ROMs, this resource
explores the role of organic chemistry
in industry. It includes information on
the chemical structures of many
important organic compounds and
the processes used to produce them.



Australian Government
Department of Education, Employment
and Workforce Relations



University of Tasmania
Research & Development
Corporation

science taking you places

Organic Chemistry - Its Role in Industry (Year 10 extended to Year 12 Science Classes)

Introduction to Organic Chemistry - The chemistry of carbon molecules is unique. Find out about carbon chemistry, the structures of molecules and how they relate to their properties and uses in this interactive resource.

Science of Fermentation - In this section you will learn about the malting and brewing processes and the role of the hops molecules and their isomers in beer production. You will also learn about the importance of fermentation in cheese production.

Science of Alkaloids - In this section you will learn about the structure, properties and uses of the alkaloid chemicals produced by and from the poppy plant and almonds.

Science of Pesticides - In this section you will learn about the chemicals used to control pests in cotton crops.

Science of Visualiser - This section allows students to enter a organic compound and see the structural, two dimensional and molecular, three dimensional, molecules.

The Science that Supports Our Industries! (Year 10-12)

The Wine Industry - This section contains scientific information from the Tasmanian and West Australian wine industries. There is an excellent section on basic organic chemistry.

The Poppy Industry - This section covers the importance of Organic Chemistry to this industry. Discover the benefits of the poppy plant, and find out why Tasmania is a world leader in poppy production.

Essential Oils - Extremely important for the perfumery industry, as many essential oils are the basic ingredient. This section explores the oils of many plants and their chemical background.

Beer Industry - From steeping to bottling; hops and malt; all about beer production.

Dairy Industry - We explore the science of chocolate and cheese manufacture in this section.

Pyrethrum Industry - Pyrethrum is a natural insecticide that has been used for centuries.

Instrumentation - This section looks at specialised laboratory equipment, including mass spectrometers and electron microscopes. It includes animations of the operations of the instruments. Also included is a section on remote sensing of crops from satellites and the use of the spectrum.

Worksheets - All of these sections are supported by worksheets, project sheets, and assessment templates.



Primary Industry Centre for Science Education (PICSE) Contacts

Trish Keane
University of Southern Queensland
ph: (07) 4631 1526
email: Patricia.Keane@usq.edu.au

Trevor Noble
GrowSmart Training
ph: (08) 8582 2270
email: tnoble@rhctraining.com.au

Anna Paice
University of Tasmania
ph: (03) 6226 2668
email: Anna.Paice@utas.edu.au

Belinda Pope
University of Western Australia
ph: (08) 6488 1646
email: belinda.pope@uwa.edu.au

Sue Lanham
University of the Sunshine Coast
ph: (07) 5456 5045
email: SLanham@usc.edu.au

Bob Buxton
Flinders University
ph: (08) 8201 3774
email: robert.buxton@flinders.edu.au

Susanna Greig
University of New England
ph: (02) 6773 2809
email: susanna.greig@une.edu.au

Trudy Staines
Cotton CRC
ph: (02) 6799 2478
email: trudy.staines@csiro.au

Teacher Resources

Order your FREE copy today!



Biology in Context- Advances in Plant Genetics (Year 10 Extended, Year 11-12)

This resource is intended to demonstrate and give practice in aspects of current research techniques (gel electrophoresis) and introduce students to some cutting edge biotechnology through the rapid breeding of new varieties of non-GMO canola using doubled haploid embryos. A CD-ROM is available that covers two main topics:

- Agarose gel electrophoresis
- Rapid breeding of new plant varieties

All resources on the CD-ROM can be accessed from the starting page index.htm. There is also a DVD that is available separately that contains two chapters: a visual guide to agarose gel electrophoresis, and an exposition of doubled haploidy for rapid canola breeding.



The Chemistry of the Citrus Industry (Year 8-12)

Aims to relate some of the chemistry involved in the local Citrus Industry to science taught in school courses. We have attempted to show that the chemistry in science courses in schools has applications in local industries. We have set the scene where this chemistry occurs in industry and then have produced related resources which could be used by both teachers and students in the classroom.

