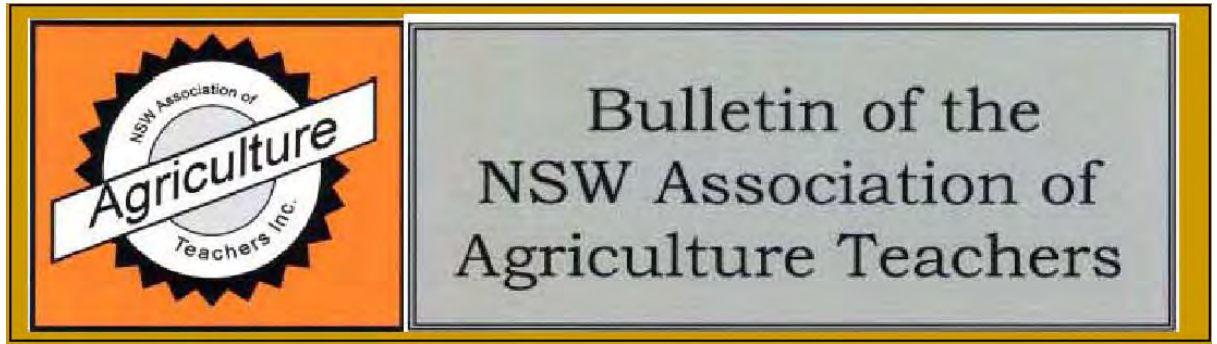




B.A.A.T

2011



Sign of the Times

N.S.W. Association of Agriculture Teachers Inc



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ABN Number: 81 639 285 642



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17. \$\$\$ Boost
18. Big Beef
19. On Fire
20. Archibull
21. CEFA
22. NSW Farmers
23. Total Topics
24. Scholarships
25. UNE 4 All
26. Cream of the Crop
27. More \$
28. Landlearn Competition
29. PISCE
30. Use if You Need
31. All Online
32. One Flash...

“FROM THE WATER IN THE DAM”



-Syllabus reviews, new syllabuses and a mountain of resources continue to flow through the ranks of NSW AAT.

-The planning is well underway for the 17th National Association of Agricultural Educators Conference themed ‘*Feeding the Future*’ come next January. NSW AAT members do get a state incentive to attend – just check out the enclosed presidents’ report.

-HSC markers are **WANTED** in both Primary Industries’ and Agriculture and for one of the best professional development opportunities with a bit of laughter, nominate yourself next March on the BOS website.

-Teaching Agriculture and Primary Industries’ is a challenge we all face each day; weather we have a house block size plot or 50+ acres. However, the networking either in person, emails, ning or by phone is a must for us all to excel too each of our students.

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



Aren't We All?

A Moment in Time with NSW AAT

Well what a year it has been. Your association has been lobbying ACARA regarding the place of Agriculture in the national curriculum. I have been the National Association of Agriculture Teachers representative on the advisory panel for ACARA developing the shaping paper for the Technologies. This has required lots of reading and deep thought about what technologies are and how a curriculum can be developed for Foundation to Yr 12 and retain relevance over the duration of a student's schooling. This means a student starting in 2015 will not graduate from school until 2027. This has made the task very challenging. Whilst I am not permitted to discuss the contents of the curriculum, it would appear that Agriculture (Food and Fibre Production) has a place and it may not be greatly dissimilar to that which currently exists in NSW. Concepts relating to F&F will probably also be embedded in the K-6 curriculum which will help to counter the appalling lack of knowledge of food and farming in the general community. The current timetable has a draft curriculum for consultation early next year, so keep your ears open and be vocal!

The new Primary Industries syllabus has just been released and it has shown the value of significant input of teachers and the NSW AAT to gain a workable syllabus that acknowledges the great differences in student and employer needs in different parts of the state. Rather than the highly prescriptive syllabus that was likely to result earlier this year a far more flexible syllabus has been developed. The structure is shown below:

- Five mandatory focus areas: Chemicals, Safety, Sustainability, Weather & Working in the Industry
- Two stream focus areas (students undertaking the 240 indicative hour course must address ONE stream focus area): Livestock health and welfare & Plant pests, diseases and disorders.

It is worth reminding all Primary Industries teachers that the HSC requirements and content are additional to the national competency based units. There are a number of mind maps that have been developed and can be found in the support material that show the content that could be tested in the examination.

It seems the timeframes between the development and implementation phase of new curricula is continually shortening and this places a greater load on individual teachers who are still trying to run their school farms, take kids to shows, and perform all the other tasks that Aggies have done for ever! This means that it is imperative that we need to share resources we develop and use our networks extensively. Whilst a task or activity you have scratched up mightn't be the basis of a PhD it may save someone else a lot of time, so come on people, SHARE.

Ways to do this include the use of this publication through Carl Chirgwin – carl.chirgwin1@det.nsw.edu.au; OR www.nswaat.org.au through the use of 'ning' which is included in this BAAT to refresh our memories of its utilisation.

A number of teachers have expressed some dissatisfaction with this year's 2U Ag HSC exam so I have set up an online survey, the results of which I will share with BOS and publish in BAAT next year from your expressing your concern.

I hope that we will have a strong contingent from NSW AAT at the Adelaide NAAE conference. As a paid up member of NSW you are also a member of NAAE, which has been lobbying ACARA, involvement with the Primary Industry Education Foundation (PIEF) in promoting Agriculture in schools, and a number of other lobbying actions on behalf of each state. The conference looks great and the keynote speaker Julian Cribb will be helpful for those that study the Climate elective in 2U Ag. All current NSW AAT members will receive a \$100 incentive on attending this conference – www.naae.org.au if you would like to attend.

For those DEC / DET teachers there is a consultation coming up on teaching facility standards and we need to all have a say as we may be able to ensure decent Ag facilities result or are at least maintained.

Hope to see you in Adelaide!

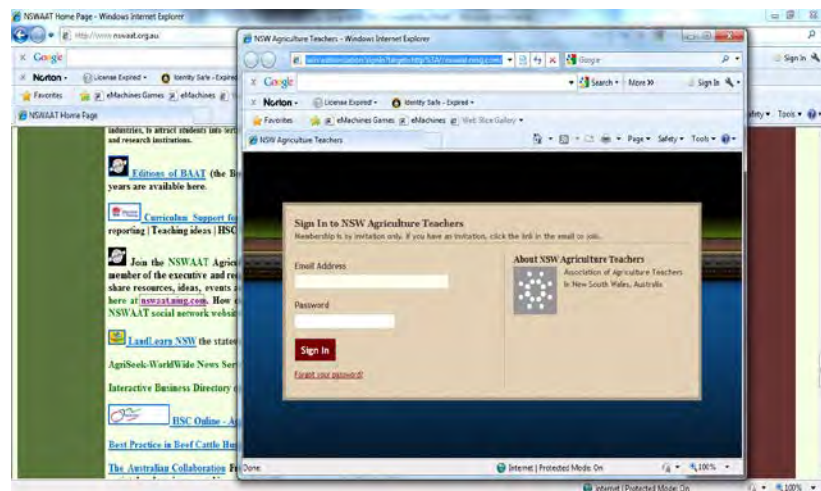
Graeme Harris – NSW AAT President 2010-2013

Just Ning It!

Step 1 – www.nswaat.org.au



Step 2 – Create an Account



Step 3 – Upload your video/photos of students in action/teaching resources



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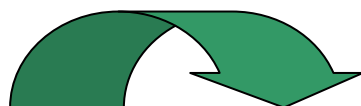
2011

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.

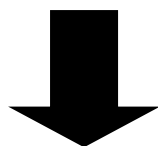
Do not delay; send your completed membership form & payment to the **treasurer:**

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



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TREASURER

Laura Tolley
FMAHS
Calala Lane
TAMWORTH
NSW 2340

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.*

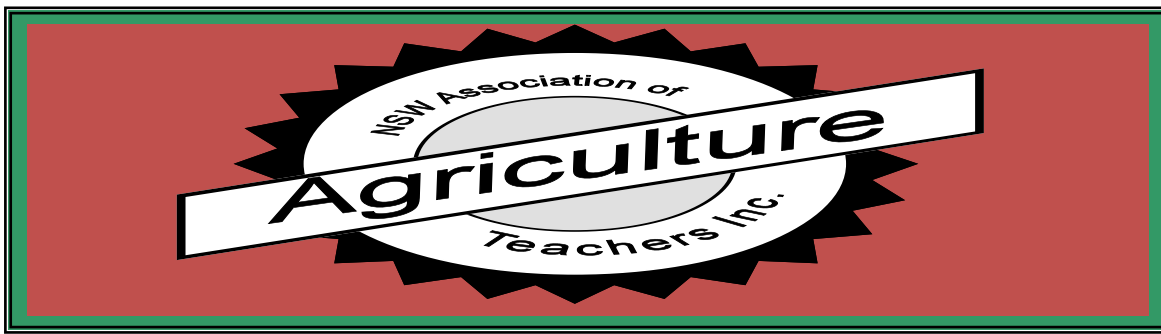
NSWAAT WEBSITE

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 (2012)

* 2 YEARS: _____ \$120 (2012-13)

N.B. Subscription applies for period from January 2011 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 List

*November
2011*

Valid Until End of:	Given Name	Surname	School
Associate	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	Peter	CRICK	Muswellbrook High School
Lifetime	Rod	FRANCIS	Charles Sturt University
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
Associate	Howard	KENNEDY	NSW BOS
Associate	NSW RAS	RAS	Sydney Olympic Park
Associate	Nigel	GRANT	The Scots PGC College
Associate	John	AGNEW	Naracoorte High
Associate	Phil	ROBERTS	Coomandook Area School
Associate	Stu	HEMMINGS	Office of Schools
Associate	Andrew	COSBY	Elisabeth Murdoch College
Associate	Cameron	ARCHER	Tocal College
Associate	Ben	STOCKWIN	PIEF
2012	Teacher of Ag		Broken Hill High School
2011	Teacher of Ag		Camden High School
2012	Teacher of Ag		Genesis Christian College
2013	Teacher of Ag		Griffith High School
2011	Teacher of Ag		Lisarow High School
2011	Teacher of Ag		Lithgow High School
2012	Teacher of Ag		Mendooran High School
2011	Teacher of Ag		Mudgee High School
2011	Teacher of Ag		Primary Industries Centre, Wagga
2011	Teacher of Ag		St Francis College, Leeton
2011	Teacher of Ag		The Scots School Albury
2011	Teacher of Ag		Wauchope High School
2012	Teacher of Ag		Wingham High School
2011	Teacher of Ag		Wyong High School
2011	Teacher of Ag		Young High School
2011			Australian National Field Days
2012	Andrew	ABERCROMBIE	Galston High School
2011	Brian	ADAMS	Lithgow High School
2012	Bryon	ADAMSON	Corowa High School
2012	Mufutau Afolabi	NASIRU	Sarasas Witaed Suksa School
2012	Gonzalo	ARMAS	Henry Kendell High School
2011	Phil	ARMOUR	Yass High School

2011	Billinda	AULD	La Salle Academy
2011	Fiona	BAILEY	Musselbrook High School
2011	Barbara	BANNISTER	XSEL Virtual Selective High School
2011	Colin	BARKER	Lyndhurst
2011	Diana	BEALE	Tumut High School
2011	Susan	BEHAN	Denison College-Kelso High School
2011	Paul	BOON	Macarthur Girls High School
2011	Craig	BOURNE	Singleton High School
2011	Sheree	BOURKE	Menai High School
2011	Graham	BRAMLEY	St Paul's College, Kempsey
2011	Louisa	BRIGGS	Brisbane Waters Secondary College
2011	Eddie	BUCKINGHAM	Mullumbimby High School
2011	Tracey	BURTON	Plumpton High School
2012	Jennifer	CAINES	Mount Annan Christian College
2011	Melanie	CAMPBELL	Moree Secondary College
2011	Sheena	CARTER	Student Teacher
2012	Hannah	CASKEY	Wee Waa High School
2012	Dale	CHADWICK	Gundagai High School
2011	Megan	CHANDLER	Narara Valley High School
2011	Carl	CHIRGWIN	Griffith High School
2011	Peter	COLLETT	Stanthorpe State High
2012	Helen	COLMAN	Molong Central School
2011	Justin	CONNORS	Bundurra Central School
2012	Ben	COOMBES	Peel High School
2011	Nigel	COX	Singleton High School
2011	Ian	CRABB	Queanbeyan High School
2011	James	CRONIN	Hennessy Catholic College
2011	Elena	DAGHER	Bossley Park High School
2011	Anita	DE LA MOTTE	Bomaderry High School
2012	David	DRURY	Waldobo Community School
2011	Nicole	DWYER	Gloucester High School
2011	Rachel	EAGLES	Forbes High School
2012	Susan	EARL	Red Bend Catholic College
2011	Cameron	ELLISON	McAuley Catholic School Tumut
2012	Bryce	EVLENSTEIN	Taree High School
2012	Sarah	EYB	James Sheahan Catholic High School
2011	Guy	FAHEY	Albury High School
2011	Ian	FAWBERT	Northholm Grammar School
2012	Rob	FORSBERG	St Josephs College
2011	Ivan	GANT	Hunter Central Coast Regional Office
2011	Gennie	GITTOES	NSW Farmers
2011	Helen	GLOVER	Macarthur Anglican School
2011	Milton	GOWER	Macarthur Anglican School
2012	Melissa	GRABHAN	Ashford Central School
2011	Richard	GRANT	James Ruse Agricultural High School
2012	Neil	GRIFFITH	Irrawang High School
2011	Graeme	HARRIS	Farrer Memorial Agricultural High School
2011	Leonie	HARRIS	Frensham
2011	Adrian	HARRISON	St Gregory's College
2012	Lois	HARRISON	Merriwa Central School
2012	Ian	HATHERLY	Kinross Wolaroi School

2011	Colin	HAWTHORN	Red Bend Catholic College
2012	Robert	HENDERSON	Tomaree High School
2012	Michael	HOLLAND	Scone Grammer School
2011	Sue	HOPE	Goulburn High School
2011	Mark	HOPKINS	Bega High School
2011	Kristina	HOSTEN	Bossley Park High School
2012	Peter	HUMPHRIES	Deniliquin High School
2011	Judith	ING	Student Teacher
2011	Maqsood	IQBAL	St Johns Park High School
2011	Grant	JACKSON	Gosford High School
2012	Charlie	JAMES	MaCarthy Catholic College
2011	David	JOHNSON	James Fallon High School
2012	Karen	JOHNSTON	James Ruse Agricultural High School
2012	Ken	JONES	Blayney High School
2011	Prue	KESBY	St Mary's College, Gunnedah
2011	John	KILLEEN	Bossley Park High School
2011	M	KOLLER	Nagle College
2012	Ian	LEES	Ulladulla High School
2011	Adam	MACRAE	Coonamble High School
2011	Hayley	MAHONEY	Picton High School
2012	Bruce	MANKTELOW	Scone High School
2011	Jenni	MANNA	St. Joseph's College
2012	Julie	MASLIN	West Wyalong
2012	Peter	MATUS	The Scots School
2011	Samantha	McAULIFFE	Mount View High School
2012	Patrick	McCANN	Flinders Christian Community High School
2012	Peter	McCANN	St Josephs College
2011	Ross	McGREGOR	Hurlstone Agriculture High School
2012	Denise	McHUGH	McCarthy Catholic College
2012	Jacqueline	McINTOSH	Crookwell High School
2011	Owen	McLAUGHLAN	Canowindra High School
2011	Jock	MCLAURIN	Yeoval Central School
2011	Allan	McMILLAN	Wagga Wagga High School
2011	Maree	McNEIL	Shoal Haven High School
2012	Stuart	McVITTIE	Gunnedah High School
2011	Mick	MELINO	St Johns College
2011	Luciano	MESITI	Student Teacher
2012	Christina	MIKAN	St Ignatus
2012	David	MULLER	St John Evangelist Catholic High School
2011	Rochelle	MUTTON	Mackillop College
2011	Simone	NEVILLE	Tuggerah Lakes Secondary College
2012	Steven	NOAKES	Kadina High School
2011	Craig	O'BRIEN	Moss Vale High School
2012	Richard	O'CONNELL	Mater Dei Catholic College
2011	Benjamin	O'LEARY	Rutherford Technology High School
2012	Phillip	OLIVER	Georges River High
2012	Emily	PEARN	Deniliquin High School
2011	Cathy	PERRI	Wollondilly Anglican College
2011	Gavin	PRICE-JONES	The Rock Central School
2011	Georgina	PRICE	Coleambally Central School
2012	Darren	RADFORD	Oxley High School

2011	Renato	RAMSAY	Sydney Distance Education High School
2012	Emma	RILEY	Baradine Central School
2012	Paul	ROSS-NEW	Kingswood High School
2012	David	SAUNDERS	Orana/Coffs Harbour
2011	Dani	SAXON	Cranebrook High School
2011	Maryann	SCHILLER	Hennessy Catholic College
2011	Nicole	SIMMONS	Student Teacher
2012	Natasha	SHANKELTON	Tullamore Central School
2012	Jade	SMITH	Dunedoo Central School
2011	Jane	SWAN	Dapto High School
2012	Jessica	TATE	Menindee Central School
2012	Vanessa	TAYLOR	Mulwaree High School
2012	Leigh	THATCHER	Pittwater High School
2012	Laura	TOLLEY	Farrer Memorial Agricultural High School
2012	Stephen	TRICKETT	Billabong High School
2011	Katie	TWOMEY	McAuley Catholic College
2012	Ron	VICTOR	Morisset High School
2011	Nicolet	WESTERHOF	Elizabeth MacCarthur
2012	Gary	WEBB	Finley High School
2012	Allison	WELLS	Barker College
2012	Wayne	WHALE	St Paul's College, Walla Walla
2012	Doug	WHITE	Manilla Central School
2011	Nigel	WHITE	Dubbo Senior College Campus
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

**Are you Up-to-Date
With Supporting
YOUR
Association???**

Worldskills New England/Northwest

The regional Primary Industries Worldskills competition was held at Moree TAFE in September. This was attended by students from Macintyre High (at Inverell), Barraba Central and Armidale High School. The activities were the standard ones for all regions involving a risk assessment for a workplace, a First Aid scenario, a fencing task using wire strainers and appropriate knots and a tree planting exercise with follow on fertilizer application and calculation exercise.

**This year was only Regional but
2012 is the State competition so start thinking about trying to go now!!**

The small number of students whom attended thoroughly enjoyed the day and gained a lot of valuable skills from the competition which will greatly benefit and strengthen their gaining skills for those related competencies. As a teacher helping judge it was also valuable for professional development, assessment validation and networking.

It should be commented on that the day was really quite poorly attended when the kids have the opportunity to gain so much and all teachers should try and make the considerably big effort to get their kids to go. I know we are all busy and sometimes it all seems too hard (certainly how I feel a lot of the time!!) but the rewards your students, school and ultimately you get are worth it.

Anyway, on the day we had Lucy Yeomans from Armidale High win with Ryan Marks from Macintyre High School place 2nd, girl from Barraba 3rd and Will Vivers from Macintyre get a Highly Commended. Congratulations to those students and thanks to Tony Barnett and Hannah Caskey for the judging and all those involved in letting the day happen.

Deb Snaith
Head Teacher Science/Agriculture/VET
Macintyre High School, Inverell



Champions!

This Years' CFA's

On Friday 21st October, 2011 Mr Greg Fulljames worked his last day at Yanco Ag after 30 years teaching agriculture, primary industries, being in charge of the boy's welfare and running the scout troop.

Greg was farewelled at a special retirement dinner on the 8th October held in the school dining room. Over 70 parents, teachers, scout members and friends attended the dinner. The room was set up with some examples of memorabilia of Greg's time. The stage basically was a camp site with tent, fireplace and a fibreglass cow as the final touch. We were not allowed to bring a live sheep in to the Dining room!!

Greg received his school service medal, a scouting trophy and gifts from staff and parents. There were many speeches, pictures and skits both serious and funny to make the evening very special for Greg.

Greg was also farewelled by the students as part of the Year 12 final luncheon. Tom Clark and Albert Gorman spoke and presented Greg with a school platinum badge (a badge normally presented as the highest level a student can achieve).

The staff and students will miss Greg and we wish him well in his new ventures in Tasmania.



Greg enjoying himself at the dinner in his honour



The two Head Teachers Welfare, Boys past and present (Greg speaking with Joe Goldsworthy).