Aspects of Experimental Design (Year 11 -12)

This CD aims to provide teachers and students in Years 11 - 12 studying Life Science subjects such as Biology and Environmental Science with an interactive and imaginative resource. The theme "working scientifically" was used to create the framework for this resource, as all researchers either at university, in industry or other agencies follow a logical and rational scientific method in answering questions with regard to their research topic. In particular, the fields of agricultural research are highlighted here in the case studies. This approach will have wide applications in schools.



An Introduction to Scientific Inquiry - This section introduces students to the basic principles of scientific method and the setting up of their own scientific investigation.

Science in the Sheep and Wool Industry - This section provides students with information and interactive activities relating to the science that is foundational to this important area of primary production.

The Science of Milk and Milk Products - Check out the biology of a cow or the nutritional make-up of milk. Why is milk such a useful natural product? What can milk be made into, what are the processes involved and just how important is it to know the science of grass and soil? Follow Igor and find the answers to all these questions and more!

Please complete and return the included order form if you would like a free copy. To preview or download these resources please visit: <http://www.picse.org>



School: _____

Attn: _____

Email: _____

Postal Address: _____

Post Code: _____

Phone: _____

Mobile: _____

- ☐ Science Taking you Places; a Teaching Resource
(includes Science Investigations with Igor)
- ☐ Organic Chemistry - Its Role in Industry
- ☐ The Science that Supports our Industries!
- ☐ Biology in Context- Advances in Plant Genetics
- ☐ The Chemistry of the Citrus Industry
- ☐ Aspects of Experimental Design

For your free teaching resources detach this order form and post to:

PICSE Admin, School of Agricultural Science, University of Tasmania, Private Bag 3503, Burnie, Tasmania 7320.

Phone: (03) 6430 4517

Fax: (03) 6430 4959

E-mail: PICSE.Admin@utas.edu.au

Bogged in a Drought?

RURALBIZ TRAINING



This training is funded by the
NSW Government in partnership
with the Australian Government

Calling all.....Farmers / Farm Managers

Here's an opportunity to tone up your management skills and gain a
Nationally recognised qualification at the same time.

Training will be offered online / distance learning with a local workshop if
needed – **no need to leave the farm / your local district.**

Recognition Of Prior Learning

You've been running your own farm for years – You can get your experience
acknowledged by using our **Recognition of Prior Learning (RPL)** & still have full
access to our training – without the worry of completing the assessment tasks!

RuralBiz Training has a limited number of funded places for:

- Diploma in Rural Business Management / Agriculture
- Advanced Diploma in Rural Business Management / Agriculture



Visit our website: www.ruralbiztraining.com.au for more course and enrolment
information or call us on 02 6884 8812.

Free Chemical Card Plus Online - while enrolled in the funded training.

Feedback from current participants:

*"I've really enjoyed the course and am a big supporter of RuralBizTraining. We
need good broadband in the bush so these opportunities are widely available."
(Peter Robertson, Jerilderie)*

*"Now that the kids are both at school, it is time to become more involved in
the management of the farm, improving my skills in the office and the
paddock."
(Rebecca Bragg, Cootamundra)*

LIMITED PLACES AVAILABLE - ENROL NOW

*(with groups starting each month from October to December 2010 if funded
places are available)*

Fax or Email back to request enrolment information:

Fax: 02 6884 8862 Email: admin@ruralbiztraining.com.au

Surname: First Name:

Business Name:

Mailing Address:

Phone: Fax:

Mobile: Email:

Preferred qualification:

REGISTRATIONS ARE NEEDED IMMEDIATELY

(Funded places are only open to residents of NSW or an employee of a NSW business)

Kreate Pty Ltd T/A RuralBiz Training ABN 98 104 919 548
P: 02 6884 8812
F: 02 6884 8862
E: admin@ruralbiztraining.com.au
W: www.ruralbiztraining.com.au

Bogged in a Drought?



Rural Skills Australia

Since its inception in 1995, Rural Skills Australia (RSA) – working in conjunction the National Farmers' Federation (NFF) and its member bodies – has looked to foster improved rural industry involvement in education and training with a view to enhancing the skills and capacities of new entrants, existing workers and primary producers alike.

Utilising funding assistance provided by the Australian Government through the Department of Education, Employment and Workplace Relations Industry Training Strategies Program, RSA employs a network of Education and Training Advisers around Australia to provide advice and assistance to rural and related industries on education and training matters, with a particular focus on Australian Apprenticeships.

During 2010/11, Tony Dwyer, RSA's NSW Education and Training Adviser, in line with established practices, will maintain his involvement with:

- the promotion of Australian Apprenticeship pathways and available Government assistance measures, including opportunities for up-skilling existing workers;
- Government-initiated consultative forums, policy reviews and education and training policy development, and the provision of industry advice to Government on specific vocational education and training matters;
- monitoring rural and related Australian Apprenticeship commencements across NSW, noting under performing or 'problem' sectors, inhibiting factors, systemic impediments and related implementation issues;
- expanding industry involvement and understanding of vocational education and training (VET) – particularly Australian Apprenticeships and Australian School-based Apprenticeships; and
- the promotion and dissemination of information on government policy changes and initiatives to members of the NFF, Commodity Councils, and associated and affiliated bodies using a variety of mediums including websites, industry journals, newsletters, publications and media releases.

Sunbeam Future Farmers Fund

In addition, RSA will continue its association with Sunbeam, an iconic Australian company, to support Australian farmers and their Production Horticulture Australian Apprentices under Sunbeam's Future Farmers Program. The program looks to encourage and reward farmers and their fulltime, part-time or school-based Production Horticulture Australian Apprentices, and is open to all growers, not just those within the Sunbeam network.

RSA plays an active role in marketing and promoting the initiative, and assists Sunbeam Foods with the management and coordination of the program.

For further information

Call 1800 647 798. **Websites:** www.ruralskills.com.au and www.agrifoodcareers.com.au





Rural Skills Australia (RSA), in conjunction with Sunbeam, is delighted to announce that the Sunbeam Future Farmers Fund, launched in October 2009, will continue in 2011. This year, 27 employers from across Australia, together with 43 of their Production Horticulture Australian Apprentices were successful in securing sponsorship payments through the Sunbeam Future Farmers Fund.

The Sunbeam Future Farmers Fund aims to give apprentices a great start in a rural career, offer much needed support to our farmers and importantly, maintain the vital skills base that will keep our agricultural industry healthy.

The program provides a financial incentive to selected apprentices on completion of their studies and financial support to Australian farmers by contributing to the cost of their apprentices undertaking Production Horticulture qualifications at the Certificate II, III or IV level.

Applications will be accepted from employers from anywhere in Australia of full-time, part-time and school-based Australian Apprentices undertaking Production Horticulture qualifications at the Certificate II, III and IV level – closing on 30 April 2011. The program is open to all growers, not just those within the Sunbeam network. However, those successful in receiving sponsorship in 2010 are not eligible to reapply.

More information, including 2010/11 Application Forms, is available online at: www.ruralskills.com.au. Prospective applicants can also contact Rural Skills Australia on 1800 647 798.



Sun safety and skin cancer prevention **Dot points for NSW Agriculture Teachers magazine.**

- Australia has among the highest rates of skin cancer in the world. Two in three Australians (2 in 3 men and 3 in 5 women) will develop some form of skin cancer before the age of 70. Every year 1857 Australians die from skin cancer.
- Almost all these skin cancers (approximately 99% of non-melanoma skin cancers and 95% of melanoma) are caused by ultraviolet (UV) radiation from the sun. Protecting skin from exposure to the sun's UV radiation is the simplest, most effective strategy for preventing skin cancer.
- Most parts of NSW have very high levels of UV radiation, especially in summer. This is because we are close to the equator and have clear skies.
- Anyone can be at risk of developing skin cancer – even people with olive and dark skin and people who tan easily. However, some people are at higher risk than others.