Greg with 3 of the 5 principals he worked with at Yanco

Mr Colin McIntyre Brown, Greg, Mr Brian Roberts, Mr Daryl Finch

Greg spent 3 years at Bourke High, 3 years at Mossvale High and the remaining 30 years at Yanco Agricultural High School. Greg has made a huge contribution to Yanco in both his Welfare and Agricultural work.

Greg has started a sheep show stock program in the school and developed a White Suffolk stud. He has taken his willing band of students to many shows in several states of Australia. Greg has been a major supporter of many show societies, even attending some shows in the holidays when students were not available. Greg has also replenished and upgraded the orchard section at the school. He has taught Primary Industries for many years and aided many students to develop their talents to either return to their home farm, further their education into agricultural fields or proceed onto university studies. Greg, over the years has continually upgraded his qualifications in many aspects of agriculture including horticulture. Greg always had time for the students and worked many hours out of school with students on the school farm. He was always available to encourage students and follow up on their achievements long after they had left school. Greg has always been a good mentor to new and younger staff and was able to help them develop their talents in the specific areas they followed. Greg has a good sense of humour and told some interesting jokes. The students often took a while (often days) to work out the intended pun.

Greg has retired to Tasmania where there are mountains to climb and rivers to paddle. We wish him well.

Yanco Agricultural High School

Arthur Kelly



Arthur began his teaching career at Galston High School in January, 1976. After 8 years he transferred to Camden High School where he has served for the past 27 years. It was at Camden that Arthur married local girl Merryn and together they raised three beautiful and successful children. At Camden he has had a major impact on the teaching of Agriculture, many of his students pursuing a career in teaching after leaving school.

Very interested in environmental education, Arthur began the program 'Plant and Save' where 50,000 trees were raised at school and sent to farms for the purpose of providing for koala habitat. The program soon extended to local councils and further to schools.

Together with colleague Peter Ryan, Arthur established a new school farm from scratch when our school moved to a new site in 2000. Further to this a riparian zone was established adjacent to the farm with trees grown on site between 02/03'.

At Camden High school, Arthur is a respected member of staff, making huge contributions to the curriculum, sport and extra curricula activities such as the Duke of Edinburgh scheme. In addition he has been responsible for the design and construction of our school gardens. I am aware that Arthur has been a long serving member of the NSW AAT, serving as the treasurer for 3 years as well as the environmental contact person. He has been an H.S.C. marker for many years and during some of those sessions, has served as a senior marker.

A keen fisherman, we wish Arthur many happy times and good catches in retirement.

Gail McBride



Building on the Amended HSC Agriculture Syllabus

The following resources have been compiled from a number of willing teachers across NSW

New HSC Electives – Farming for the 21st Century

Guess we have all been busy compiling new resources for the new HSC elective we have just taught to 2011 year 12. To help anyone doing it for the first time for the next cohort or just to give you added ideas this edition includes my delivery version of the elective, in other words it's basically what the kids end up with in their books with some recommended websites etc. If the full topic doesn't get printed feel free to email or ring me at school and I can email it all as it is digital too.

Deb Snaith (deborah.snaith@det.nsw.edu.au)

Head Teacher Science/Agriculture/VET

Macintyre High School

Inverell

Issues relating to Research and Development (R & D)

R & D is fundamental to the progressive role of Agriculture in the Australian economy. Research is done by scientists working in government organisations (DPI, CSIRO) or private companies like Dow Agrosiences - global company accessing projects worldwide.

*(*Teachers - Google each issue and find relevant secondary source to use.)*

Issues in R & D include:

- 1 funding sources
- 2 patents
- 3 plant breeders' rights
- 4 animal welfare
- 5 legislation
- 6 contracts

Funding Sources

Funding for R & D comes from government sources (state or federal) or private companies with a marketing interest in a product or other reasons like environmental, social etc.

It is usually a stressful thing relying on funding to start, continue and/or finish a project. Often funding is linked to contract agreements and is reliant on the researcher of the team of scientists to come up with some results or be interested in the ongoing project. Depending on federal or state funding, there are rules which govern expenditure of funds and time frames.

Private companies may have ulterior motives, be purely profit driven, have genuine interest and be socially motivated e.g. environmental aspects with mining companies.

Patents

www.abc.net.au/tv/newinventors

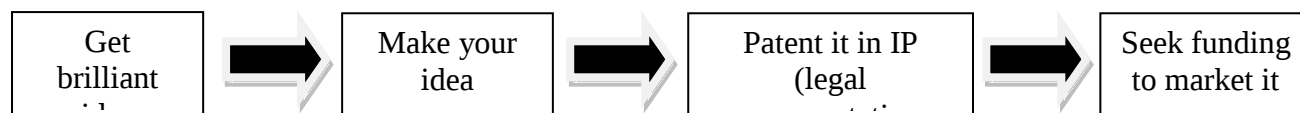
This is when an invention is protected by a patent. A patent gives the owner the exclusive right to an invention within the market place. It is a government sanctioned monopoly (one person controls it) provided to the owner to exploit the invention to the exclusion of others. There is a set time length of the patent and it varies between 5 to 8 years and costs from \$5 to \$8000 (see patent sheet).

www.actuateip.com.au/services/what-is-a-patent.html

To be patented an idea (invention) needs to be manufactured, novel and useful. It can be a product or a device, machine, business method (software) or biotechnology (GM).

Why patent?

- Financial benefit
- Protect your idea
- Allows you to legally threaten unauthorised users of the invention
- Helps your bargaining position
- Protects a company's investment in time and resources put into the R & D of that technology
- Costs money to patent something and has an ongoing maintenance fee so the idea needs to be worthwhile



NB I had a local inventor, Ed Evans with his safegate idea come in and talk to kids (www.safegate.com.au)

Plant Breeders' Rights

www.ipaustralia.gov.au/pbr

Also Wikipedia has a good explanation

There are exclusive commercial rights to a registered plant variety. The rights are a form of intellectual property like patents and copyright, and are administered under the Plant Breeders' Right Act 1994. When you have "rights" that means you have exclusive rights to produce the material, get it ready for propagation, offer it for sale, sell it, import and an export it and store e.g. a new coloured rose or variety of wheat or hybrid fruit tree.

Other forms of protection to Plant Breeders' Rights include a trademark and patents.

Why do it?

- For protection of great new variety
- Allows you to develop it
- Give you the exclusive rights to market the plant however you want

Inverell examples:

'Dictator' barley - can sow late season (June) and get good growth for feed.

'Drover' oats - has more rust resistance, dual purpose ⇒ good for grazing and is high yielding grain

'Taipan' oats - good grazing and grain

If a farmer buys some 'Drover' from Norco or Elders etc to sow they are allowed to do whatever they want with it (graze, strip, re-sow, feed out) but they are not permitted to sell it to anyone under the Plant Breeders' Rights Act 1994 as 'seed' oats.

MOUNTAIN

*Editor's Note: Deb Snaith has a deborah.snaith@det.nsw.edu.au more of resources -

Mr Presidente Himself

AGRICULTURAL SYSTEMS –

NOTES:

Farming systems do not exist in isolation; they are complex systems that are integrated systems within our world. They impact upon and are impacted upon other systems including:

- **Socio-economic systems** (economic systems- which affect the price paid for agricultural products via supply and demand, manufacturing systems – which develop resources for agricultural systems, technological systems – which affect the rate of progress of agricultural systems and political systems – which impose regulations on farmers and control international trade).
- **Cultural systems** –(ethical systems – which develop attitudes which impact on demand for products for instance genetically engineered products, educational systems – provide instruction on agricultural systems).
- **Natural systems** – (physical and chemical systems that provide resources for agricultural systems, biological systems – provide both detrimental and productive organisms for agricultural systems).

Students learn to:

- **Be aware of the use of systems thinking when looking at a farm** .It allows a holistic approach i.e. a “whole farm “ approach so that the subsystems (enterprises) are not studied as a separate unit but as a part of the whole farm unit. The use of models allows us to look at a farm in diagrammatic form, which simplifies the system. We can thus view a complex system in a simplified manner.
- **Construct an appropriate model showing interactions between subsystems on a farm.** Models include the black box model (inputs and outputs only), the static model (inputs, outputs & processes) and the dynamic model (which shows inputs, processes, outputs, the boundary of the farm and the interactions between subsystems).
This requires using systems language – enterprises of a farm need to be identified i.e. separating a farm into its various enterprises or subsystems. It requires you to look at the inputs, outputs and processes that take place within the whole farm and between the subsystems and show these in a dynamic model.
- **Relate the current land use of a farm to what has occurred in the past including Aboriginal management practices.** Aboriginal land management uses naturally occurring resources and natural land features. Land that may be unstable is left, seasonal movement of flora and fauna e.g. oysters are harvested when flowers on a certain tree bloom along the North Coast defines timing of operations such as hunting. Aboriginal people and communities hold enormous knowledge of

local wildlife and plant resources, which has accumulated over generations of experience.

The Aboriginals are aware of what the land is capable of in terms of sustainable levels of extraction and what the impact of human interference is. For example, this is why Aboriginals allow affected areas to regenerate; and burn campsites to clean them of human pathogens and detritus.

- **List the environmental changes that agriculture has caused.** Environmental changes that have occurred include – changes in populations and species of flora and fauna, the introduction of secondary pests e.g. cane toads, rabbits, prickly pear and woody weed species. Destruction of waterways, pollution of soils via contaminants, the occurrence of algal blooms due to the increase of the nutrient status and erosion students need to address the reasons for these changes.
 - **Outline the physical and biological environment of a farm.** Student's to complete a table showing the differences between agricultural systems and natural systems in terms of inputs, outputs and any interference's. Natural systems are self-regulating whereas agricultural systems are not – Why is this? Students to be familiar with the interactions of the climate on Agriculture.
 - **Outline the interactions that exist between pastures, soils and animals in grazing systems.** Students need to be aware of the reactions that do exist between subsystems – pastures/ soils (nutrient flow/cycles from the soil to the pasture): pastures/soils to animals (animals grazing, removing vegetation, compacting soil, selective grazing thus effecting botanical composition).
-

1 or 4

The similarities and differences in the anatomy and physiology of ruminants and monogastrics

- Digestion is the physical, chemical and sometimes microbial breakdown of food into a soluble form that the animals can absorb
- Two most common systems are the monogastrics and the ruminant digestive systems:
- Monogastrics (pigs, poultry, horses) – have only one stomach and for digestion these animals depend on the activity of enzymes produced by their own digestive glands
- Ruminants (sheep, cattle, goats) – have four stomachs including a large rumen. The rumen contains a population of bacteria, protozoa and anaerobic fungi which are responsible for digesting much of the feed including cellulose.

Organ	Monogastrics	Ruminants
Mouth	Digestion begins in mouth where starch is broken down physically by chewing and chemically by action of saliva (which contains an enzyme which acts on the starch molecule to break it down)	Saliva is free from digestive enzymes but acts as a chemical pH buffer to keep the rumen pH neutral (6 - 7) This enables microbes in rumen to survive. Food is physically broken down by chewing
Stomach(s)	Monogastrics have one stomach. Hydrochloric acid (HCl) and enzymes act on food molecules to break them down to smaller molecules – carbohydrates are broken down into simple sugars and proteins are broken down into amino acids	Ruminants have four stomachs: - The rumen is a huge muscular fermentation chamber and contains a large population of microbes (bacteria, protozoans and anaerobic fungi) Microbes secrete enzymes which assist in three processes: i) breakdown of carbs (starch, cellulose, sugars) into fatty acids ii) synthesis of proteins (making of) iii) synthesis of vitamin B The rumen has moving muscular walls which cause the contents to be churned up and mixed. Food is regularly returned to mouth for regular chewing - The reticulum (2nd stomach) is closely joined to rumen and has a similar function. Together, they are referred to as the Paunch. Reticulum also has a strong muscular wall and internal tissue has a honeycomb pattern on it. Microbes continue to release enzymes here - The omasum (3rd stomach) sometimes called 'the bible' because of leaf-like partitions that line walls. Omasum removes 60 – 70% of the water from the rumen fluid that enters it - The abomasum (4th stomach) is the 'true stomach'. Here, gastric juices are secreted which contain both enzymes (to digest proteins) as well as the HCl (which kills the microbes that have been washed down from the rumen) These microbes are then digested to release amino acids from their body protein
Small Intestine	Digestion is completed here and amino acids, glucose and lipids (fats) are absorbed into the blood stream through the villi projections that line the small intestine	Enzymes are secreted by the small intestine. Here the starch, proteins and fats are broken down into soluble compounds which are absorbed into the blood stream through the villi. Any undigested food residues pass into the large intestine
Large Intestine	Water is removed from food residues. Undigested food residues are expelled as faeces through the anus	Further digestion of food occurs in the large intestine by bacteria. Water is removed here from food residues. The residues pass into the rectum and are expelled as faeces through the anus

- Ruminants advantages:
 - Can digest cellulose
 - Upgrade low quality feeds (i.e. hay) to release volatile fatty acids (VFA) which can be ingested by microbes and also released as an energy source into the blood stream
 - Ruminants can make protein from urea (which contains nitrogen) and other non-protein sources of nitrogen
 - Can produce vitamin B by microbial action
- Ruminants disadvantages:
 - Ruminant digestive system is inefficient – energy is lost as heat, methane and CO₂
 - Animals have to eat for many hours to meet nutritional requirements
 - Any ingested high quality protein (i.e. young legume pasture) has its nutritional value depressed as energy is wasted converting it into microbial protein
 - Ruminant animals are susceptible to bloat
- Monogastrics advantages:
 - Spend less time eating
 - Do not suffer from bloat
 - More efficient converting feed to bodyweight (food conversion ratio)/product (meat...)
- Monogastrics disadvantages:
 - Cannot upgrade low quality feeds or produce vitamins
 - Cannot digest cellulose
- Ruminant digestion:
 1. Carbohydrate digestion –
 - Ruminant diet contains large quantities of carbohydrates (cellulose, sugars and starch)
 - Mature pastures contain mainly cellulose and high concentrate feeds (i.e. cereal grains which are fed in feed lots) contain mainly starch
 - Carbohydrates are digested in the rumen
 - Microbes in the rumen secrete enzymes which digest (break down) complex carbohydrates (i.e. starch) into simple sugars
 - These simple sugars are then taken up and metabolised by microbes in rumen
 - Products released by the microbes are volatile fatty acids (acetic, propionic and butyric acid) as well as methane gas and CO₂
 - These VFAs are absorbed into blood through the rumen wall and carried to the liver
 - VFAs are used as the main energy source by the ruminant animal
 - If methane builds up in rumen = bloat (rich clover pastures will incline ruminants to bloat)
 2. Protein digestion
 - Food proteins (i.e. protein in legumes) are broken down into peptides and amino acids by the rumen microbes
 - Some amino acids (protein building blocks) are further broken down into organic acids, ammonia and CO₂
 - At the same time, rumen microbes build microbial protein from amino acids and nitrogenous substances (i.e. ammonia – NH₃, and non-protein nitrogen – urea, in the food)
 - When microbes (which have built protein) in the rumen die, they travel through the digestive tract to the abomasum and the small intestine where their cell proteins are broken down to small amino acids which are absorbed into the blood stream
 - Important feature formation of microbial protein is that rumen microbes are capable of synthesising (making) essential amino acids as well as non-essential amino acids
 - Thus essential amino acids do not have to be supplement/supplied in animals diet



Your Marketing Advantage



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~ How to Target the Most Profitable Markets ~

~ How to Sell to Feedlots ~ What Buyers Want ~ Feedlot Buyers List ~

Angus cattle receive market premiums due to consistent performance in a range of markets and production environments. Angus and Angus cross cattle are widely used for the domestic retail and quality food service markets. Purebred Angus are preferred for the high quality Japanese export market.

Additional demand is created from licenced processors of Certified Australian Angus Beef (CAAB) and Angus Pure, as well as processors supplying into the McDonald's and Hungry Jack's specialty burger programs.

Continual improvement is essential if market demand and the current premiums are to be maintained. This improvement occurs as better genetics are identified and channeled through to commercial herds. For example, in the export market, the beef industry will be the winner if we can breed cattle that meet high marbling requirements with shorter feeding periods and less waste fat. In meeting the needs of one market, we must be careful

to ensure cattle remain versatile enough to meet other needs as markets and seasons change. It is also important to keep cows fertile, productive and easy care.

Selecting Target Markets

One of the most important steps is deciding which markets to target. This involves evaluating which are likely to be the most profitable, the specifications of these markets and their stability. In addition, it is necessary to evaluate the production potential of your country and the options if seasons or markets change.

These decisions are difficult, especially in an industry characterised by shifting goal posts and extreme seasonal variations.

However, without a target you are a seller not a marketer. If you have a clear target, it is easier to organise production and breeding programs to meet customer requirements.



Angus offer more marketing opportunities. Export and domestic feedlots, backgrounders and processors buy Angus.

Evaluating your Environment

The environment and productivity of your property may limit your choices. More favourable environments allow greater flexibility. Where you can finish animals, it is possible to produce to a wider range of market end points. In environments where the pastures do not allow finishing, you have less flexibility.

What is Required?

To evaluate your environment, list what you can do on your property. For example:

- Can you fatten vealers, yearling steers, bullocks?
- What weights can your stock reach at different ages?
- Can you grow heifers out to joining weights by 12 to 14 months?
- What can be done with supplementary feeding, pasture improvement or fodder cropping?
- What are your neighbours able to do?

Evaluate Market Opportunities

- Can you sell vealers, store weaners, yearlings, steers, or bullocks through your normal outlets?
- Are there special sales worth targeting in your district?
- What other outlets do you have?
- How far will you have to truck cattle to meet the other options?

Whatever your answers, you need to develop a cow herd that can perform well in your environment. For example, the environment will dictate the optimum size and milk production level for your cows. With females designed to produce under your conditions, the bulls can be selected to match market requirements.

Choosing Target Markets

To focus accurately on producing for a market, the specifications of that market are central to success. You must know the specifications and penalties if cattle fall outside specifications.

To make valid decisions between different market options, you need to calculate the costs and returns from each. Gross margin budgets are the best way of comparing the potential profitability of alternative enterprises.

The budgets should be compared on a return to the total area devoted to cattle, on a gross margin per hectare basis. They should not be compared on a return per cow basis.

Example gross margins are available from your local agriculture office, accountant or consultant. Find one to use as a template and insert your own figures.

Maintaining Flexibility

While you target particular markets, it is also important to maintain some flexibility in your program. You can't afford to lock yourself exclusively into one system. Markets may change and seasonal variation will influence what you can do in any one year. When you decide your main target, make sure your program and your cattle have the versatility to meet alternate options if necessary.

Flexibility in your production system is also important. In some enterprises, there is little scope to vary things if seasons change. It is desirable to have some stock that can be marketed earlier than planned if seasons require. For example, a store weaner enterprise is based on carrying large numbers of cows and selling calves and cull cows before the hardest time of year. A property



A balance between fertile cows and steers that meet market demands is essential.

fully stocked with pregnant cows or cows and new calves has little chance to cope with bad seasons. In contrast, running less cows to grow steers out to yearlings allows you to cash in the steers if conditions dictate. You can cut up to 30% of stock numbers before it is necessary to sell breeders if conditions dictate.

Being Different

The markets you have targeted in the past and that your neighbours produce for now are often not the only markets available. Seeking alternative markets may be more important than locking in to what others do. What other options do you have? Can you supply a local butcher with cattle every week? Instead of selling store weaners, can you retain ownership and have the calves backgrounded for slaughter at your cost or on shares? What marketing alliances are available to you? Can you work with other producers to sell bigger lines? Can you sell at times of the year when others can not? Are you locked into selling at the one time of the year with no flexibility (eg annual weaner sales)? Can you value-add your females by selling pregnancy tested in calf at special breeder sales?

Participating in Industry Alliances

More and more producer groups are being formed to establish marketing alliances. Some of these are horizontal alliances to increase consistency and the numbers of cattle. These alliances can often negotiate improved terms based on the numbers provided.

Other alliances are vertical arrangements involving all or part of the supply chain. Under vertical alliances, producers supply stock at pre-scheduled times for slaughter or for feeding on.

In some cases ownership of the cattle is retained through to

slaughter with payment based on predetermined quality and weight arrangements. The advantages of these alliances are that as the owner of the cattle during feeding and slaughter, you are guaranteed feedback. You are paid on the results and receive the information as part of the payment process.

Angus producers are encouraged to develop alliances with licenced Certified Australian Angus Beef (CAAB) and Angus Pure processors listed elsewhere in this document.

Markets and Specifications

Australian beef producers supply a variety of domestic and export markets:

1 Domestic Markets

The domestic market is the most important market for Australian beef. Around one third of the beef produced in Australia is consumed domestically and is sold through butcher shops, supermarkets and the food service industry.