Risk factors include:

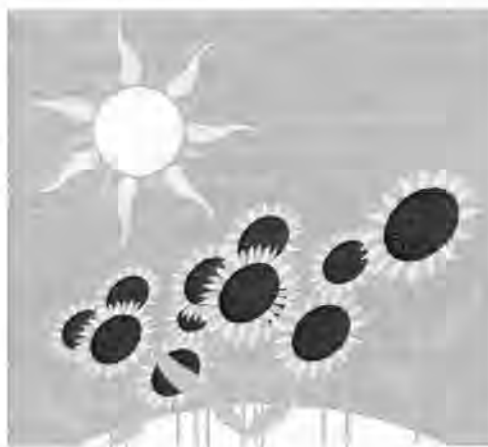
- A large number of moles
 - A history of sunburn
 - A family history of melanoma
 - A previous diagnosis of melanoma or other skin cancer
 - Fair skin that burns easily and does not tan
 - Red/fair hair and blue/green eyes
 - Having a compromised immune system
- Sunscreen works by filtering (not blocking) UV radiation (with a chemical barrier that absorbs and/or reflects the UV rays) away from the skin. No sunscreen provides 100% protection against UV radiation and sunscreen should not be used as the primary or only method of sun protection. When applied correctly SPF30+ sunscreen filters approximately 96% of UV radiation. This means that over 3% of UV radiation is transmitting through to the skin. These small amounts of UV radiation accumulate and damage skin over time.
 - The Cancer Council recommends that people protect their skin in 5 ways:
 - Slip on close-weave clothing that covers as much skin as possible. Shirts with a collar and long or elbow length sleeve and pants or knee length shorts.
 - Slop on SPF30+, broad-spectrum, water-resistant sunscreen. Apply 20 minutes before going outside and re-apply every 2 hours.
 - Slap on a broad-brimmed hat that protects the face, ears and neck. Caps provide no protection for the ears, neck and cheeks and are not recommend.
 - Seek shade wherever possible. Trees, awnings and shade shelters can all provide excellent shade.
 - Slide on close-fitting sunglasses that meet the Australian Standard 1067.
 - A suntan is not a sign of good health - a suntan is a sign that skin has been damaged by the sun. The body begins to produce melanin to absorb UV radiation as a defense response when exposed to UV radiation. A tan offers protection against sunburn that is equivalent to approximately that of an SPF3 sunscreen and provides no protection against further DNA damage to the skin cells.

- Nearly all skin cancers can be cured if detected and treated early. The overall five-year survival rates for melanoma are 90% for men and 94% for women.
- The UV Index is a tool that can be used to show the intensity of the sun's UV radiation. It divides UV radiation into levels as follows: low (1-2), moderate (3-5), high (6-7), very high (8-10) and extreme (11 and above). When the UV forecast is 3 (moderate) the UV rays are strong enough to damage the skin and sun protection is required.
- The sun's rays are strongest between 10am to 2pm (11am to 3pm during daylight saving time). However, the **SunSmart UV Alert** identifies the hours of each day when the UV Index will be 3 or above as well as showing what the maximum UV forecast will be for the day. The Alert can also be used to help plan outdoor activities – staying indoors when UV levels are 3 or above, or using sun protection when outdoors.
- Do not equate UV levels with temperature – UV can be high on cool and cloudy days too.
- The UV SunSmart Alert is available in most newspapers or the following link lets you check UV levels in your local area: <http://www.bom.gov.au/weather/nsw/nsw-uv-index-map.shtml>
- The risk of developing and dying from melanoma increases with age. However melanoma also affects young people. Australian adolescents have by far the highest incidence of malignant melanoma, accounting for one third of all cancers in female adolescents and one quarter in males.¹²
- Early detection of skin cancer is important. The sooner any type of skin cancer is detected, diagnosed and treated the more likely it is that treatment will be less invasive and the greater the likelihood of a complete cure.
- Cancer Council recommends that everyone become familiar with their own skin and keep an eye on any potential changes. This means getting to know existing moles, birthmarks, freckles and blemishes on the skin and being alert to any new or changing spots anywhere on the body.

Things to look out for:

- Any new spot, lump or unusual freckle, mole, sunspot or sore that doesn't heal or that wasn't there before.
- A spot that looks different from other spots around it.
- A spot that has changed colour, size or shape over a few weeks or months, has an irregular border or becomes itchy and/or bleeds.

A GP should be consulted **immediately** if anything looks new or different.





CASTLEREAGH FEEDS

Supporting Education Program

The Healthy Choice

INFORMATION DAYS

**ONLINE SUPPORT
& ADVICE**

'FREE' FEED!

**A WELL EARNED BREAK
FOR YOUR TEACHER**

Graham has been successfully feeding and showing livestock for over thirty years and is available via the email addresses to consult with you about your livestock feeding requirements.

Castlereagh Feeds in conjunction with our distributors intend to hold information days covering topics such as nutrition, selection and preparation of your livestock. An invitation will be extended to your school to attend these events when held in your area.

**OUR RANGE OF
FEED INCLUDES:**
cattle, poultry, sheep, horses,
rabbits, alpacas, pigs & goats

HOW IT WORKS

In return for using Castlereagh Feed products entirely or as the majority of your feed requirements to feed your schools livestock, and those livestock are awarded a Championship at **any show in NSW**,

**YOUR SCHOOL WINS ONE TONNE
OF CASTLEREAGH FEED
'ABSOLUTELY FREE'**

(ONE PER SCHOOL DURING OFFER PERIOD)

If your Schools livestock win a Championship at **any ROYAL SHOW in NSW** and you have used Castlereagh Feeds products to feed your champion,

**YOUR AGRICULTURE TEACHER WINS
TWO NIGHTS ACCOMMODATION
AT A TIME AND DESTINATION OF THEIR CHOICE
TO THE VALUE OF \$500 COMPLIMENTS OF
CASTLEREAGH FEEDS**

To register your school and find out where your nearest distributor of Castlereagh Feeds is, contact:

GRAHAM WILLIAMS on Ph: 0488 172353

info@castlereaghfeeds.com.au

gjwilliams@hotmail.com.au

**OFFER ENDS
30TH JUNE
2011**



Bogged in a Drought?

Butler's BAAT Blog



A picture perfect
conference –
Stuart Hemmings



Such an
enjoyable
event –
**Bronny
Nielson**



Always important to share & enjoy the company of colleagues.
Great food and Cargill Tour was extensive & informative.
See you all in 2013 – **Anita De La Motte**



Really enjoyed
the variety, and,
the food –
Ben Coombes

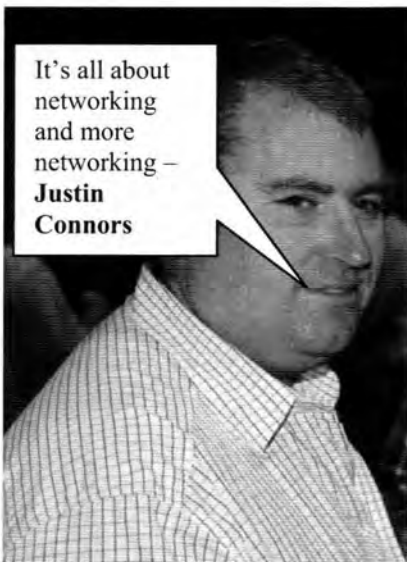
Bogged in a Drought?