The domestic retail market uses young, lightweight carcasses finished either off grass or following short term grain feeding. Of the retail sales, butcher shops sell 30% and supermarkets 60-65%.

a) Retail butchers. Traditionally retail butchers have handled lightweight grass-fed calves or weaners. They are generally finished on the cow and sold direct for slaughter with live weights of 250 to 350 kg. They produce 140 to 200 kg carcasses with required rump (P8) fat depths of 4 to 10 mm. Both heifers and steers are used. Some butcher shops are now increasing their carcass weight requirements to stay competitive with the supermarkets.

(b) Supermarkets. These handle mainly boxed beef from heavier animals with more use of short grain feeding to improve



Steers like these are fed for 150 to 300 days to meet different sectors of the high quality export market to Japan and Korea

consistency of supply and quality. About 70 % of the current supermarket supply is grain assisted.

Some supermarkets buy direct from wholesalers who buy or feed the cattle, others contract feedlots to supply grainfed carcasses and offer forward contracts. A price grid is normally used with discounts for carcasses that fall outside optimum carcass weight, fatness and meat colour specifications. Marbling is not a requirement for this market.

Suitable feeder steers and heifers must be able to grow quickly and reach the required carcass weight without becoming overfat. Cattle are fed for 60 to 90 days generally gaining 1.3 to 2.2 kg/day. Heifers are fed for this market as they are generally cheaper to buy and perform nearly as well as steers on feed and can be fed for shorter times because they finish faster. Heavier weaners can go directly to the feedlots. Lighter calves are grown out to required feedlot entry weights.

Specifications for feeders and carcasses vary between states and supermarkets but there are generally two sets of specifications used:

(i) Light Supermarket. This covers the smaller supermarkets that use lighter carcass weights of 160 to 220kg Hot Standard Carcass Weight (HSCW), with 5 to 12 mm P8 fat, with bright red meat colour and white fat preferred. Stock enter feedlots at weights of 240 to 300 kg liveweight with milk teeth.

(ii) Heavy Supermarket. The larger supermarkets are moving towards heavier carcass weights and cutting the carcasses in new ways to give reduced costs per kg processed. Feedlot entry weights of 280 to 360 kg, with no more than 2 teeth produce carcasses weighing 200 to 280 kg HSCW, with 4 to 18 mm P8 fat.

(c) Food Service. This sector uses a wide variety of product from manufacturing beef for hamburgers to high quality steaks for white tablecloth type restaurants. Most of the beef is supplied in boxed form and comes from heavier carcasses. Certified Australian Angus Beef™ is an example of a high quality product used in this sector. Large numbers of grassfed heavy steers or “Breaking Ox” are used in this area. They are 0-2 teeth with carcass weights of 260 to 350 kg and 6-22 mm of P8 fat.



A CAAB meal: the result of well bred, well managed Angus cattle.

Export Markets

I Grainfed

(a) Japanese B3. This is the long fed, higher quality part of the Japanese market targeted by Australian feedlots. Steers of breeds known to marble, like Angus, are normally fed for 200 to 300 days to hit a minimum of marble score 3. Carcass weights of 350 to 450 kg with 12 to 25 mm P8 fat are preferred. Carcasses are boned out to primals and sold in the upper end of the Japanese middle market through supermarkets or food service outlets.

Steers start on feed at 360 to 480 kg with fat scores of 2 to 3 and milk or two teeth. They should be medium to later maturing types. Gains on feed are around 1.0 to 1.5 kg / day decreasing with time on feed. The minimum marble score of 3 is critical and animals are slaughtered at 24 to 30 months to maximise marbling. Carcasses that fail to meet this specification are downgraded to B2 resulting in substantial economic penalties.

Selection for growth and marbling are important in herds supplying this market. Sires with higher IMF% EBVs produce progeny with higher proportions meeting minimum marbling standards. Beef CRC research has also shown that cattle backgrounded at a faster growth rate will have more intramuscular fat %.

(b) Japanese B2. This product targets the central segment of the Japanese middle market, with a minimum of marble score 2. Steers are fed for approximately 150 days to achieve carcass weights of 350 to 420 kg HSCW. Angus have been widely used in northern herds in crossbreeding programs to increase the proportion of steers suitable for this market.

Steers go on feed at 400 to 500 kg, up to 4 teeth and fat score 2 to 3. Mid to later maturity types are required. Gains on feed are around 1.2 to 1.6 kg / day. Carcasses failing to meet marble score 2 are downgraded to B1. Meat colour and fat colour are important for this medium quality segment and carcasses can carry 12 to 25 mm of P8 fat.

Details of the B3 Production System

PROCESSOR (Abattoir)	OUTPUT: Carcass weight: Age: Fat depth: Marble score:	350 to 450 kg 24 to 30 months 12 to 25 mm min 3 score
FEEDLOT (200 to 300 days)	OUTPUT: Liveweight: Age: Feedlot Gain:	650 to 800 kg Max 6 teeth 1 to 1.5 kg/day
GROWER/ BACKGROUND (6 to 12 months)	OUTPUT: Liveweight: Age: Daily gain:	360 to 480 kg 14 to 20 months 0.6 to 0.8 kg/day
COMMERCIAL BREEDER	OUTPUT: Liveweight: Age: Daily gain:	240 to 350 kg 7 to 10 months 0.8 to 1.1 kg/day

(c) Japanese B1. This market uses short feeding times of 100 to 120 days to produce carcasses weighing from 300 to 400 kg HSCW with 10 to 22 mm of P8 fat. The carcasses are boned out to suit the lower end of the Japanese middle market where marbling is not required. Steers of all breeds are used and the main emphasis is on feedlot growth, carcass yield and minimum meat and fat colour quality requirements. Steers start on feed weighing 400 to 500 kg with up to 4 teeth. They should be no more than 2 to 3 fat score on entry and normally gain 1.3 to 1.7 kg / day on feed. Steers with higher *Bos indicus* or European breed content have suited this market and Angus crossbreds are ideal.

II Grassfed Export Markets

A range of grassfed markets also exists. The EU uses cattle with carcass weights of 240 to 420 kg and 6 to 22 mm of P8 fat. Other requirements for supplying the EU market include individual identification certification of no use of HGP's and that cattle (except breeding bulls) must be purchased from EUCAS Accredited properties.

Large numbers of grassfed bullocks with carcass weights over 300 kg are exported to Japan.

Older animals like cows and cull bulls are used for manufacturing purposes. This includes large quantities of trim and low fat meat used to produce hamburgers in the USA.

(d) Other Export markets. Australian beef is also exported to a wide range of other export markets. The specifications differ and individual abattoirs tend to specialise in supplying different markets. For example, some works conduct special slaughter procedures to meet religious needs.

The Korean market has become an increasingly important market for Australia since its liberalisation. Imports of chilled grainfed beef similar to Japan are increasing and Korean consumers have a strong history of preferring high quality, grain fed, marbled beef.

How Suitable are Angus?

Research and trial results show that modern Angus cattle can meet the specifications of all the markets described. They have the versatility to suit light supermarket weights and to be grown out for feeding on to heavy export weights. The ability to marble make Angus the preferred cattle for the high quality, long fed Japanese market. The current Meat Standards of Australia (MSA) grading system emphasises the value of Angus cattle and their crosses. They have produced high grading carcasses with tender, palatable beef to meet consumer needs.

The Feedlots Want Angus

The feedlot industry has become a major force in the Australian beef industry over the last decade. Feedlot buyers have a strong influence on cattle prices, especially for Angus cattle. The superior performance of Angus in a wide range of grainfed markets has generated a healthy premium for both straightbred and crossbred Angus cattle.



In the export market the beef industry will be the winner if we can breed cattle that meet high marbling requirements with shorter feeding periods and less waste fat.

How to Sell Angus to the Feedlots

If you produce Angus cattle and want to sell feeder steers or heifers, you can contact the feedlots directly or work through your agent.

You will need to know how much your cattle weigh, their fat score, what bloodlines are involved, and understand different delivery arrangements. Most feedlots will have a buyer inspect the cattle on property before purchase. Unsuitable cattle will be drafted off and the remainder may be weighed individually to make sure they fit specifications. Prices are normally decided on full weights less 5%, or on empty weights on arrival at the feedlot.

When you sell to any feedlot, make sure that you discuss getting feedback on the animals after feeding and slaughter. Feedlots have the capacity to record your animal identification details and match this with feedlot identification. This feedback is essential in evaluating the suitability of your cattle for that market. You need the information to improve your breeding program. In many cases feedback is only provided to suppliers who ask for it. Be diligent to ensure that this information is collected and returned to you.



Well bred & presented Angus steers meet a variety of markets.

These Feedlots Buy Angus:



Cargill Beef: Wagga Wagga, NSW Contact: Tony Burke. Glen Innes, NSW. Ph: 0429 383 002.
Contact: Grant Gary Ph: 02 6938 3002.

Rangers Valley: Glen Innes, NSW. Contact: Richard Eldershaw Ph: 02 6734 4977; 0428 263 955

JBS Swift: Prime City, Griffith, NSW. Beef City, Toowoomba, Qld. Caroon, Quirindi, NSW.
Contact: Brett Campbell, Ph: 0428 719 024. Cameron Hilton, 0428 727 202.

Whyalla: Nippon Meats, Texas, Qld. Contact: Russell Handley, Ph: 0429 795 993.

Tasmania: Perth, Tasmania. Contact: Anthony Barnes, Ph: 03 6398 6244.

ICM: Peechelba, Vic. Contact: Gina Lincoln, Ph: 03 5726 8388.

Rockdale: Yanco, NSW. Contact: Peter Steer, Ph: 02 6951 1180

Yarranbrook: John Dee, Inglewood, Qld. Contact: Graham Bond, Ph: 07 4652 1688



Kerwee: Jondaryan, Qld.
Contact: Jim Cudmore, Ph: 07 4692 2277

Charlton: Charlton, Vic. Contact: Stephen Rennie, Ph: 0418 266 691

Teys Bros: Condamine, QLD. Contact: Glenn Poole, Ph: 07 3287 2188

Nebru Plains: Three Springs WA. Contact: Alexandra Pugh, Ph: 08 9955 2032.



T & R Murray Bridge, SA Ph: 08 8532 1955



Grass and crop finishing is an important enterprise for many Angus producers.

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Linking Angus Marketing Questions

1. Outline the importance of being a marketer not a seller
2. Describe the considerations when selecting target markets
3. Maintaining flexibility is vital. Discuss this statement.
4. Describe how you may differentiate your production outcomes
5. Define alliances
6. Construct a table showing the specifications for each market
7. Recommend a flow chart diagram for selling Angus cattle to feedlots?



Visit the CAAB website <http://www.caab.com.au/Content.asp?regID=10846&id=1060>

Read the information on CAAB.

Explain your answers for the following questions to another student and discuss their thoughts before you write your answers in your book.

1. Outline CAAB.
2. Describe how producers supply cattle to CAAB
3. Describe the advantages of branding and promotion such as by CAAB for producers
4. Define MSA grading.
5. Use the internet to investigate the impact of the McDonalds Angus Beef Campaign on consumption of their products.

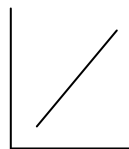
Submitted by Graeme Harris

Throw some M/C into the Mix

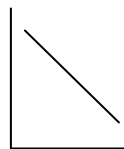
1. There are many external factors that act on a farm with one of these being historical factors. An example of a historical factor acting on a farming system is:
 - a. What has previously happened on the farm?
 - b. Taxes imposed by governments
 - c. The effect of supply and demand
 - d. The development of new technologies
2. One benefit of repeating an experiment is:
 - a. Allows for more plants to be grown
 - b. Increases the accuracy of data collected
 - c. Decreases the accuracy of data collected
 - d. Allows for less plants to be grown
3. The four compartments of a ruminant system in order from mouth to anus are:
 - a. Reticulum, omasium, abomasium, rumen
 - b. Rumen, reticulum, omasium, abomasium
 - c. Reticulum, rumen, abomasium, omasium
 - d. Rumen, omasium, reticulum, abomasium
4. There are a number of animal's enterprises in the Dunedoo area. The most significant of these enterprises are:
 - a. Dairy cattle and beef cattle
 - b. Sheep for prime lambs and beef cattle
 - c. Sheep for prime lambs and dairy cattle
 - d. Beef cattle and wheat
5. An example of a physical factor affecting production on a farm includes:
 - a. Consumer preferences
 - b. Animal enterprises
 - c. Plant enterprises
 - d. Topography of the land
6. An example of an input into a dairy farming system is:
 - a. Cheese
 - b. Milk
 - c. Cull cows
 - d. Genetics

7. Outputs are products produced by a farming system. Examples of outputs include:
- Cull cows
 - Wool
 - Grain
 - All of the above
8. The main factors affecting the location of agricultural enterprises include:
- Climate
 - Soils
 - Both A and B
 - Breed type
9. European farming practices have resulted in land degradation issues since European arrival. Causes of these issues include:
- Direct drilling
 - Over cultivation
 - Crop rotation
 - Cell grazing
10. Which of the following marketing strategies would be the most beneficial are used to market beef cattle directly to an abattoir?
- Marketing boards
 - Over the hooks
 - Forward contracts
 - Cooperatives
11. Which graph below shows the law of demand?

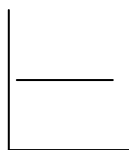
a.



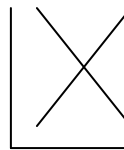
b.



c.



d.



12. A hazard is:

- a. Anything that has the potential to cause sickness or injury.
- b. A way of reducing risk of a hazard occurring.
- c. A type of risk.
- d. Forms part of the OHS Act 2001.

13. The hierarchy of control is followed to reduce hazards occurring in the workplace.

One of the steps of the hierarchy of control is to use engineering solution. An example of this type of solution would be:

- a. Using a front end loader to lift things.
- b. Using a less toxic chemical to control heliothis.
- c. Using guards on a PTO shaft.
- d. Wearing PPE such as a hat or overalls.

14. Which of the following is an example of a monogastric animal?

- a. Horse
- b. Sheep
- c. Alpaca
- d. Llama

15. The nutrient required by animals that helps in tissue and muscle growth is:

- a. Carbohydrates
- b. Fats
- c. Vitamins and minerals
- d. Protein

Submitted by Jade Smith

Dunedoo Central School



Amanda Conley



GRIFFITH HIGH SCHOOL
HIGHER SCHOOL CERTIFICATE ASSESSMENT TASK
Year 12 Term 2 2011
Agriculture

Farming for the 21st Century Elective

<u>Task</u>	<u>Checklist</u>
<i>Q1) Describe the research design, data analysis, presentation, conclusion & recommendation of the Geo-Electric Cable at Coleambally Irrigation Limited</i> (H4.1 – Justifies and applies appropriate experimental techniques, technologies, research by methods and data presentation and analysis in relation to agricultural problems and situations)	(40 words) x 5 descriptive areas {From templates below}

<u>Description Template No 1</u>
<u>Descriptive Area</u> – Research Design
<u>Features & Characteristics of Research Design</u> • • •

<u>Description Template No 2</u>
<u>Descriptive Area</u> – Data Analysis
<u>Features & Characteristics of Data Analysis</u> • • •

<u>Description Template No 3</u>
<u>Descriptive Area</u> – Presentation
<u>Features & Characteristics of Presentation</u> • • •

<u>Description Template No 4</u>
<u>Descriptive Area</u> – Conclusion
<u>Features & Characteristics of Conclusion</u> • • •

<u>Description Template No 5</u>
<u>Descriptive Area</u> – Recommendation
<u>Features & Characteristics of Recommendation</u> • • •

Sample the
seed too
10cc?

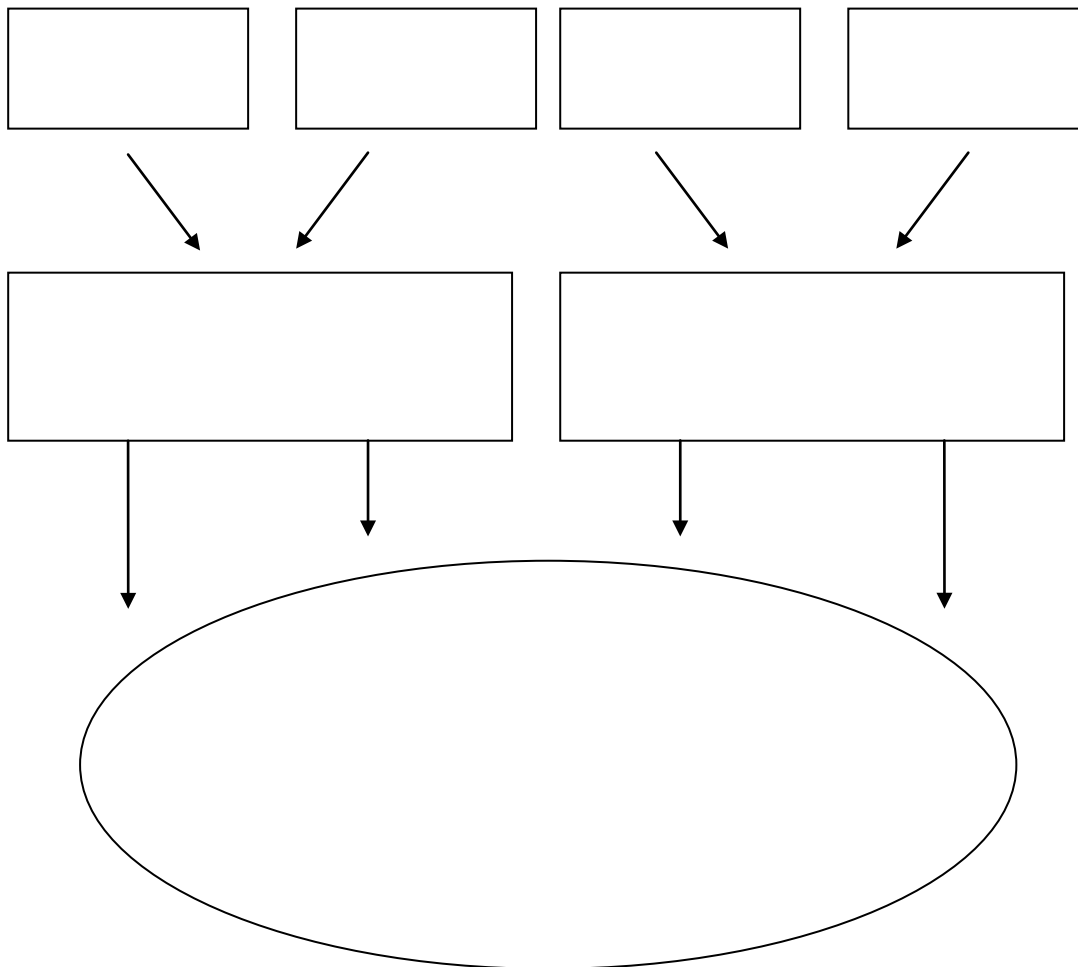


Task	Checklist
<u>Q2) Choose two descriptive areas from the above. Analyse these areas with the inclusion of examples.</u> (H5.1– Evaluates the impact of innovation, ethics and current issues on Australian agricultural systems).	(80 words) x 2 descriptive areas {From templates below}

Analyse Template No 1

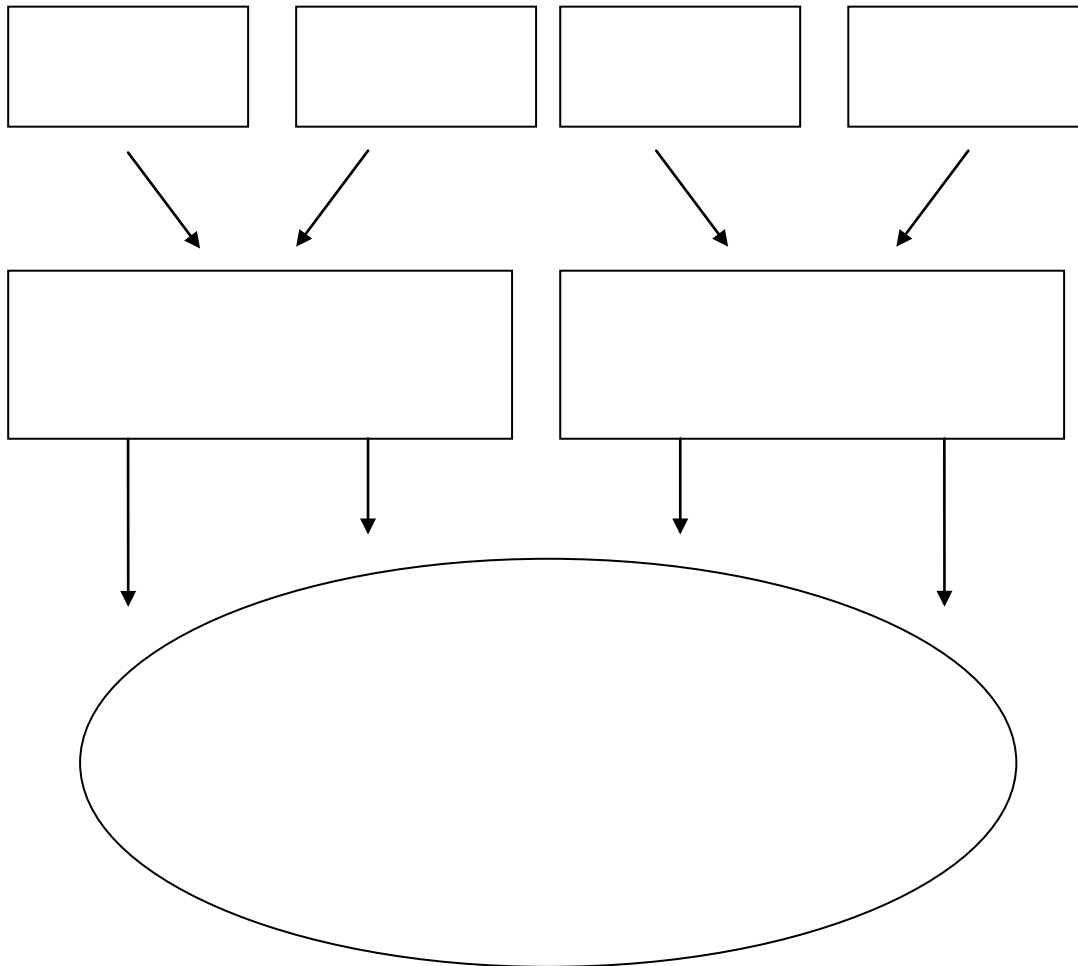
Descriptive Area –

1st – Components,
2nd – Relationship &
3rd Implications



Analyse Template No 2Descriptive Area –

1st – Components,
2nd – Relationship &
3rd Implications



Marking Criteria for the Related Questions

Q1) *Describe the research design, data analysis, presentation, conclusion & recommendation of the Geo-Electric Cable at Coleambally Irrigation Limited*

Descriptive Template No 1 – Research Design

<u>HSC Outcome – 4.1 – MARKING GUIDELINES</u>		
<u>CRITERIA</u>	<u>MARKS</u>	<u>YOUR MARK</u>
Provides the key features and characteristics of research design for the Geo-Electric Cable	2	
Provides a feature and/or a characteristic of research design for the Geo-Electric Cable	1	

Teacher's Comment:

Descriptive Template No 2 – Data Analysis

<u>HSC Outcome – 4.1 – MARKING GUIDELINES</u>		
<u>CRITERIA</u>	<u>MARKS</u>	<u>YOUR MARK</u>
Provides the key features and characteristics of data analysis for the Geo-Electric Cable	2	
Provides a feature and/or a characteristic of data analysis for the Geo-Electric Cable	1	

Teacher's Comment:

Descriptive Template No 3 – Presentation

<u>HSC Outcome – 4.1 – MARKING GUIDELINES</u>		
<u>CRITERIA</u>	<u>MARKS</u>	<u>YOUR MARK</u>
Provides the key features and characteristics of presentation for the Geo-Electric Cable	2	
Provides a feature and/or a characteristic of presentation for the Geo-Electric Cable	1	

Teacher's Comment:

Descriptive Template No 4 – Conclusion

<u>HSC Outcome – 4.1 – MARKING GUIDELINES</u>		
<u>CRITERIA</u>	<u>MARKS</u>	<u>YOUR MARK</u>
Provides the key features and characteristics of research design for the Geo-Electric Cable	2	
Provides a feature and/or a characteristic of research design for the Geo-Electric Cable	1	

Teacher's Comment:

Descriptive Template No 5 – Recommendation

<u>HSC Outcome – 4.1 – MARKING GUIDELINES</u>		
<u>CRITERIA</u>	<u>MARKS</u>	<u>YOUR MARK</u>
Provides the key features and characteristics of recommendation for the Geo-Electric Cable	2	
Provides a feature and/or a characteristic of recommendation for the Geo-Electric Cable	1	

Teacher's Comment:



Q2) Choose two descriptive areas from the above. Analyse these areas with the inclusion of examples.

Analysis Template No 1 & 2

HSC Outcome – 5.1 – MARKING GUIDELINES		
<u>CRITERIA</u>	<u>MARKS</u>	<u>YOUR MARK</u>
- States the descriptive area - Provides four components of the descriptive area - Relates these components together using examples for each - Links the relationships to the implications of the descriptive area	8	
- States the descriptive area - Provides three to four components of the descriptive area - Relates these components together using examples - Links the relationships to the implications of the descriptive area	6-7	
- States the descriptive area - Provides two-three components of the descriptive area - Links the relationships to the implications of the descriptive area	4-5	
- States the descriptive area - Provides one component of the descriptive area OR - Links the relationships to the relationship or implications of the descriptive area	2-3	
- States the descriptive area - Provides one component of the descriptive area	1	

Teacher's Comment:

Back in BAAT Time

While many of our students who have just sat the 2011 HSC have celebrated their 18 years, what was NSWAAAT up to 18 years ago when these kids were born??

An extract from the 1993 Autumn edition of BAAT, which followed the Biennial Conference held in Tamworth that year, shows that some comments and reflections on some “legendary” experienced agricultural educators at the time, may still provide a good lesson for many of us today!

Following the copy of the cover of that edition, is an article written by the late Norm Thomas for that edition, on how to go about marketing Agriculture in your school; some good points that many could still utilise today!

Then comes the citation from that year for the presentation of the JA Sutherland Award, delivered by Dr John Spencer from the University of New England, presented posthumously to the Late Ian Parberry.

A snapshot in history that we hope you find of interest and relevant in guiding our future as agricultural educators, building on the successes and dedication of our earlier “aggie” colleagues.

Cheers

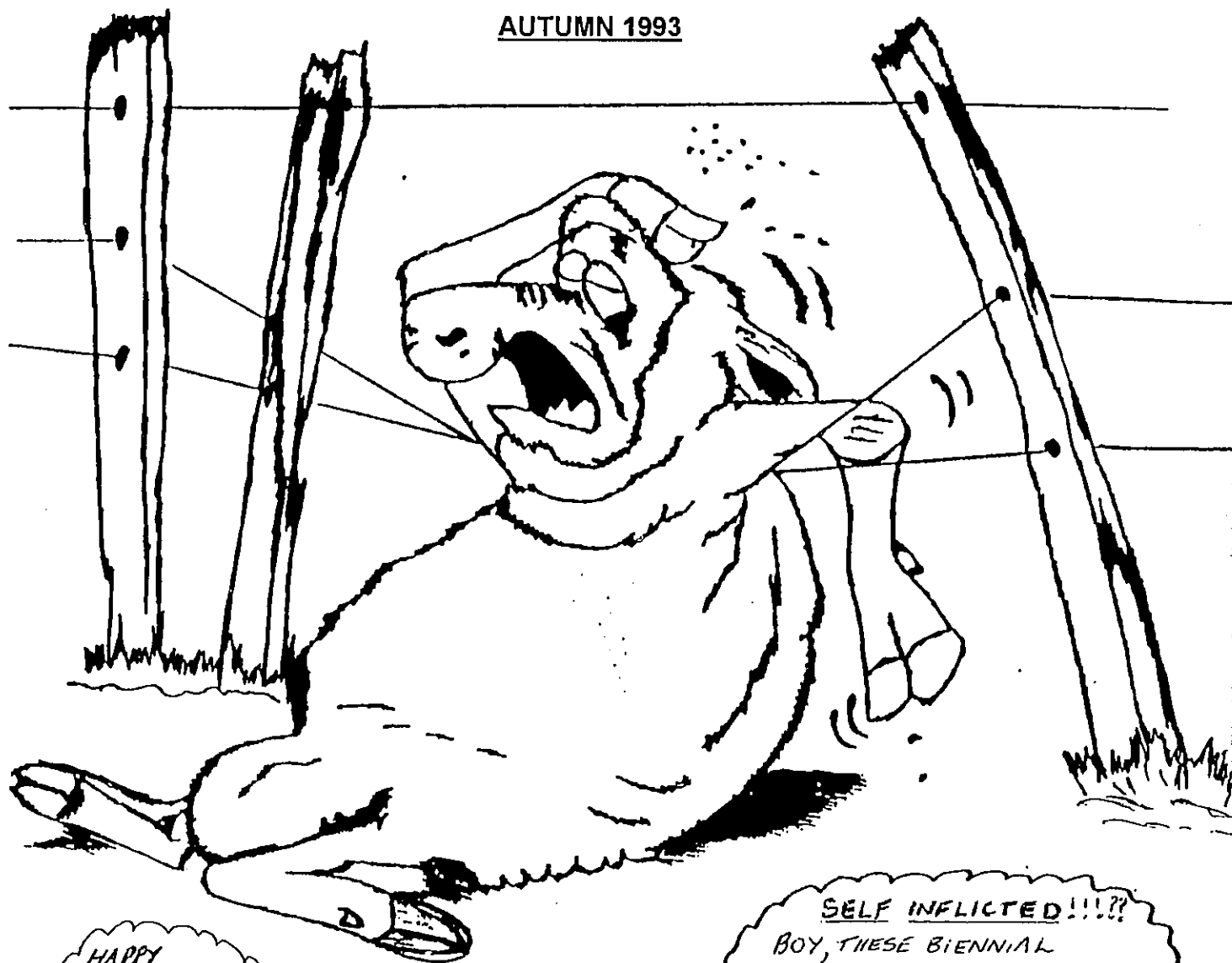
Stu Hemmings

A MAN OF Many Talents

"B.A.A.T."

BULLETIN OF THE N.S.W. ASSOCIATION OF AGRICULTURE TEACHERS

AUTUMN 1993



HAPPY
AUSTRALIA
DAY !!
BUSK ON!!

OH!!
WHAT
A
NIGHT!!



SELF INFLICTED!!!??
BOY, THESE BIENNIAL
GATHERINGS OF AG TEACHERS
SURE MAKE FOR SOME BIG
NIGHTS, AND THIS GUYS
• JUST GOTTEN THROUGH THE
BUDGETTING WORKSHOP!!



26 JANUARY 1993MAINTAINING AGRICULTURE IN SCHOOLS

Even the title of this session sounds defensive. It gives the idea that we are fighting a rearguard action. In some schools this would be true - in others far off the mark.

Agriculture as a subject within the school reflects the understanding of its importance by the administrators. Without administrative support the most dedicated agriculture teacher may become disheartened.

School Administrators are continually under pressure to include some new policy or subject. There is a finite amount of time available and space has to be made for the "new learning". Because of this and the fact that in policy making school Agriculture is poorly represented, agriculture as a subject is often severely curtailed.

Consider your own experiences. Often "the hierarchy" has perceived Agriculture simply as being far lower ability groups, training to become farm labourers, useful to raise money for school funds, or as a subject suited only to rural locations. Perhaps we are guilty of allowing these misconceptions to become so firmly established.

The answer is to go out and market the subject. We have a product which is undeniably first rate. Let us look at its attributes:

1. Of immense interest to at least half of the students.
2. Very useful to other teachers to provide concrete examples eg in mathematics, computer use, Australian history, economics, technology, art, language, etc.
3. Syllabi adaptable to any or all regions. Urban areas often fail to realise the value of various forms of agriculture which apply to towns and cities.
4. The subject is non-sexist, multicultural and suited to all levels of ability.
5. Allows for active personal development by providing group activities, leadership roles and appreciation of individual abilities.
6. Many of the so called "new innovations" in areas, such as Design and Technology, have been integral parts of Agriculture teaching for decades.
7. Dedicated teachers who see the importance of the subject to the future life of the students - regardless of occupation.

The market place has students needing to be educationally equipped for life. Parents realise that their children should be holistically educated. Agriculture is one subject which would help to attain this.

Clearly there is a lack of communication. Yesterday Vivian Sinderberry (NSW Farmers Assoc) and Richard McEvoy (Rural Training) both illustrated their talks with examples of this.

The reasons why there has not been adequate communication are many and varied. Which shot gun pellet actually killed the rabbit is immaterial - the results is the same!

Let us amend the situation and actively promote agriculture. If each teacher does his/her best then progress will be made and the students, community and environment benefit.

Norm Thomas
Norm Thomas

STRATEGIES WHICH MAY BE USED IN LINE WITH MAINTAINING QUALITY EDUCATION

(A) PERSONAL

- (1) Be motivated yourself.
- (2) Strengthen areas of knowledge where there is a need to do so. This includes keeping up to date with subject matter and administration.
- (3) Develop a variety of teaching strategies.
- (4) Keep a diary and compare work completed at given intervals of time eg monthly.
- (5) Be prepared to improve your own professional qualification.

(B) SCHOOL

- (1) Constantly show how the board approach of agriculture is of value to students regardless of their career option.
- (2) Insist that you get fair representation, as an area of education, within the school.
- (3) Ensure that teachers of other subjects who take an Agriculture class to fill their teaching load, do the work with the same zeal that you display.
- (4) Make sure that students and other teachers helping you receive full credit for their work.

(C) COMMUNITY

- (1) Involve parents and community members in your activities.
- (2) Give regular reports of activities to parent groups associated with the school.
- (3) Encourage local media to give your school activities adequate coverage.
- (4) Align yourself with the local agricultural associations eg NSW Farmers, Show Societies, etc

(D) GENERAL

No doubt your work is already time consuming and at times the results are not quite as you had envisaged. Encouragement and new ideas can come from intercollegiate meetings. Attendance at these may be formally on days located or informally as occurs at stock competitions, field days or mixed school excursions.

Your NSW Agricultural Teachers Association organises a biennial conference which is well worth while attending. The Association also has a publication called BAAT which is a useful professional publication.

Norm. Stone

In Support of a Proposal to confer posthumously the *J A Sutherland* Medal upon Ian Parbery

29 January 1993

Only after some 24/25 years as both an agriculture teacher and as a trainer of agriculture teachers was I able to see a glimmer of significance in the history of agricultural education, especially in Australia – about who or what had gone before me, or even why we were teaching what we *were* teaching!

I learned three very humbling truths –

1. There was nothing new under the sun – all the wonderful and exciting things we were doing in Agriculture in the 50s, 60s and 70s were *not* new, They had all been done before, from as far back as 1860 in NSW.
2. There were some people who, by their scholarship, imagination, ability to survive both the physical environments in which they worked and the indifference of those who employed them; by their commitment to their pupils and their teaching genius, lifted agricultural education from obscure 'object lessons' into a dynamic upon which human endeavour throughout the world was focused.
3. That with all my enthusiasm for and experiences in teaching agriculture, I was virtually sitting on the shoulders of giants in agricultural education, who had gone before me and made the whole task so comparatively easy for me.

I would name those giants as *John Halstead, Peter Board, Frank McMullen, Ernie Breakwell, Bill Hindmarsh, Clarrie James and Alan Sutherland* – and I dare say that many of these names are a mystery to most of you – but that doesn't make them any less giants in agricultural education, nor does it lessen by one jot, *what you/we owe them*.

To that list tonight, we acknowledge the addition of the remarkable *Ian H Parbery*.

Never *before* the beginning of our secondary education system (1911) and never *till* 1934, was the preparation of professionally competent, imaginative and enthusiastic teachers of agriculture a Departmental priority. Even *then*, it became the prerogative of the Armidale Teacher's College (thanks to the positive influence of D.H.Drummond) through one Clarrie James and, two years later, in 1936, by a young hopeful extrovert by the name of James Alan Sutherland.

Some will know that in 1939 Clarrie became the pioneer Principal of Farrer and that "Sutho" or "JAS", after spending 5 years in the RAAF in WWII and a year at Lismore H.S., spent a further 27 years at A.T.C. (a total of 31 years) training agriculture teachers.

It is this Alan Sutherland – lecturer extraordinary, artist, author of international repute – who is remembered and honoured by this award.

"Parb" was one of the products of the Sutherland Stable who, graduating as a 2-year trained teacher of agriculture at the end of 1957, became both the pride and envy of his mentor. In fact, he outshone "Sutho" in intellectual brilliance, in teaching experience – 12 years in 3 state schools, during which time he completed his BA by external studies – in lecturing skills, in attention to the needs of his students, in support and encouragement of his lecturer colleagues, and in the international recognition he gained for his research in soil algae, the microflora of (leaf) phyllospheres and in the taxonomic studies of the Melioline Fungi.

A Teacher's Certificate, Bachelor of Arts, Bachelor of Letters (now Master of Letters) with Special merit, Master of Arts with Honours and Doctor of Philosophy, were his formal credits – but only for the Teacher's Certificate did he have the privilege of studying full-time. The rest were completed, without study leave, by external study, in addition to his heavy teaching and lecturing loads. At the time of his death in 1990, at just over 51 years of age, he had been training teachers of agriculture (and science) continuously for 20 years.

He walked on the international stage of research scientists – he was drafted by the Australian Vice-Chancellor's Committee to go to Indonesia on two occasions to teach science lecturers how to teach and to initiate research projects there in plant protection.

But he never lost the common touch – for 6 years he co-ordinated and taught the Field Research Technicians Certificate through TAFE – as a spare time venture; and for 4 years he taught human physiology, biochemistry, microbiology and immunology to Nurse Educators through ACAE.

Even his closest friends didn't know the extent of his publications. Apart from 3 research theses, he co-authored 4 reference books in plant protection and microbiology. He wrote 7 papers and co-authored another for international scientific journals; and he delivered invited papers to 7 international scientific conferences in Australia, in Scotland and in the Netherlands – and

As a matter of some interest to this gathering, he was the *foundation* President of the NSW Agriculture Teachers' Association, 1973 and 1974. No doubt the Association will hold a copy of his C.V. for anyone to peruse – the details go far beyond anything I can outline here.

I speak as his lecturing colleague and one of his numerous friends. A more brilliant man I have never worked with or met. Though we went to the same school, trained in the same college and shared one school in our teaching (from which his wife Fran came) we never met until he joined Alan Sutherland and me at A.T.C. in 1971 – and for 19 years we shared an unforgettable friendship.

He was crusty, often abrupt and singularly intolerant of fools, especially educated fools. He was incorruptible and would not tolerate anything that smacked of hypocrisy. But he was also a team man – and with him on the teacher-training team at the ACEA, we pioneered exciting and effective new ways of teaching teachers – and *his* teaching became something of a legend.

But he was a sensitive man – and always somewhat bemused that anyone should think he had any special abilities – who never allowed ambition, his beloved research, or even his employing institution, which did its best to ignore him (it took 18 years for its representatives to begrudgingly promote him to Senior Lecturer!), to influence or detract from his attention to his pupils, students and colleagues.

Parb was *never* a traditional or career academic – he was always the most professional of teachers.

I congratulate you on your decision to honour him, albeit posthumously, as one who from 1958 to 1990 was one of the remarkables, one of the genuine ones – the most recent giant in the history of agricultural education in NSW.


University of New England.
1.7.93.

What's Happening in My Paddock???

COOMEALLA HIGH SCHOOL FARM

The most western NSW high School, and on the border with Victoria... Not far from the Murray and Darling Rivers with Irrigated horticulture and vineyards being the major industries with sheep enterprises undergoing somewhat of a resurgence. The land can be flat, dry and saline with climatic extremes which have Cherries through to Avocados and Mangos... though not all are grown at the school farm... yet.

Area Approximately 5ha

Type Mixed farming Enterprises include:

- Horticulture - Citrus, Grapes, Various Fruit
- Fodder Crops / Pasture - Winter Cereals, Lucerne, Millet, Kikuyu and Clover
- Vegetables, Herbs, Flowers - Summer / Winter
- Sheep - Aiming for a 1st Cross flock of about 20 ewes
- Poultry- Laying flock of about 20 birds in large movable coop.
- Rabbits - Numbers reduced due to mosquito borne viruses. Building back up slowly.
- Cattle - Have been showing lowline cattle at local show but hoping to shift to Angus steers in 2012
- Aquaponics - Still setting up but very interesting and quick to set up.

Where are the Photos Editor???