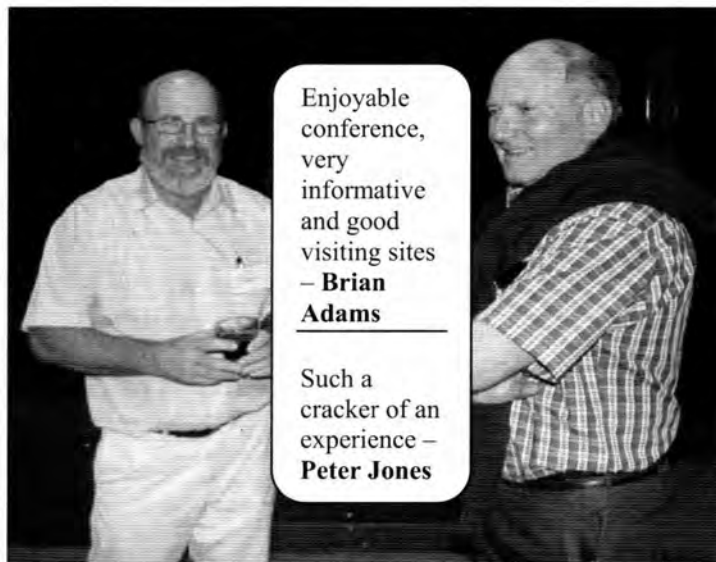
Just a beaut show! –
Tony Barnett



Good Fun,
Good Times &
Good People –
Laura Tolley



It's all about
networking
and more
networking –
**Justin
Connors**



Enjoyable
conference,
very
informative
and good
visiting sites
– **Brian
Adams**

Such a
cracker of an
experience –
Peter Jones



Just loved
the
company
– **Tony
Butler**



I learnt so
much in such
a short time –
Jane Swan

Great chance to meet up with others & share ideas – I am inspired to change things at my school now. Thanks to one & all –
Simone Neville



Thanks for the invite –
Mel Henry (GGA)

Great conference! Interested by Auscott tour where I saw a water storage dam bigger than the average North Coast farm – 200 Ha –
Mick Melino

What a great time! Why haven't I been before?
– **Dave Randall**



What a Ripper of a conference!!! I learnt how to cook a steak, but the real highlight was getting bogged!!! –
Peter Collett

\$!*@ - you got me!
– **Does anyone know this man?**



Absolutely loved it! The people, the trips, the Peel & Castlereagh and the sense that we can instil Agriculture into one and all –
Carl Chirgwin

A great chance to catch up with friends & meet new people. A great time had by all as well –
Jade Smith



Fishing, berries, trout, dairy tastings – No wonder we were an hour late getting back –
Gary Webb



Simply sensational! Thanks to one & all –
Evan Paul

It was great meeting and sharing ideas with other Ag teachers –
Tendayi Mokogo



It was a great invigorator as well as good fun –
Warwick Rolfe

Great times and thanks to all who organised –
Phil Hurst

Enjoyed the tours & sampling local produce. Also, a great time networking –
Nicolet Westerhof



Very good time & wine –
Prue Kesby

Enjoyed the cotton trip; great farmer. Time to catch up is great. Thanks to the organising committee –
Ivan Gant

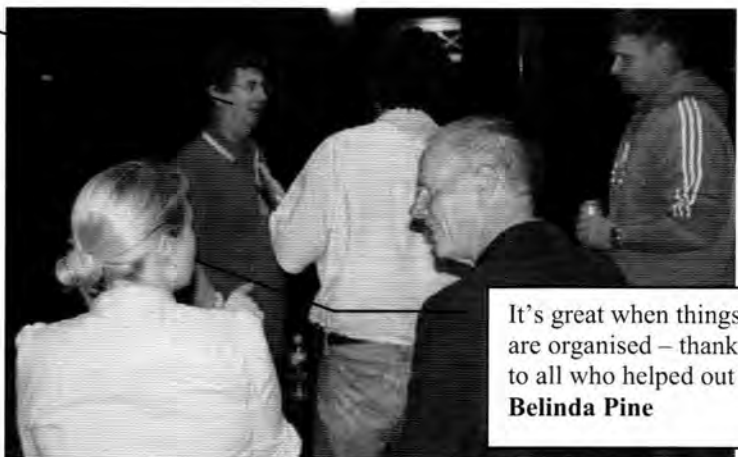


I feel I have reinvented myself. It was a real 'refresher'. Learnt heaps! Great excursions & well organised –
Nigel Cox