CLASSES

Year 7 Technology Ag and Year 8 Technology Agriculture follow same course structure on a semester rotation. This class looks at plant and small animal enterprises and carry out design aspects such as making seed packets, producing pamphlets, designing logo's and producing a vegetable/herb/flower box which they take home. The class also looks at caring for young animals and usually have the opportunity of taking home a chicken or young rabbit after meeting appropriate criteria.

Year 9/10 Agriculture covers a range of enterprises on a two year cycle with students being able to opt for a 100 or 200hr course. Each year there is a balance of plant and animal enterprises studied with students enjoying the practical aspects that the course can offer.

Year 11/12 Agriculture is usually a small class with students often with a rural background. The heavy emphasis on theory can be challenging for some students. As a result we are in the process of shifting to Primary Industries as this may better meet the needs of students and the community better.

Coomealla High is a small school (360) getting smaller with many challenges to face. Catering for all students and providing interesting and engaging activities helps to keep the Agriculture subject relevant in the school and community.

Peter Colley
Coomealla High School

There is always BAAT No. 40

Talk About Flexible School Studies

Primary Industries on the Western Access Program

Brief History of the Western Access Program:

The Western Access Program started in 1990 and included central schools from Peak Hill, Yeoval, Tullibigeal, Trundle, Tullamore, Tottenham and Trangie. The aim of the development of this Country Areas Program project was to link several rural and remote schools in the West of NSW to allow students to remain in their local communities and complete their HSC and further studies. The first courses were developed utilising TELEMATIC technology using school based telephone lines. In 2004, all Access schools across NSW were upgraded to allow for courses to be delivered using Video Conference technology to enhance all learning experiences.

In 2010, Western Access will be providing HSC curriculum to over 15 schools across the Western Region of NSW.

Western Access students learn by attending video conference sessions (between 60 to 90 minutes a week) delivered by staff within each of the schools. Each subject is then further supported by co teachers in each school to maintain the students focus on the subject materials and ensure that students meet Board of Studies requirements.

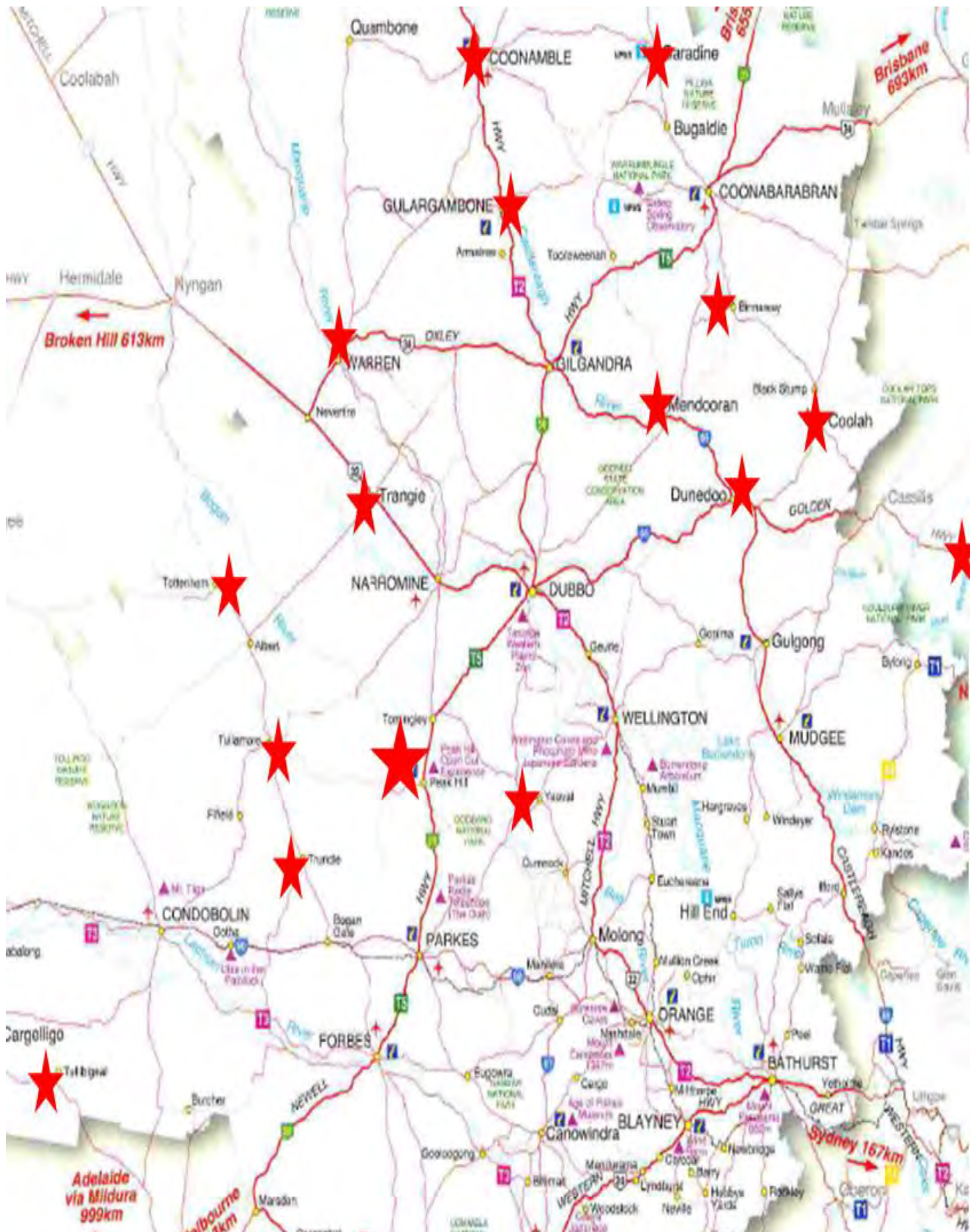
Primary Industries on Western Access:

Primary Industries on the Western Access Program has been running since 1995, proving to be a popular course with many students across the schools.

The study of Primary Industries across the Western Access Program involves the student participating in two thirty minute video conferences as well as time with their co-teacher to complete the work for the week. During VC's, students participate in the tute like lecture; they introduce many of the concepts for the week. The VC sessions involve students working from a work book on the competency they are working on at the time.

Students are also required to complete practical activities at their home school. These are often basic (often because the co-teachers are not always agriculture trained) and are built upon practical days run at different times of the year. All students are expected to attend the practical days which have been held on farms in the local areas or the Condobolin Research Station and in more recent years at the Trangie Agricultural Research Station. Training carried on these days can involve fencing, livestock handling (sheep & cattle), machinery maintenance, cropping skills & tree planting skills.

During term 2 of the Year 11 course, students attend a week of training at Dubbo TAFE's Rural Skills Centre. During this week students are provided with training in chemical application, tractor skill, motorbike/ATV skills and sometimes horticulture training.





Students at Dubbo Rural Skills Centre





WE WANT YOU!

HSC Markers for Agriculture & Primary Industries

Have you thought about applying to mark HSC examination responses in November?

At present marking takes place in Sydney & Tamworth

Application open early in the year (Only in March) on the Board of Studies website

You will hear the result of your application by August

This is an opportunity for teachers with an interest in the development of their own student's responses to the questions in the HSC as well as an opportunity for professional development of yourself and others who help you share your ideas and resources

Applicant should have general teaching experience, experienced teaching of the present syllabus as well as teaching Agriculture or Primary Industries' over a minimal number of years

If you do not succeed try again as new markers are employed each year.

www.bos.nsw.edu.au

Artificial Insemination from the Cow's Perspective

Though I've just given birth to a heifer
And of pride and of milk I am full
It is sad to relate
That my lactical state
Was not brought about by a bull

I've/never been naughty, I swear it
In spite of this calf I have born
By Farmer Brown's tractor
I'm virgo intacta
I've not had the bull by the horn

How dreary the farmyard and meadow
The cowshed seems gloomy and grey
But the one bit of fun
In the years dreary run
Has by science been taken away

I know that the farm is a business
Where all of us must pull our weight
But I'd pull and I'd pull
For a nicely built bull
For this phoney arrangement I hate

It must not be thought that I'm jealous
There are things that a cow shouldn't say
But these A.I. tarts
Who handle our parts
Still get it the old fashioned way



Laura Tolley

Careers in Agriculture Expo

5 April 2012



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.

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

Hold the date in your diary and make sure you participate in this exciting opportunity to kick start your career in agriculture.

Date: 5 April 2012
Time: 9:30am – 3:30pm
Venue: Cathy Freeman Park, Sydney Showground
Sydney Olympic Park NSW 2127

For further information

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



Royal Agricultural Society of NSW

Facilities Review

<https://detwww.det.nsw.edu.au/news/sbs/noticeboard/yr2011/aug/review.htm>

Coca-Cola Scholarships

A great scholarship is available for people studying in an agricultural field.

Please see the below link for more information

<http://www.acas.asn.au/index.htm>

Art4Agriculture

<http://art4agriculturechat.wordpress.com/art4agriculture-events/>



Top of the Crops: Edward Jones wins 2011 Australian Universities Crops Competition

Edward Jones, a third year Bachelor of Science in Agriculture student in the Faculty of Agriculture, Food and Natural Resources, is the winner of the 2011 Australian Universities Crops Competition, held at Temora, NSW, on 10 and 11 September 2011.

Edward beat 54 students from seven universities – The University of Sydney, The University of Western Australia, The University of Adelaide, La Trobe University, Curtin University, Charles Sturt University and the University of New England – to take out the title.

The prize includes an international ten-day study tour to compete in the Collegiate Crops Contest held in November 2011 in California, USA. Edward's award will include airfares, accommodation, meals, enterprise visits, and registration to compete in the Collegiate Crops Contest.

According to Edward: "The Australian Universities Crops Competition was a great chance to learn about the Australian grains industry from in-field experience and to socialise with like-minded students from across Australia. I am thrilled to have won the competition this year and can't wait for the opportunity to represent Australia and the University of Sydney's Faculty of Agriculture, Food and Natural Resources in America."

"In the near future, we will have to produce significantly more food for our growing global population using less resources while also reducing any negative impacts on our environment. Although there are many challenges in achieving this, it promises to make agriculture an extremely exciting and rewarding field to work in. Winning the competition has provided me with the invaluable experience of broadening my knowledge and understanding of agricultural systems in different regions of the world," said Edward.

The Australian Universities Crops Competition was held over two days, with a day of field training undertaken the day before the competition. Competitors were examined on a range of topics across the Australian grains industry supply chain, from seed identification and grain grading to calculating gross margins and yield potential.

"I am delighted that our Edward Jones won the Australian Universities Crops Competition," said Dr Daniel Tan, Senior Lecturer in the Faculty of Agriculture, Food and Natural Resources, who led the group of University of Sydney student entrants.

“The competition was fierce with 55 competitors from seven universities, and Ed put his best foot forward in representing the Agronomy Program at the University of Sydney. Ed’s combination of practical skills and theoretical grounding provided him with the tools to excel in the competition,” said Dr Tan.

“The Crops Competition is a great opportunity for our students to develop their technical knowledge and practical skills, and also to engage with industry stakeholders.”

Competitors gain an insight into the Australian cereal, pulse and oilseed sectors and also gain practical in-field experience that will help prepare them for entry into the agricultural industry. The competition also provides an opportunity for networking between universities, students and industry representatives from Pulse Australia, Landmark and Graincorp.

The University of Sydney entered fourteen students into the competition this year, with the group led by Dr Daniel Tan, along with support from student mentors, Ben Azzopardi and Sam Malfroy. Sam Malfroy won fourth place in the 2010 Australian Universities Crops Competition and a four-day International Study Tour to New Zealand.

This is the third year the annual crops competition has been organised by Grain Growers Limited with sponsorship from the Grains Research and Development Corporation, Graincorp and Landmark.

Read more about the Australian Universities Crops Competition at: <http://www.graingrowers.com.au/industrydevelopment/capacity-programs/australian-universities-crops-competition>



CAN WE SUSTAIN OUR CURRENT AGRICULTURAL SYSTEM IN AUSTRALIA?

The current outcries from the farming community about the imposition of a “carbon tax” on the economic viability of their operations raises an important issue. Can we sustain our current agricultural system in Australia? Has an “Agenda 21” sustainability assessment been made of our agricultural system? Whilst current outcries are narrowly focused on matters economic, the other components of “Agenda 21” need to be applied to determine farming’s long term sustainability. Agenda 21 is widely and internationally accepted as a measure of the long term sustainability of a human activity. To assess using Agenda 21, the triple bottom line of economic, social and environmental factors needs to be applied, not simply matters economic.

Agenda 21 was formulated to ensure that the Earth’s environment would be at least maintained and preferably improved as it passes from one generation to the next. This is why a triple bottom line assessment is used. It can also be used to bring to light short comings and specifically focus future action to correct these short comings. Taking this approach brings to light many interesting if not disturbing aspects of current agricultural activity and the need for action. Much of this may require structural adjustment at a government level or changed individual action and not be left to “market forces” to sort out as has been the practice in recent times.

Firstly, an economic assessment would reveal such problems as the level of farm indebtedness, the “cost/price squeeze” on returns, a culture of “betting against the climate odds” decision making, dependence on drought/exception circumstances grant monies and the “freehold title” problem.

***The level of farm indebtedness**

The average rate of farm indebtedness is about \$450,000 (2010) and rising. Couple this with a general long term trend of decreasing commodity prices, there is an erosion of farm equity.

***The on-going “cost/price squeeze” on returns**

There has been a long term downward trend for product prices received by producers and when this is coupled with a long term upward trend in input costs, returns are being squeezed downwards. Over time, the farm becomes less profitable with even lower returns to capital. The most common response to this at an individual farmer level is cut costs and this means “cutting corners” to hopefully remain viable.

***A culture of “betting against the climate odds” decision making**

Most management decisions involve “betting against the odds”. This is despite more than one hundred years of and at some locations of up to hundred and fifty years of meteorological data statistically indicating the odds against the farmer. There is only a small percentage of Australia with the “climate odds” in favour of a reliable harvest. If Australia is to be a regular supplier to the global food market, consistent and reliable harvests are needed to meet long term contracts.

***The dependence on drought/exceptional circumstances grants monies for managing risk**

There is a shifting of risk to the public purse through the widespread use of “exceptional circumstances” and drought area declarations. The negative side of climate, particularly drought, is seen more as bad luck rather than the acceptance that drought is a very real occurrence over the majority of Australia. The responsibility of the risk needs to be shifted back to the producer, who cannot expect to be bailed out by emotive pleas for help. The question that needs to be asked is: “Why are you farming there in the first place?” If farming is to be continued, the producer should accept the risk as does any business in the wider economy. Often the monetary relief comes to the farm as interest rate relief that flows straight through the farm to a financial institution to cover their risk and, in turn, increase the future level of farm indebtedness. Is this economically sustainable? The answer would be “highly doubtful”.

***The resolution of “freehold title” and how land can be used**

People think “freehold title” legally allows them to use their property in whatever way they choose even if it is not in the interests of the wider community and environment. There have been few successful prosecutions in this area. An exception was the case of tree clearing in the Gwydir Wetlands. The widely held notion is that: “It is my land and I can choose how I use it in pursuit of generating income”. The Coal Seam gas issue has sharpened the focus on this issue.

Secondly, a social assessment uncovers some important issues such as the aging of the farming population, the flight of youth from the “bush”, the tyranny of isolation despite the advent of technology, OH&S issues indicating that farming is a dangerous activity, the high rate of male suicide and animal welfare.

***The aging of farmers**

The aging of farmers (currently average age 54 years) carries with it a number of negative consequences such as resistance to change as people age, slower adoption of technology, insular/local outlook and slow response to wider market signals: “Seen this all before but it always comes back, just wait and see”.

***The flight of rural youth from country areas to the city**

Rural youth since the 1980’s has been deserting country Australia in large numbers whether it is the rejection of the agricultural “way of life” of farming, family succession problems or to put their talents to what they see as better use in the wider world. This critical mass movement of young people has drastically upset the sustainable demography of rural Australia. The obvious impact has been on country sporting organizations both male and female.

***The tyranny of isolation**

Despite the advent of technology, including the internet and newer more sophisticated phone systems, rural people often have to travel long distances to health and specialist medical services, government support services, for example, Centrelink, and to be involved in social and interest groups. A negative outcome of rural isolation is the need to travel long distances often at high speed which increases the chance of motor vehicle accidents on the generally poorer roads found in isolated rural areas.

***Farming is a potentially dangerous work place**

From an Occupational Health and Safety (OH&S) perspective, farming is one of the more dangerous occupations with more opportunities for accidents to occur as farming operations are commonly undertaken short-handed and in isolation. Safe OH&S practices come at a cost which in the cost/price squeeze environment is often seen as one that can be trimmed off the expense sheet.

***The high rate of male suicide in rural areas**

The high rate of suicide, particularly amongst males, tears at the fabric of rural communities. High inter-generational expectations, the inability to control production factors such as adverse climate and product prices coupled with an inability to cope creates an environment where this outcome devastates all connected with the person involved. This is a tragic waste of lives.

***The animal welfare debate with the wider community**

Animal farming is under constant scrutiny from the public examination of animal welfare issues. These can impact on the marketing of animal products as seen in the recent anti mulesing debate, live cattle exports to Indonesia and the increased demand for “free range” animal products. Whilst much of the negative comment comes from a misunderstanding of basic animal husbandry practices, other welfare issues remain especially when animals are subjected flood, drought and fire particularly in the more climatically extreme parts of Australia.

Thirdly, an environmental assessment reveals issues such as over modification of underlying ecosystems, soil degradation and the poor use of scarce water resources.

***The farm as a man modified ecosystem**

Farming modifies existing ecosystems so that the new system channels resources into the production of outputs sold to sustain the farming enterprise. In general, the more intensive the production pursued, the more radical the modification of the original ecosystem. It is possible to push the ecosystem to such a point that it collapses. The Murray/Darling system is the most recent and obvious example of this where over allocation of water to upstream irrigators has crashed the downstream ecosystem.

***Soil degradation**

Agricultural activities alter the soil system from what was developed under a natural ecosystem over the millennia. A well documented example of this is the increase in soil acidity with the long term use of clover- ley farming to maintain/improve the productivity of winter cereal cropping land. Other well documented examples include the increase in soil salinity caused by the removal of deep rooted vegetation, the lowering of an already low soil organic matter content which ,in turn, lowers the soil’s stability against erosion and the compaction of naturally fragile soils with a pastoral industry based on cloven hooved animals, sheep and cattle.

***The poor use of scarce water resources**

Questions are being publically expressed about the wise use of our scarce water resources. Are we using them wisely? Are they going to the most efficient end uses? Is irrigation in arid and semi arid areas a clever use of water? The answer is “no”.

***The exporting of farm nutrients in produce and their subsequent replacement**

Every time a farm product is harvested, nutrients from the farm are harvested and transported away and overseas if the product is exported. If not replaced, the level of production diminishes. Whilst some can be replaced on the farm using nitrogen fixing legumes, these require a phosphate fertilizer, for example, superphosphate which has to be imported from somewhere else, often from overseas. The long term sustainability is therefore questionable.

To answer the original question posed: “Can we sustain our current agricultural system over the long term?” From the evidence presented above, probably not. Based on this Agenda 21 assessment, we should reduce our total production as only 20% is used locally and 80% is exported. We would not run short of food as some in the industry are promoting. Production needs to be confined to climatically safe areas and conducted in a “smart” technological way. Successful practitioners are doing that now and are likely to remain viable in the long term

Personal Biography

I am a recently retired agricultural educator and have a Master of Applied Science in Agricultural Education. Have taught across NSW and travelled widely across Australia. In addition, I have lived in the city environment whilst still involved in agricultural education and can view agriculture from "paddock to plate".

I have travelled widely overseas viewing farming and the marketing of produce within the countries visited including, Ireland, Great Britain, Spain, France, Italy, Austria, Switzerland, Germany, Denmark, Sweden, Finland, Russia, Belarus, Lithuania, Poland, United Arab Emirates, Vietnam, Turkey and Greece.

I have been reflecting on my career and my travels, attempting to address the issue of long term sustainable agriculture in general.

Compiled by Rick Kemp

CSIRO has two interesting free downloads:

1. "Water: Science and Solutions for Australia"
2. "Climate Change: Science and Solutions for Australia"

Some quality factual information among the current shrill background noise





Unexpected Bequest a Boost for Agricultural Sustainability

Research into sustainable agricultural science has been given a huge boost with the announcement of a major bequest to the University of Sydney.

The unexpected gift of over \$8.6 million is from the Estate of the late Mrs Nancy Roma Paech, who grew up on the land but was never a farmer or grazier.

Professor Mark Adams, Dean of the Faculty of Agriculture, Food and Natural Resources at the University of Sydney said: "This is an extremely generous and far sighted gift which will have a transformational impact on the research to be conducted at our new Centre for Carbon, Water and Food."

Mrs Paech was the daughter of a farming family from 'Leeson' Station, Winton, in outback Queensland. She spent her early years on the station and her affection for rural Australia is thought to date back to that time. She was known to be interested in methods of crop production without the use of pesticides.

When her father died in the mid 1920s the estate was divided between Nancy and her elder brother, Robert Speirs. When Nancy died in 1987, her estate in turn was managed by her husband Donald Paech. It was only after Donald Paech died in 2009 that the University of Sydney was made aware of the bequest. Up until then, it had no idea of Nancy Paech's intentions to donate her estate to the University.

Trustees of the Estate, Cedric and Mary Holland, said Nancy's wish was that interest from her bequest be directed towards "financing research in matters pertaining to agricultural science".

Professor Adams said income from the gift will be directed towards supporting research that benefits pastoral industries and the sustainable management of rangeland, pastoral and related inland Australian landscapes.

"In particular it will be supporting research into the types of low-impact, broad-acre agriculture that are the future of sustainable land management for a large proportion of the Australian continent," said Professor Adams.

This use also reflects Nancy Paech's early life and recognises that a large proportion of the world's poorest people are dependent on rangelands and the animals they support, and that there will be increasing demand for knowledge in this field from countries like China, Africa and India.

Deputy Vice-Chancellor and Provost, Professor Stephen Garton said this gift would bring long term positive benefits for the University.

"Income from the bequest will fund the establishment of a new academic chair in Range Science which will focus on Sustainability of inland Australian landscapes used for animal production. As well there will be a number of Visiting Professorships, PhD Scholarships and Masters Scholarships all named after Nancy Roma Paech."

The research and associated activities supported by the Paech Bequest will be conducted through the Centre for Carbon, Water and Food of the Faculty of Agriculture, at the Camden campus of the University of Sydney. A new facility to house this interdisciplinary centre will be completed in 2012.

UPPER HUNTER BEEF BONANZA



Claudia Nielsen with Shorthorn X Simmental steer 2nd on Hoof and Heavy weight Champion and Jackpot winner.

Over 600 students and independent beef cattle producers exhibited at The Upper Hunter Beef Bonanza 2011. This show has overwhelmed organisers building in popularity each year offering a diverse program for primary and secondary students as well as commercial and stud breeders from all over the state.

With 176 steers entered in the Open Led Hoof and Hook competition most of the awards were taken out by schools:

Led Classes:

Reserve Champion Lightweight – McCarthy Catholic College
 Champion Light Middleweight – McCarthy
 Champion Heavy Middleweight – Coonabarabran High
 Reserve Champion Heavyweight – Calrossy

Carcase Classes:

Champion Lightweight – Scone High
 Res Champion Lightweight – Scone Grammar
 Champion Light Middleweight – Mudgee High
 Reserve Champion Light Middleweight – McCarthy
 Champion Heavy Middleweight – Coonabarabran High
 Champion Heavyweight – Calrossy
 Reserve Champion Heavyweight – Coolah High

Calrossy's Shorthorn X Simmental steer bred by Matt and Kate Spry went on to become the Heavy Weight Jackpot Winner with a score of 90.948 just behind Coonabarabran's Middleweight limousin X shorthorn infused steer by 0.138 pts which took out the Overall Champion both Hoof and Hook and Jackpot with a score of 91.186 pts. This outstanding steer was bred by Jason and Kylie Catts, Futurity Shorthorns. Congratulations to Coonabarabran High and the Catts Family.

Commercial breeders mainly exhibited cattle in the unled section but Calrossy Anglican School took out the Live Champion Pen of 3 with 2 limousins and 1 charolais X steer. Judge for both the led and unled hoof classes was Mr Tim Bayliss from Armidale.

There were a large number of heifers entered for the Heifer Classic this year with the shorthorns dominating in numbers and places. Calrossy continued their success in the Heifer Classic taking out first place and Champion Heifer with the school's bred Kamilaroi Lauren F10 paraded by Lane Evans.

With 467 students participating in the Open Parading Competition on the Sunday of showing, Calrossy students were elated when Katie Dejong Yr 8 Calrossy was awarded Champion and Lane Evans yr 9 Calrossy was awarded Reserve Champion of this prestigious event by the 3 judges Mr Steven and Mrs Amanda Carter, Blackjack Shorthorns and Mr Glenn Bullock.

Jonty Hemmingway was Champion Junior Judge with Alexander Riley from Farrer placed Reserve Champion Junior Judge of the show.



Anne Johnston Yr 9 Parading Charolais X Reserve Heavyweight Hoof Champion

National Inter-School Meat Judging Competition

This event continues to grow in popularity every year giving student the opportunity to assess beef carcasses and primals and identify a class of beef primals and beef and lamb retail cuts. While some students undergo some training prior to the event, other students simply enjoy the experience and protocol associated with entering a processing plant to view rows of carcasses and develop knowledge and understanding of beef production.

Calrossy students were thrilled with their success in the Interschool Meat Judging Competition held in conjunction with the Upper Hunter Beef Bonanza 2011. Primo, Scone generously hosted the event with 140 students participating and representing 20 schools from around NSW.

The Overall Individual Champion was Laura Duncan Year 11 Calrossy and Runner-Up Emily Bowler also Yr 11 at Calrossy. The overall Champion Team was Calrossy consisting of Laura Duncan, Emily Bowler, Anna McKenzie and William Cant. Winning teams in the 2 Carcase Classes and Retail and Primal ID sections went to Calrossy with Kempsey High taking out the Primal Class.

Mrs Bronwyn Nielsen, Head Teacher Agriculture, Calrossy Anglican School was awarded the Champion Coach. The winning Calrossy Team members will now be invited to attend the 5 day Inter-Collegiate Meat Judging Workshop and Competition held at UNE in July 2012.

We are very fortunate to have such great industry support in Tamworth, said Mrs Nielsen. Calrossy students undergo a crash training course with a visit to Cargill and Kays Meats and Country Capital Meats provide retails cuts for training sessions. The knowledge and skills gained from this competition assist students with their understanding of the HSC Agriculture Product Study Unit explained Mrs Nielsen.

Mr Tim Baylis, Judge, awarded the Upper Hunter Beef Bonanza's popularity to its uniqueness with the inclusion of the National Interschool Meat Judging Competition, the Inter-active Unled Steer Judging Competition and the sponsored school steer competition, allowing schools the opportunity to participate that would otherwise struggle with funding to purchase and feed a steer.



Lane Evans parading Champion Heifer Kamilaroi Lauren F10
sashed by Mr Tim Baylis judge of the show.



Katie Dejong Open Champion Parader and Lane Evans
Open Reserve Champion Parader of the show

Have You Ever Thought What You Would Do If Your Farm Was Threatened By a Fire?

Some teachers may either think it won't happen at their school or may just not want to consider it seriously.

Unfortunately for some schools it may be a reality. All schools should have an emergency plan that includes the protection of the animals. With summer and the bushfire season approaching, planning for the event of a bushfire should be considered and should be part of your emergency planning.

Here is an outline of the planning you should do and some links to further information. You can use this information as a basis for developing a general emergency plan for your school farm.

FIRE SITUATIONS

- Have a plan that all staff that work with the animals have been made aware of and can access
- Identify and record the number, species and location of all animals at your school to facilitate efficient evacuation
- Identify the staff members who are responsible for the different school animals and ensure they know their responsibilities
- Have an evacuation kit
- Prepare an area of the school farm/grounds as a safe area (cleared or very green area with access to water)
- Prepare all buildings and clear rubbish and vegetation from yards or areas to be used to yard animals
- During hot/dry summer conditions monitor weather forecasts, RFS bulletins and media broadcasts, especially ABC radio and local community radio stations for emergency information.

YOUR PLAN

Your plan should include the following information as a minimum:

- Contact details for local fire brigades, local ABC radio frequency for information, website address for RFS and contact details for staff members who work with school animals
- Map of the school farm indicating the position of watering points, gates and exits
- Location of the evacuation kit
- Location of evacuation places where companion animals can be taken
- Location of safe areas suitable for livestock
- Location of cages and pens for transporting companion animals
- Availability and options for transport of livestock
- What to wear during times of fire
- Equipment suitable for use with animals during fire (avoid using synthetic or plastic equipment).

EVACUATION KIT

Equip a bin (with lid) with the following:

- wirecutters and a sharp knife
- torch, portable radio and fresh batteries
- metal water bucket
- extra cotton lead ropes and leather halters for cattle and/or horses
- woollen blanket and towels
- animal first aid items
- whatever else you feel is essential for the first 24 hours.

Store the kit in an easily accessible location and don't use it for anything but emergencies.

For further information:

Bushfire Preparedness

http://www.dpi.nsw.gov.au/data/assets/pdf_file/0008/96821/bushfire-preparedness.pdf

Rural Fire Service <http://www.rfs.nsw.gov.au/>

Horses and Bushfires

<http://www.dpi.vic.gov.au/agriculture/farming-management/fire-flood-other-emergencies/bushfire-recovery/assessing-and-managing-livestock/horses-and-bushfires>

For further information contact:

Sally Bannerman

Schools Animal Welfare Officer

sally.bannerman@det.nsw.edu.au

Archibull Prize

As part of 2011 the Archibull Prize entry surveys were promoted to teachers of each school participating. Teachers were asked to select at least 30 students to complete the entry survey (with a vision that the same students would also complete the exit survey).

We will be releasing the full results of the survey in January 2012. In the meantime in light of the ongoing discussions about careers in agriculture I would like to share a few interesting survey insights with you:

Knowledge about Farming in Australia

In general, students from both primary and secondary schools demonstrated reasonably good knowledge about farmers and farming; however, there is some scope for improvement.

Some feedback

- Interestingly most primary (90%) and secondary (82%) school students incorrectly said that farmers were between the ages of 30 and 50 years old.
- A higher percentage of secondary school students (50%), compared to primary school students (35%), correctly identified 60 million as the number of people that Australian farmers feed.
- Only 7% correctly identified "93%" as the percentage of how much food eaten in Australia comes from Australia (44% of respondents said "45%", which was the most popular answer)
- Most primary (94%) and secondary (74%) school students said they wanted to know more about farming.

Attitudes and Perceptions of Farmers and Farming in Australia

- Primary and secondary school students demonstrated a generally positive view of farmers and farming.
- Most primary (89%) and most secondary (75%) students said that farmers are important to them.
- Most (75%) of both primary and secondary school students said that the food made in Australia is "better than food from other countries"

- More than 80% of both primary and secondary school students said that the statements "It is important to know where your food comes from" and "It is best to buy Australian made products" are true and the statement "People in cities don't need farmers" is FALSE.

More than 80% of primary school students said the following statements are also TRUE:

- "Farmers look after the environment"
- "Farming is a good job for a young person"

More than 80% of secondary school students said that the following statements are also TRUE:

- "Farmers contribute to Australia's economy"
- "Farmers use science and technology to help them produce food"

More than 80% of secondary school students said that the following statements are also FALSE:

- "People in cities don't need farmers"
- "To work in agriculture you need to live in the country"
- "A drought does not affect people living in cities"

Perceptions about Farming as a Career

- In response to the statement "Farming is a good career choice for a young person", more secondary than primary school students responded "unsure" (33% for secondary school, 14% for primary school)
- On the other hand more primary than secondary school students responded "true" (45% for secondary school, 81% for primary school).

These are very important insights and provide a great platform for primary industries, agribusiness and the government and education sectors to take a collaborative approach and partner to build on the positives and address the negatives and debunk the myth conceptions. We have 7 billion people to feed, house and clothe and we need farmers to do this.

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Above: Naomi, Gunnedah and CSU team - Animal Science

The Country Education Foundation of Australia



**Grant Applications Now
Open For Rural and Regional
Students for 2012!**



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 41 local Education Foundations in NSW, SA, QLD and NT, 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, apprenticeships and entry-level careers.

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 course-related 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



4 November 2011

Graeme Harris
President
NSW Association of Agriculture Teachers

Dear Mr Harris,

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

Following my previous correspondence in back in May, the NSW Farmers' Association has made considerable progress in pursuing its policy calling for greater integration into the curriculum of sustainable food and fibre messages for years K-12. I would like to take this opportunity to provide you with an update on some of our activities.

The Association believes a Sustainable Food and Fibre Policy (SFFP) is needed so 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. 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 also encourage more of them to study agriculture and its associated subjects.

In July the Association met with the advisor to the Minister of Education, Adrian Piccoli and gave an update on what we had achieved to date in progressing our SFFP. The response was generally favourable; however we were ultimately referred back to the NSW Board of Studies and the Australian Curriculum, Assessment and Reporting Authority. With that advice, the Association developed two key technical documents and sent them to the NSW Board of Studies. The first of which was a 'Sustainable Food and Fibre Education Policy for Schools', containing information about sustainable food and fibre production and how these messages could be incorporated into the curriculum and state school programs. The second document included some suggested Sustainable Food and Fibre Content Elaborations.

At a National level we are still in close contact with ACARA. We have made a submission to their consultation on their Cross Curriculum Priorities and specifically focused on the *Sustainability* Cross Curriculum Priority. We are also providing input into an ACARA developed 'Sustainable Food and Fibre Focal Concepts Document' that currently appears to emulate the *Sustainability* Cross Curriculum Priority.

We are currently working with the Association's advertising agency in developing a campaign aimed at further raising awareness of this important issue. In order to get maximum impact and ensure clarity of message we must have a consistent voice throughout the campaign. One that is simple, clear and repetitive. This messaging needs to talk to the importance of education and demonstrate the implications of failing to include food and fibre security in the revised curriculums. It also needs to put the responsibility of this decision in the hands of the key decision makers.

I trust that you find this information useful. The Association will continue to pursue the implementation of a Sustainable Food and Fibre Policy in the NSW curriculum and if you have any questions please do not hesitate to contact the Association.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Sarah'.

Sarah Thompson
CHAIR RURAL AFFAIRS COMMITTEE

NSW Farmers' Association

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Photo courtesy of Cessnock Advertiser.

THE FIRST Tocal SCHOOLS STEER CHALLENGE

Tocal College has set up a competition for local schools to encourage students to learn about caring for and showing cattle. Eight local high schools were lent one or two steers and provided with feed and training on how to look after them and prepare them for the college competition-held in August 2011.

During the program, teachers of agriculture and their students fed the steers and trained them to lead in the show ring. They also learnt about the beef industry including animal husbandry and welfare.

Prizes were awarded for the school and individual students in a number of different categories including "best growth rates", "steer presentation", "parading" and "judging".

According to Tocal's Beef Cattle Lecturer, Bruce West, the Schools Steer Challenge is based on a similar program which has been run at the University of Western Sydney in the past.

Mr West explained;

"The schools involved came from the Central Coast, Cessnock, Maitland and Lochinvar. The participating schools had a great time preparing the steers and acquiring new skills.

The teachers also said they learnt many skills that they can apply to the main competition in August when the schools will return to Tocal with their steers to showcase what they have achieved. I am most impressed with the enthusiasm shown by local students and I am sure they will gain a lot from being involved in our first Tocal Steers Challenge,"

When the competition was over, the steers were sold and the schools shared in the proceeds of the sale. Feed costs were sponsored by Castlereagh Feeds. The program was so successful; it will be run again next year with a greater number of schools.

Tocal Prospectus Out Now!



For Your Free Copy
Ph: 1800 025 520

TIM EYES

Tim was dux of the Certificate III in Agriculture in 2009. He was the first Tocal student selected for a BBM (Big Brother Movement) travel award to the UK. This award paid for his overseas trip to learn about beef production and agriculture in England, Scotland and Wales.

He returned from this trip recently and came back to Tocal to speak to students about it. He visited London and Paris, worked on cattle and sheep studs, went to a number of country shows around the UK and spent time on an large Artificial Breeding Centre in Wales which has some of the best bulls in the world.

Tim was fortunate to have the opportunity to meet some of the UK's top beef producers and see the amazing breeds of sheep and cattle that are so different to those in Australia. He showed students photos of Galloways and British Blue Cattle, as well as Swelldale Sheep. All these look very strange compared to the livestock at Tocal.

'The overseas trip was a wonderful opportunity for me and I will always be grateful to Tocal and BBM Ltd for giving me the chance to travel and learn so much. I have decided to set up my own Limousin Stud and have arranged to import semen from the people I worked for in England,' he said.

Tim is currently working on the Central Coast for a number of farmers as well as running his own stud and providing advice to those who have purchased small blocks and don't know how to manage them.



Tim Eyes showing cattle.



Minister of Primary Industries Katrina Hodgkinson presenting award to Donna.

PAST STUDENT DONNA FRASER

Donna completed Certificate III and Certificate IV in Agriculture at Tocal in 2001-2002.

She worked in the dairy industry at Cowra for 5 years, before diversifying into the pig industry, first at Grenfell and then starting work with Westmill Piggery, a large intensive piggery near Young. Donna has been with Westmill for 5 years and loves her work.

Donna now manages all the 9 farrowing sheds, and is responsible for animal health, welfare, nutrition, care and management of all sows and piglets, and record keeping.

The piggery has over 1000 breeding sows and produces 400-500 pigs per week, or 24000 pigs a year for the Australian market. Modern piggeries are high tech with the heating, feeding and watering systems completely automated.

Donna is an important member of the management team which consists of 10 staff. She has developed many new skills and recently designed a piglet box for use when piglets are born cold and weak. This box has saved the lives of countless piglets.

A graduation ceremony was held in Young recently and the Minister for Primary Industries, Katrina Hodgkinson presented awards to Donna and other staff who had gained the Diploma in Agriculture through skills recognition.

Donna received credit for all the skills she has gained on the job since leaving Tocal. As a result, she achieved a Diploma without having to do any study or further training.



EMAIL FROM EX-STUDENT LAURA WELLING

"Hi, I was at Tocal in 2004 as a mature age student. Yes a little older than your average student. I whizzed through it but did need to get working after the Certificate to earn money but I would have liked to have stayed on to complete the Diploma.

To be honest I'm not your typical agriculture/beef/wheat/sheep kind of person. I'm 100% dairy. Dairy farming, dairy shows, dairy cows, genetics, dairy sciences and technologies.

I've been working in the Australian and North American dairy industry's since leaving Tocal.

I've been travelling and dairying around Canada the past few years. I'm also doing a degree through Charles Sturt University by distance education. I've been lucky enough to work with world class dairy animals on some state-of-the-art dairy farms. Not to mention attending cow shows and sales.

I'm so thankful for Tocal for the training I received all those years ago. But even more so the friends I made... I'm still very close to Lizzy Bennett, Bianca Stanford and Rachael O'Keefe (another dairy buff working in Victoria!). The connections and the friendship are fantastic!

My little brother Stephen went to Tocal after me and now he is working for the Aussie government and getting married next year to Lisa Anderson, another Tocal student... All of this would NEVER have come about if Tocal didn't sandwich us all together... My parents are so happy with the way my brother turned out, and that's thanks to the direction from Tocal staff.

Long before I studied at Tocal I was one of two students from my high school Ag class to be picked for a free visit to Tocal. I remember we went camping out in the back paddocks of the college, a GREAT program and I hope you still run things like that for prospective students. I still look back and laugh at the way things all fell into place.

I wish I could say I went on to University and am now a millionaire with a degree but its all been very slow because I physically cannot stay put anywhere long enough to finish it.

The dairy world is so exciting in North America, so I've got to be here in all the action!

I sent a recent photo of me at Rocky Mountain Holsteins; Mountain High 2011 Sale in Cochrane Alberta. It's like the "Mercedes Benz" of the elite cow world.

Kindest regards, Laura."

TOTAL STOCKHORSE SALE

The third Tocal Australian Stock Horse Sale will be held at the college on November 6, 2011.

The 2008-2009 Tocal Stockhorse Sales were very successful. There weren't enough horses available to run a Stockhorse Sale in 2010. However, with good results in the Tocal breeding program and a lot of hard work by staff and students who have trained and prepared the sale horses, Tocal has great offerings for the 2011 sale.

This year there will be 24 Tocal horses bred and trained on Tocal and about 16 horses from other vendors.

"We take great care to ensure the horses we sell are quality animals both in terms of breeding, temperament and ability," College Principal, Dr Cameron Archer said. "This way we know that those who buy a Tocal bred Stock Horse will be more than happy with their purchase. We have had great feedback about the quality of the horses that were sold at our previous sales," he said.

A catalogue for the sale will be available shortly and the details of each horse will be recorded in this. A parade of the horses, ridden by Tocal students and staff will be held at 9am on the day of the sale with the sale commencing at 1pm.