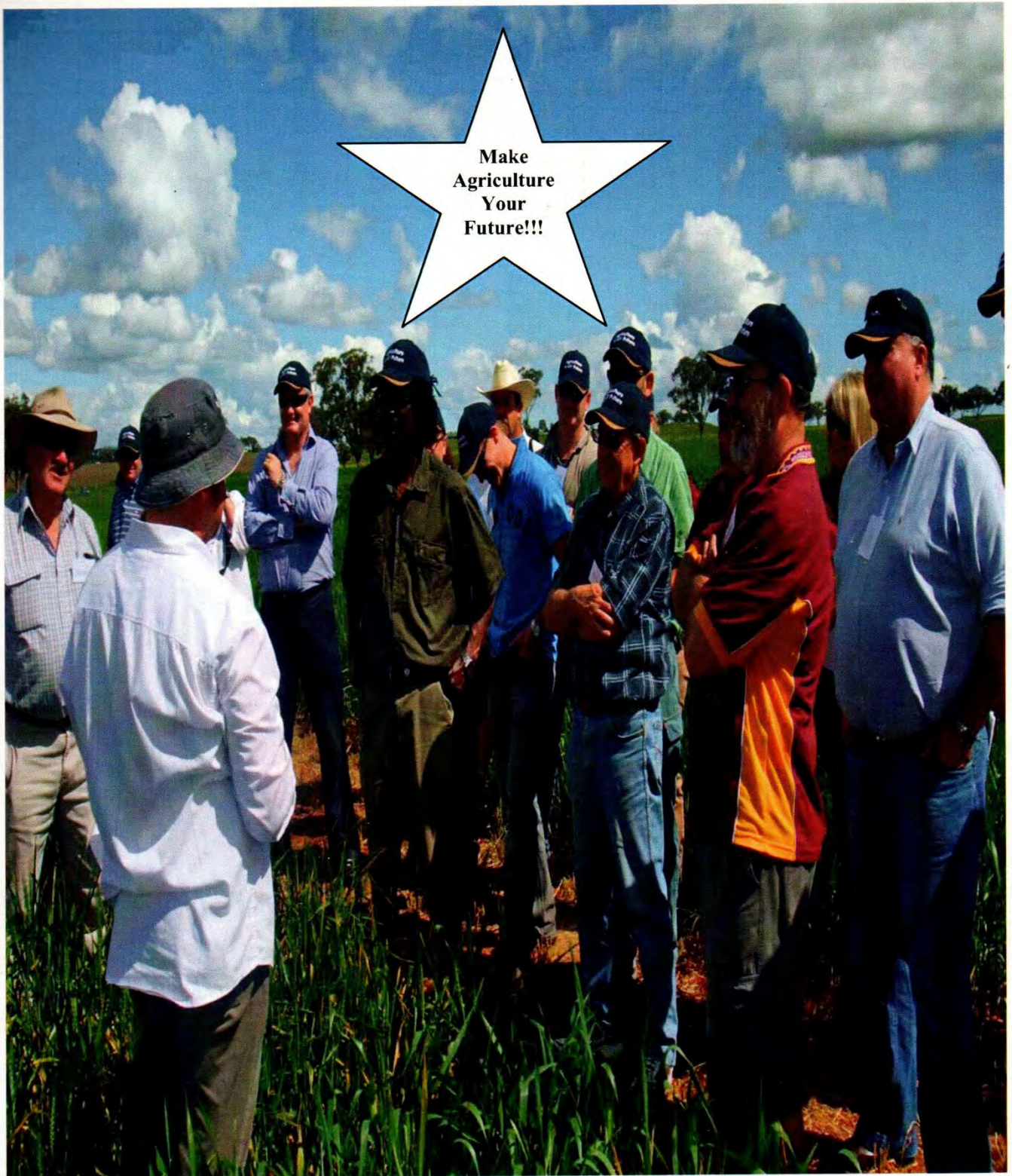
The contacts I have now will help a lot –
Max Igbal



Great time and excellent activities –
Graeme Harris



It's great when things are organised – thanks to all who helped out –
Belinda Pine



Us as One

Bogged in a Drought?