MACHINERY SKILLS TRAINING



Students at Tocal are trained in the safe operation and maintenance of farm machinery. Whether you work on a cropping or livestock property you will still need to use quad bikes and tractors, hand tools and chainsaws at times. Safe use of these is most important so all students are trained to work with this machinery.

Having good livestock skills as well as being able to use machinery and equipment makes Tocal graduates highly employable. Hunter Institute of TAFE assist college staff by providing training in small engines, hand tools and welding. They have excellent trainers and all the gear to provide very good experience for students.



Tocal has worked closely with local TAFE colleges in the Hunter for many years and this benefits our students as they are also enrolled with TAFE.

STRONG DEMAND FOR Tocal GRADUATES

Tocal College gets numerous calls from employers looking to recruit keen young people for their farms and businesses. Some of the job opportunities available at the moment include:

- Livestock buyer for a large meat processing company
- Pen riders & trainee managers for a number of NSW feedlots
- Station Hand for a large Wagyu Stud near Mendooran in central west NSW. Involves AI and ET programs for 1500 breeders, other cattle work & farm operations
- Trainee manager for large rural produce stores in the Hunter Valley
- Station hands for North Australian Pastoral Company & Kidman properties in QLD & NT
- Tractor operators and farm hands for large cropping properties at Bourke & Walgett.
- Horse person for large Thoroughbred Studs at Scone & Denman
- Station Hand on a cattle property at Narrabri that also has a Stockhorse Stud

CAREER SPOTLIGHT

'I' JOB PROSPECTS

Instructor

Trains students in practical skills and agricultural theory. Usually employed at an Agricultural or TAFE College.

Irrigation Farmer

A person who grows irrigated crops and/or pastures such as cotton, sorghum, wheat, oats, and lucerne. Many areas use flood or spray system irrigation.

Tocal Brochure Out Now!



Tocal

COLLEGE

Paterson NSW 2421 Australia

Phone: 1800 025 520

Fax: 02 4938 5549

info@tocal.com

www.tocal.nsw.edu.au



Industry &
Investment

ELMORE CHARITY BALL RURAL SCHOLARSHIP

AIM: To provide an opportunity for a member of the rural community to further their education in the agricultural field, by providing the applicant with a scholarship of \$5,000 towards the cost of their accommodation for the first year of their agricultural course.

SELECTION CRITERIA:

Students may apply if:-

- They are entering their first year of undergraduate degree
- Intending to enrol in an Australian Tertiary Institution course related to agriculture.
- They are under 24 years of age as at January 1, 2012.
- They can demonstrate a career commitment to agriculture
- An Australian citizen or permanent resident
- Short listed applicants must be available for an interview
- If the application is lodged prior to receiving a College offer, the applicant must ensure a copy of the College offer is sent to our Committee by 31st January 2012.

The scholarship is open not only to students who wish to take up farming as a career, but also to those who wish to provide consultancy, research, technical and other services to agriculture. The scholarship will be paid in two parts (\$2,500) six monthly (upon receipt of accommodation account and successful half year results)

APPLICATIONS CLOSE: 31st January 2012

For further information or to obtain an application form contact:

Sam 0458 356 673 or Craig 0427 326 311

or EMAIL: elmorcharityball@iinet.net.au

ELMORE SUMMER SEND OFF BNS BALL – 10TH MARCH 2012

www.elmoresummersendoff.org.au

Students get Training Experience in ‘Working Canines’ Course

A new course at the University of New England is giving students experience in the training of dogs used in a variety of working contexts.

A residential school at UNE last week for those undertaking the course by distance education had the students working with beagles in training routines for quarantine detector dogs, and seeing demonstrations by dogs trained to detect termites in buildings.

“It was the best residential school ever,” said one of the students, Kelly Walton from Sydney. “I’ve always loved animals, and have had dogs since I was nine.”

Kelly, who is studying for a Bachelor of Science degree majoring in Zoology, interrupted a career in television production to follow her interest in animals. She and her fellow students agreed that the new unit – “Working Canines” – was opening up new options for careers with animals. “I’d really like to work in animal welfare one day,” Kelly said.



The “Working Canines” unit is part of the Bachelor of Animal Science degree program introduced at UNE this year, and it is also available – as an elective unit – to students in related degree programs. The Bachelor of Animal Science program has three specialist majors: Livestock Production, Wildlife Management, and Canine and Equine Science, with the Canine and Equine Science major being the first of its kind in Australia.

Geoffrey O’Neil, the quarantine dog handler who conducted the detector dog training sessions, said: “We’re putting what the students are learning into a real operational context, and giving them some ideas about employment opportunities.” It was Mr O’Neil’s wife, Alix O’Neil, who demonstrated termite detection with her own Labradors that travelled with them from Sydney.

“These students will be well prepared for employment,” Mr O’Neil said, “and the Australian Quarantine and Inspection Service, for example, could potentially recruit graduates who have already done a lot of the training the Service would otherwise have had to put them through.”

During the four-day residential school, the students also travelled to a farm to see a sheep dog demonstration, to the Armidale Greyhound Racing Club to see racing greyhounds in training, practised obedience training with dogs of mixed breeds, and saw a sled dog demonstration by Neen Brown – a local woman who is the only Australian ever to have entered the Ititarod event in Alaska.

“There’s a wide range of uses for detector dogs,” said UNE’s Dr Wendy Brown, the UNE Senior Lecturer who coordinates the Canine and Equine major of the Bachelor of Animal Science degree program, “and it’s expanding. There’s a big demand for expert dog handlers in customs, military, police and corrective services, and attention is now turning to the use of dogs in fields such as wildlife conservation and cancer detection. There’s actually a world-wide shortage of detector dogs, so there will definitely be a role for our graduates in the future.

“We’ve had positive feedback from people in the relevant industries, and they’re keen to employ people with this kind of training – training that hasn’t been available at tertiary level until the introduction of this course.”

Media contact: Dr Wendy Brown on (02) 6773 5125 or Jim Scanlan (UNE Public Relations) on (02) 6773 3049.

UNE Leads Worm Control Program for Sheep Meat Industry

A team of scientists will soon start working with sheep meat producers in NSW and Victoria to develop integrated worm control programs that will lift the limits imposed by worm infection on sheep meat production systems.

Led by the University of include researchers from the Charles Sturt University, and and Pest Authority.

“Worms represent the highest animal health cost,” team, UNE’s Dr Lewis Kahn, lost production rather than sheep and their products has losses due to worms have England region, where sheep barber’s pole worm, worms head every year.”

Supported by Meat & aims to develop regional help to lift sheep meat development of drench

“At the moment, the sheep incidence and severity of Kahn, who is an Associate Environmental and Rural unnecessary drench treatments in the process of reducing reliance on drenches is also important in the context of consumer demands.”

Work will begin this spring on the three-year project, which will focus on the New England, Central West and South West regions of NSW and the North East and Western districts of Victoria. Initially involving nine farms (three of them in the New England region), this number will increase to more than 50 over the course of the project.

“One aim of the project is to develop industry engagement with sheep health advisers and their clients so as to reduce the time it takes to translate research into on-farm adoption,” Dr Kahn said. “In the longer term, broader-scale adoption of the worm control programs will be aided by a delivery network and training materials being established by the Cooperative Research Centre for Sheep Industry Innovation (which is based on the UNE campus in Armidale) as part of the ‘WormBoss’ program developed over the past six years for the Australian wool industry.”



New England, the team will also University of Melbourne, the Central Livestock Health

Australian sheep industry’s said the leader of the project “with most of that cost being in the cost of control. The value of increased considerably, so become greater. In the New are susceptible to infection by cost the industry about \$11 per

Livestock Australia, the project worm control programs that will production while slowing the resistance.

industry is faced with a growing drench resistance,” said Dr Professor in UNE’s School of Science. “And eliminating

Media contact: Dr Lewis Kahn, School of Environmental and Rural Science, UNE (02) 6773 2997 or Jim Scanlan, Public Relations, UNE (02) 6773 3049.

New Precision Agriculture Course to Meet a Growing Need

Australia's first Graduate Certificate in Precision Agriculture program will be offered by the University of New England, commencing in January 2012.

"This study program is the fruit of more than 20 years' experience within the University's Precision Agriculture Research Group, which has worked in the development and application of precision agriculture technologies in a variety of industries – including broadacre cropping, horticulture, viticulture, and livestock systems," said UNE's Dr Mark Trotter, the coordinator of the new Graduate Certificate (Grad Cert Precision Ag) program.

The industry-informed course involves the completion of four semester-long units. The two core units, "Precision Agriculture" and "Introduction to Geographical Information Systems", cover global navigation satellite systems (GNSS) and their application; handling spatial data and the practical use of geographic information systems (GIS); the application of remote sensing to agricultural landscapes; soil, vegetation and yield variability and the sensors used to measure them; livestock tracking and pasture management systems; the economics of precision agriculture; issues associated with the adoption of new technologies.

"Students will get the opportunity to apply their skills through hands-on experience with current and emerging precision agriculture technologies such as EM38 soil sensors, GNSS survey equipment, ground-based active optical sensors, airborne optical sensors, livestock tracking technologies, the 'Pastures from Space' program, and both farm-specific and generic geographical information systems," Dr Trotter said.



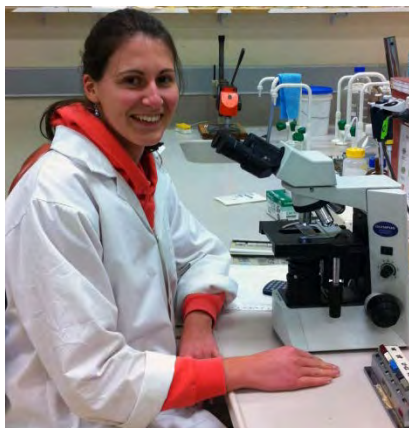
A pool of elective units (from which students will select and complete two) includes: "Business Skills for the Agricultural Consultant", "Remote Sensing and Image Analysis", "Spatial Analysis and Modelling", "Remote Sensing and Surveying", and a research project unit with a precision agriculture focus.

"Precision agriculture is a rapidly developing field of research and commercial activity both in the more traditional plant industries and also increasingly in the livestock sector," Dr Trotter said. "Producers are seeking to increase their production efficiency, and new technologies offer the potential to take advantage of the spatial and temporal variability that occurs across their landscapes and amongst their livestock. This Graduate Certificate program meets a significant need to develop experts in this field; the industry is crying out for people who can assist in the implementation of precision agriculture technologies."

The Grad Cert Precision Ag course is available for study both on and off campus, and can be completed part-time over one or two years.

Inquiries and requests for detailed course information may be directed to Dr Mark Trotter (mtrotter@une.edu.au; 0447 441 841).

Media contact: Dr Mark Trotter on 0447 441 841 or (02) 6773 2465, or Jim Scanlan (UNE Public Relations) on (02) 6773 3049.



Young Animal Scientist Develops New Research Technique

Fiona Fishpool, a research student at the University of New England, has developed a reliable method of measuring an individual grazing animal's intake of dietary supplements.

Fiona has shown that the oral worm drench Fenbendazole, when included in a lick block containing feed supplements, emerges in blood samples as a reliable marker of the amount of the block – and therefore of the supplements – that an animal has eaten.

“We can tell from the blood samples just how much of a block each animal has eaten,” she said. “This has been quite difficult to determine until now.”

“It gives us an opportunity to understand not only how much, but why animals eat supplements,” she continued. “Using this technique, I’ve found that sheep are more driven to look for feed supplements when they have a worm infection.”

Fiona explained that Fenbendazole had a number of advantages over other markers of supplement intake, which had proved difficult to work with: it is non-toxic, can be added to any supplement mixture, does not create aversion to the lick block, and does not degrade in the paddock.

“This is a new tool for researchers exploring feed supplements,” said the principal supervisor of Fiona’s PhD project, Associate Professor Lewis Kahn from UNE’s School of Environment and Rural Science. “It’s a technique – unlike others – that can be used over a long period.”

Fiona’s project has brought her success not only in the field but also in the academy: at a recent conference of the New Zealand Society of Animal Production at Invercargill, NZ, she won the Young Member Award for her paper titled “Fenbendazole as a possible marker of supplement intake in sheep”.

With only six months to go before she completes her PhD thesis, she’s focusing on that while considering her options for a career in research – a career that’s already off to a promising start.

Media contact: Fiona Fishpool on (02) 6773 3240 or Jim Scanlan (UNE Public Relations) on (02) 6773 3049.



Farmers among cream of the crop

Most urban Australians don't realise the value of agricultural workers

{ EMPLOYEE PROFILE }

LOUIS WHITE

LINDSAY Barratt is not your typical winemaker. In fact, he is not the typical person you expect to retire to country life and start working the land.

Barratt was a renal physician (kidney specialist) in Adelaide.

He spent 25 years at the Flinders Medical Centre and was also a director before taking the decision to retire 10 years ago.

"I was looking for something to do after medicine and I stumbled upon this vineyard with my wife about 20 years ago," Barratt says. "We immediately fell in love with it. It was a readymade vineyard and, being based in the Adelaide Hills, it was only a 20 to 30 minute drive from the city. So, when I returned from work each evening I would be out in the vineyards, and spent all my weekends in it too."

Barratt soon realised that he wanted to be working full-time on the vineyard instead of employing people to do the work for him. He also discovered that his passion ran deep and he wanted to become a winemaker in his own right.

"So I retired from medicine in 2001 and then studied a graduate diploma in oenology at the University of Adelaide a year later

and took control of all the wine produced under the Barratt label at the Lobethal winery," he says.

"When I took on the winery, which covered 15 acres (6ha), I didn't realise how much work was involved, but I have to say I never considered the negative aspects of working on a farm.

"It is a lot of hard work and you can be wiped out with one storm, as happened to us a few years ago, but I love living and working here and I have great passion for wine."

Barratt's story will be comforting to the Australian Year of the Farmer organisation, which was established to celebrate the work of the agricultural industry and to establish closer ties between Australia's rural and urban communities.

"We are trying to have a year of celebrations in 2012 to highlight the role that farmers play in keeping the country going," says Geoff Bell, managing director and co-founder of the organisation.

"We would like more people to see and recognise the positive

contribution farmers make to the economy and share how Australia is leading the world in farming techniques and innovation."

There are more than 136,000 farms across the country, which generate in excess of \$405 billion

each year, equating to 27 per cent of the nation's GDP.

Bell, who is also a councillor of the Royal Agricultural Society of NSW, serving as chairman of both the agricultural development committee and the Sydney Showground support group, came up with the idea together with Philip Bruem, who is the chairman, just over five years ago.

"We are not a lobby group and we have no political agenda, we are just trying to tell the story of what farmers are doing and encourage people to consider a career in agriculture," Bell says.

Research conducted by TNS found that only 22 per cent of city dwellers make it to the countryside annually while 69 per cent visit rural Australia less than once a year. Altogether, city people spend less than 3.5 days a year in rural areas, but more than 50 per cent would like to visit the country more often.

"It is important to get the communities in the city and country involved and we have a roadshow with a number of vehicles that will travel around the country combined with 400 events," Bell says.

"It is not just about creating awareness but also we are launching a range of education and careers advice programs to show the benefits of agriculture and

inform schoolchildren.

"By 2050 the worldwide population will have grown from seven billion to 9.3 billion and farmers globally will need to increase productivity by more than 70 per cent in the next 40 years."

The Australian Year of the Farmer will team up with Art4Agriculture to deliver education programs to demonstrate how farmers play a key role in helping sustain the Australian way of life and propel the economy.

More than 9000 primary and secondary schools will participate in a competition where subjects such as visual arts, sciences,

maths, geography, English and media studies will use interactive learning materials to create a short story, speech, poster artwork or digital media project.

There will be two awards, the Cream of the Crop and the Archibull Prize.

"We are also getting support from the Department of Education for agriculture and farming related jobs to be included in the jobs guide for Year 10 students in 2012 across the country," Bell says.

"No industry can offer the range of jobs we have, which include marketing, sales, science, biotechnology, engineering,

agronomy, IT right up to running your own farm."

One person who knows at first hand what farm life offers is Alison McIntosh.

McIntosh lives on a property at Laggan near Crookwell in NSW where she manages a number of professional responsibilities while being actively engaged in the local community.

She is involved in her family's cattle seedstock operation and also has a keen interest in genetics, breeding and marketing.

She spent three years as the national livestock identification system extension and technical

support officer for NSW and before this McIntosh worked for Meat and Livestock Australia in the research and development team as well as in its communications and industry affairs division.

"I think a lot of people just take our food for granted," McIntosh

says. "The average consumer doesn't realise how important agriculture is for our economy."

"I have been on a farm all my life and I have really enjoyed the challenges and lifestyle."

Last year McIntosh established her own Angus stud. She also opened a consultancy business providing specialist services to beef cattle producers, as well as providing training in chemical certification, farm planning and livestock breeding and selection to the broader rural sector.

"The business is going well but we do need more young people coming back to the farms," she points out.

"The average age is about 60 years old where I live and we do need younger people either staying on farms or moving into the agricultural and farming professions to establish careers in this essential sector of the economy."

The Australian Year of the Farmer 2012 campaign should at the very least raise awareness of alternative careers and lifestyles out there for those wanting a change.

Those with any trepidation about such a move should look no further than Lindsay Barratt, a man whose life has been revitalised since leaving the medical profession.

At 70 years of age, Barratt seems to have a lot of energy left in him and doesn't worry about the impending tough years that lie ahead.

"I think the Australian wine industry might struggle for a few years yet, but it is a great industry and a lot of fun," he says.

"It is also expensive, as you are continuing laying out money before you see a return. I have a lot of stock here to sell."

"But to be honest I don't miss medicine at all, and I love the change of lifestyle. I wouldn't change it for the world."

'We would like more people to see and recognise the positive contribution farmers make to the economy'

**GEOFFRELL
AUSTRALIAN YEAR
OF THE FARMER**

Horizon Scholarships

I need your help!

Applications are now open for the Horizon Scholarship which is aimed at attracting our best and brightest to study Agricultural Science at university.

I know that Year 12's have probably finished their exams and started their summer holidays so too late to distribute this information to them.

However, if you know of any students with a commitment to a career in agriculture, who can demonstrate leadership potential and had a solid academic record at high school, I would really appreciate it if you could suggest this scholarship to them.

Please also feel free to forward this email to any of your networks who you think may be interested in the scholarship.

Application forms can be found here – www.rirdc.gov.au/horizon

Any questions please don't hesitate to get in touch.

Kind regards,

Victoria Taylor

Program Coordinator

The Horizon Scholarship

(Formerly known as Investing in Youth)

0417 466 234

PO Box 378

Dickson ACT 2602

More about the Horizon Scholarship can be found here:

<http://www.rirdc.gov.au/horizon>

victoria@flourishcommunication.com.au

<http://www.flourishcommunication.com.au>

2011 LandLearn NSW

Speech Spectacular



Do you know some savvy students who:
Can talk the leg off a timber chair?

...or

Have a passion for ploughing?
Just like the sound of their voice?

The LandLearn Speech Spectacular is a great opportunity for passionate students to have a go at public speaking and the chance for a great experience and prizes in the process.

What is the LandLearn NSW Speech Spectacular?

In its third year, the Speech Spectacular is the flagship public speaking event for LandLearn NSW, the education portal for primary industries in NSW. The Spectacular is free to enter and encourages students in stages 3, 4 and 5 to voice their opinions on some important primary industry issues!

How does it work?

There are two public speaking rounds. Round one calls on students to prepare a two minute response to one of these topics, entered as an MP3 recording, due last day of term 2011:

1. Social media is good for farmers
2. Farmers can't help climate change
3. The environment is what we eat

Round two, top speakers from each category are invited to give another speech on a new topic LIVE at the Dubbo Beef Spectacular in March 2012.

Prizes

The judging panel will consist of representatives from LandLearn NSW, NSW Primary Industries and The Land Newspaper. First prize in each category will receive \$500, runner-up \$250 and Rising Stars \$100.

How to enter?

If you think this might be a great opportunity for your students, visit www.landlearnnsw.org.au to listen to last year's entries, find out more and enter online. Brought to you by: LandLearn NSW, NSW Primary Industries and The Land Newspaper



THE LAND



Department of
Primary Industries



RASF Community Futures Grant

Would \$25,000 help realise your community-transforming idea?

The Royal Agricultural Society Foundation is giving young people the chance to secure up to \$25,000 to deliver a new and innovative rural community project.

Proposals can be for the initiative of your choice. Projects must address a need or issue in your local area, resulting in positive economic and social change for the community. 2011 winner, Tamara Nixon, overheard a community resident say **'Oaklands Community Health & Fitness Centre is the best thing to ever happen to our town'**.

To enter, simply tell us how you would use \$25,000 to execute a project to benefit your local community.

Eligible entrants must be 35 or under on 1 May 2012 and projects must be located in rural or regional NSW.



Apply online at www.rasf.org.au before 15 January 2012

For further information please contact the Royal Agricultural Society Foundation

T: 02 9704 1234 E: foundation@rasf.org.au

Supporting education and community development in country NSW.



SIAs warmly welcomed in South Australia

Adelaide has well and truly welcomed PICSE's national program, the Science Investigation Awards (SIAs).

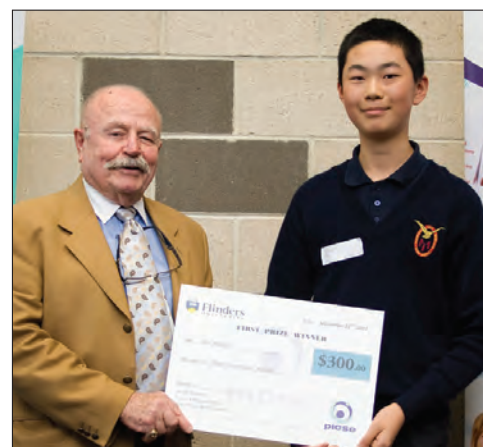
Flinders University joined the PICSE SIA Program last year and piloted the SIAs through several local primary schools. This year the Flinders SIAs were extended into high schools with more than 70 students across years 7-12 entering 46 research projects.

Students came from metropolitan and country schools to present their research in poster format at the University, where they had the opportunity to discuss their projects and tackle questions from a team of roving judges. The team included Dr Paul Willis, Director of the Royal Institute Australia, and various university researchers, as well as industry

representatives from organisations such as the Fisheries Research & Development Corporation (FRDC), National Centre for Ground Water and Training, as well as the Primary Industries and Resources SA.

Flinders University's Faculty of Science and Engineering also hosted a range of science workshops for the students prior to the awards ceremony.

"The awards foster an enthusiasm of science across all year levels by supporting students to plan, investigate and conduct hands-on science experiments on a topic of their choice," PICSE Flinders Science Education Officer Sylvia Toelken said. *"As one year 9 student concluded on their evaluation form; 'It helped me realise that science can be fun and you can learn stuff while having fun.'"*



Bob Pennington presenting the FRDC prize for 1st Place Year 8 to Rory from Norwood Morialta High School



..... From the Director

Relationships are the key!



Rick Rockliff (Tasmanian Alkaloids) awarding First Prize (Year 11/12) to Reuben and Alex, Don College, who commented "We have entered every year since grade 7 back in 2006 and have thoroughly enjoyed the experience each year"

The most important word in our PICSE vocabulary is "Relationships"! Our Science Education Officers (SEOs) build relationships with students, teachers, university academics, industry scientists, national colleagues and local community supporters. These relationships are not built through emails or flyers, but through face to face discussions in classrooms, teacher staffrooms, laboratories and other

workplaces. One of the factors relating to the huge success of the PICSE Science Investigation Awards (SIAs) are the visits to classrooms, during which the SEOs work with the teachers in supporting students in the identification of investigation topics, discussion of scientific method, investigation protocols and the final report. While this is very resource intensive, these personal engagements are the basis of the

sustainability and intrinsic value of the SIA program.

Nationwide, the interest and reach of the SIAs has increased significantly since last year, with SEOs visiting 114 schools (an increase of 41%) and engaging with 2,541 primary and high school students (an increase of 22%). The value of the program is demonstrated by the survey data in which 77% of the students reported that the SIAs were very useful for their class assessment.

The following comments demonstrate again the value of the SIA program:

Student: "This has driven us to study science at UTAS next year where we look forward to learning more about the world we live in."

Teacher: "Great competition and a real credit to the School of Agricultural Science and the science community in this area."

Judge: "A lot of the students valued the idea of telling someone all about their project."

Student: "It helped me realise that science can be fun and you can learn while having fun."

Judge: "A great program for helping excite students about science."

Student: "I think it was great! Fun and enjoyable."

Associate Professor David Russell

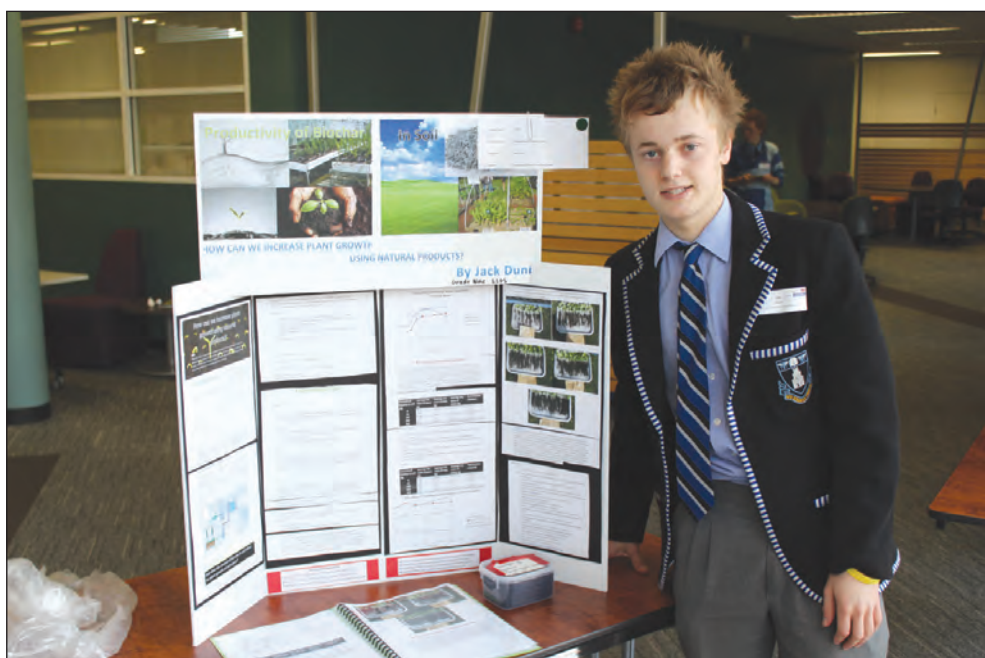


Tasmanian awards program enjoys student and industry support

More than \$1,200 in prize money was up for grabs in the 2011 Tasmanian Science Investigation Awards (SIAs). The Launceston, Burnie and Hobart campuses of UTAS each hosted an awards event, with 550 students from across the state all competing for the prize pool donated by industry partners.

UTAS School of Agricultural Science facilitated the Tasmanian SIAs with the program supported by many industries and community groups, including Tasmanian Women in Agriculture. These groups share a common interest in furthering science education and generating skilled graduates to feed back into science-based industries.

The SIAs are a core activity of PICSE and showcase the independent research of young scientists from years 5-12. Students can compete either individually or as part of a team.



Jack from Launceston Church Grammar School won the Tasmanian Women In Agriculture Best Agricultural Project (Years 7-10)

Winning projects were judged across criteria including good scientific method, clear method and results, excellent presentation, demonstrating an understanding of outcomes and succinct communication with the judges.

The Hobart SIAs enjoyed enthusiastic support from five schools with 95 participating students. Many judges commented on how creative students were in selecting topics and the innovative ways in which they pursued

their investigation process. Professor Holger Meinke, Director of the Tasmanian Institute of Agricultural Research (TIAR), congratulated the students and presented the award-winning entries.



... From the Strategic Development Manager

PICSE to grow science online



Matt Cahill presenting Brydie from Albany Senior High School with the Dow AgroSciences New Zealand Travelling Scholarship for "Excellence in Science"

The Science Investigation Awards (SIAs) are synonymous with the PICSE program. The SIA program is highly regarded by teachers, well supported by students and has cemented a valued place in the school calendar. PICSE Science Education Officers spend face to face time in the classroom supporting the teachers and mentoring students in their science investigation.

I mentioned in the October NETWORK, that PICSE is collaborating with a national agribusiness partner to extend the reach of this program. Dow AgroSciences (DAS) also has a vision. Recognising the student impact and teacher benefit of the SIA program in supporting quality science engagement, DAS and PICSE have embarked on an ambitious project to build an electronic version of the program that will reach into every secondary school in

Australia not currently engaged in SIAs.

The PICSE and DAS support will come in new and innovative ways using available technology with a host of newly developed tools. The new initiative, called *Science for Growth*, will challenge and stimulate students and support teachers of rural and more remote schools in their critical role of making the next generation more science literate.

2012 will see the new program, *Science for Growth*, piloted and evaluated in Queensland and New South Wales, with a national rollout planned for 2013. DAS and PICSE are committed to working alongside the Australian Science Teachers Association, making support programs more accessible, user friendly and, most importantly, fun and relevant for students.

Vic Dobos

PICSE is funded by the Federal Government's Diversity and Structural Adjustment Fund (DEEWR), University of Tasmania, University of Western Australia, University of New England, University of Southern Queensland, University of the Sunshine Coast, Flinders University, Charles Sturt University, Curtin University and the Grains RDC, Cotton RDC, Fisheries RDC, Horticulture Australia Ltd, Cotton CRC, Murray Darling Basin Authority, Dow AgroSciences, Woolworths Ltd and the National Centre for Groundwater Research and Training.

Expression of Interest

Fax or email back to register your interest

Name:.....

Address:.....

.....

Phone:.....

Mobile:.....

Fax:.....

Email.....

Chemical Card Plus

☐ Face to Face workshop

Preferred location:.....

☐ Online Group

☐ Online One

☐ Distance Ed

Other training:

Once we receive this expression of interest we will contact you/send information on your chosen training option

Fax: 02 6884 8862

Email: admin@ruralbiztraining.com.au



RuralBiz Training: Who we are

RuralBiz Training offers good quality, good value training for farmers and rural communities.

Director of RuralBiz Training Kathy Sims, former Rural Financial Counsellor in the Central West is aware of the needs of people in rural communities.

We are part of the national training agenda with our own registered training organisation, Kreate Pty Ltd.

Flexible delivery is our specialty with courses available in interactive online mode, self paced online, distance education and traditional face-to-face workshops.

You can train with us without leaving home, or you can get a small (12 or more) group together and we will come to you.

Our trainers are well-qualified, experienced and live in our rural communities.

Contact: RuralBiz Training

P: 02 6884 8812

F: 02 6884 8862

E: admin@ruralbiztraining.com.au

Suite 8, Level 1

46 Wingewarra Street

PO Box 524

DUBBO NSW 2830



RuralBiz
Training



Chemical Card Plus

Four options

**'Face to Face' Workshop
Online Workshop**

**Self Paced Online
Distance Ed**

New in
2011

www.ruralbiztraining.com.au

Chemical Card Plus

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

If you are applying pesticides or using chemicals in your business you may be liable for a fine or other penalty if you are not accredited. This includes all agricultural chemical users - eg 1080, herbicides, fungicides, insecticides, pour ons, backliners, fumigants and others.

Chemical Card Plus includes additional training elements:

- **NSW OHS Exemption** for on farm use of fumigants in grain silos and rabbit warrens.
- Updated information about **Safe handling of 1080** baits.



Benefits of **Chemical Card Plus** training:

- **Save money** - Lower course costs
- **Less time** away from farm or business
- **Convenient** - complete in your own time at home
- Nationally accredited training at AQF3 level
- Aligns with QA programs; LPA, Cattlecare, Freshcare.....
- Meets the training requirements of the NSW Pesticides Act and APVMA
- Accreditation is valid for 5 years in NSW
- Receive a handy wallet sized plastic card
- Qld ACDC training included on request

Chemical Card Plus

How do you want to complete your chemical training?

GROUP? Choose between

- **'Face-to-Face'** - Join a local workshop run for groups of 12 or more people.
Group organiser's discount available
Initial: \$280pp Refresher: \$190pp
- **Online Group** - Interact in real time with a group and trainer - attend a workshop from your computer.
"I enjoyed the online feature, it is just like being in a group but you get to stay at home"
Initial: \$255pp Refresher: \$165pp



INDIVIDUALLY? Choose between

- **Online One** - Start immediately! Register and pay online for immediate access to online materials. Work at your own pace, at home when it suits you.
Refresher: \$145pp
- **Distance Ed** - Receive a pack of materials to work through at your own pace, at home, at a time that suits you.
Refresher: \$165pp



Other training available:

- **Farm Planning**
- **Understanding Farm Financial Statements**
- **Farm Succession Planning Seminars**
- **Selling Your Grain**
- **QuickChecks**
- **Diploma of Rural Business Management**
- **Diploma of Agriculture**
- **Advanced Diploma of Rural Business Management**
- **Advanced Diploma of Agriculture**

Visit our website www.ruralbiztraining.com.au for more information on these courses.

"Learning is a treasure that follows its owner everywhere" - Chinese proverb

Calf Milk Replacer

VEANAVITE

Advantage

Vitamins & Minerals

23 essential Vitamins, Minerals and Anti-oxidants for maximum health and wellbeing.

Fibosel®

Exposed and activated β-glucans to boost natural self defence.

VEANAVITE ADVANTAGE is a high quality Calf Milk Replacer formulated to meet the nutritional demands of the young calf. A quality blend of spray dried milk powders provide a rich source of protein and energy in a blend fortified with vitamins, minerals and antioxidants. The addition of Fibosel helps boost natural self defence.

Calf Milk Replacer

VEANAVITE

Supacharge

Vitamins & Minerals

23 essential Vitamins, Minerals and Anti-oxidants for maximum health and wellbeing.

Bovatec®

For the control of bovine coccidiosis while improving feed efficiency and weight gains.

Fibosel®

Exposed and activated β-glucans to boost natural self defence.

Organic Acids

Organic acids possessing antimicrobial properties to assist in the control of gut pathogens.

VEANAVITE SUPACHARGE is a premium quality Calf Milk Replacer scientifically formulated for optimum health and growth rates. A quality blend of 100% spray dried milk powders provide a rich source of protein and energy in a blend fortified with vitamins, minerals and antioxidants. Veनावite Supacharge also has added Organic Acids, Bovatec and Fibosel all of which add up to the best possible start for your calves.

Warning: Veनावite Supacharge is Calf specific. Do not feed to horses, dogs, cats or other animals.

Calf Milk Replacer

VEANAVITE

Pro

Vitamins & Minerals

23 essential Vitamins, Minerals and Anti-oxidants for maximum health and wellbeing.

Bovatec®

For the control of bovine coccidiosis while improving feed efficiency and weight gains.

Fibosel®

Exposed and activated β-glucans to boost natural self defence.

Organic Acids

Organic acids possessing antimicrobial properties to assist in the control of gut pathogens.

Betaine

A natural Osmolyte for best performance during periods of heat and stress.

VEANAVITE PRO is a premium quality, high protein Calf Milk Replacer scientifically formulated to support maximum lean muscle growth and neonatal development of the calf. A quality blend of 100% spray dried milk powders provide a rich source of protein and energy in a blend fortified with vitamins, minerals and antioxidants. Veनावite Pro also has added Bovatec, Organic Acids, Fibosel and Betaine and is ideal for Accelerated rearing programs.

Warning: Veनावite Pro is Calf specific. Do not feed to horses, dogs, cats or other animals.

22% Protein
18% Fat



25% Protein
20% Fat



27% Protein
20% Fat



Lamb & Kid Milk Replacer

VEANAVITE

Guardian

Vitamins & Minerals

23 essential Vitamins, Minerals and Anti-oxidants for maximum health and wellbeing.

Probiotic

Protexin multi-strain probiotic balances the digestive system, while improving feed conversion and weight gain.

Fibosel®

Exposed and activated β -glucans to boost natural self defence.

VEANAVITE GUARDIAN is a premium quality, low lactose Milk Replacer formulated to provide optimal nutrition for young lambs and goat kids. A quality blend of spray dried milk powders provide a rich source of protein and energy in a blend fortified with vitamins, highly available organic trace minerals and antioxidants. Veनावite Guardian also has an added Multi-strain Probiotic and Fibosel to boost natural self defense.

26% Protein
24% Fat



Milk Replacer

VEANAVITE

Farmyard

Vitamins & Minerals

23 essential Vitamins, Minerals and Anti-oxidants for maximum health and wellbeing.

Probiotic

Protexin multi-strain probiotic balances the digestive system, while improving feed conversion and weight gain.

Fibosel®

Exposed and activated β -glucans to boost natural self defence.

VEANAVITE FARMYARD is a premium quality Milk Replacer formulated to provide balanced nutrition for a variety of young farm animals. It is suitable for calves, foals, lambs, kid goats, alpaca cria and piglets and as a supplement to the diet of puppies and adult dogs. A quality blend of spray dried milk powders provide a rich source of protein and energy in a blend fortified with vitamins, minerals and antioxidants. Veनावite Farmyard also has an added Multi-strain Probiotic and Fibosel to boost natural self defense. Feed according to the species specific guidelines on the packaging.

26% Protein
22% Fat



Piglet Milk Replacer

VEANAVITE

PiggyPower

Vitamins & Minerals

23 essential Vitamins, Minerals and Anti-oxidants for maximum health and wellbeing.

Fibosel®

Exposed and activated β -glucans to boost natural self defence.

Organic Acids

Organic acids possessing antimicrobial properties to assist in the control of gut pathogens.

Betaine

A natural Osmolyte for best performance during periods of heat and stress.

VEANAVITE PIGGYPower is a premium quality, high protein Piglet Milk Replacer scientifically formulated to maximise lean muscle development and growth potential of modern genotypes. A quality blend of spray dried milk powders have been selected and fortified with vitamins, minerals and antioxidants. Veनावite PiggyPower also has added Fibosel, Organic Acids and Betain providing the best possible start for your piglets. It may be used as supplementation or substitution of sow's milk.

27% Protein
20% Fat



For more information contact: Rivalea Pty Ltd,

Albury Road, Corowa, NSW, 2646, Phone: (02) 6033 8000

Fax: (02) 6033 2916 or visit www.rivalea.com.au

Calling all.....Farmers

Property Management Planning

Online / distance learning – train from home!

Limited Funded places available

An opportunity to set up your own Farm Plan - *Map out what you want your farm to look like in 5, 10, 20 or more years and learn how you can make it a reality and gain a Nationally recognised qualification at the same time.*

Computerised mapping software will be provided and used during the training. Examples of the advantages of computerised mapping:

- ❖ Easy to update
- ❖ Calculate areas & lengths for purchase of fertilisers, seed & fencing material...
- ❖ Maintain details of infrastructure eg underground water pipe join locations

National Units covered	
AHCAGB505A	<i>Develop a whole farm plan</i>
AHCAGB501A	<i>Develop climate risk management strategies</i>
AHCNAR506A	<i>Develop and implement sustainable land use strategies</i>



Having a current Farm Plan is often a prerequisite when applying for CMA incentive funding – check with your local CMA to see what is available.

This training includes six half day online training sessions/virtual workshops, manuals, a digital image of your property (max: \$210 per business) and FarmMap, computerised mapping software.

Availability of funding for a business is decided by your regional office of Department of Education & Communities. Conditions apply for level of funding available.

Visit our website www.ruralbiztraining.com.au for details.

REGISTER EARLY - LIMITED FUNDED PLACES AVAILABLE

(2 people from each business encouraged to register)

Start date will be advised as groups are formed.

FAX OR EMAIL BACK TO REGISTER:

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



Education & Communities

**Green Skills & Energy
Efficient Strategy Funding**

Surname: First Name:

Business Name:

Mailing Address:

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Phone: Fax:

Mobile: Email:

What benefits do you hope to gain from the training?

.....

(Only open to residents of NSW & persons who work in NSW)

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



Meat & Livestock Australia has launched a unique educational tool for use in the classroom.

The **Virtual Farm Visit** features three very different beef and sheep properties – the Kimberley, central west NSW and Gippsland – showcasing the breadth and adaptability of these enterprises.

A suite of video clips, supported by fact sheets, show each farmer talking to the 'visitor' about various aspects of their business. The content is curriculum-aligned and grouped in subject areas for use in the classroom.

The tool has been developed in consultation with teachers and is accompanied by a set of teacher's guides.

The [Virtual Farm Visit](http://www.mla.com.au/virtualfarm) is available on MLA's website – www.mla.com.au/virtualfarm

Getting agriculture into every classroom is a shared goal and **I encourage you to share this resource with your colleagues and to teachers at other schools** who might also find it useful.

Regards
Deborah

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Email: dleake@mla.com.au

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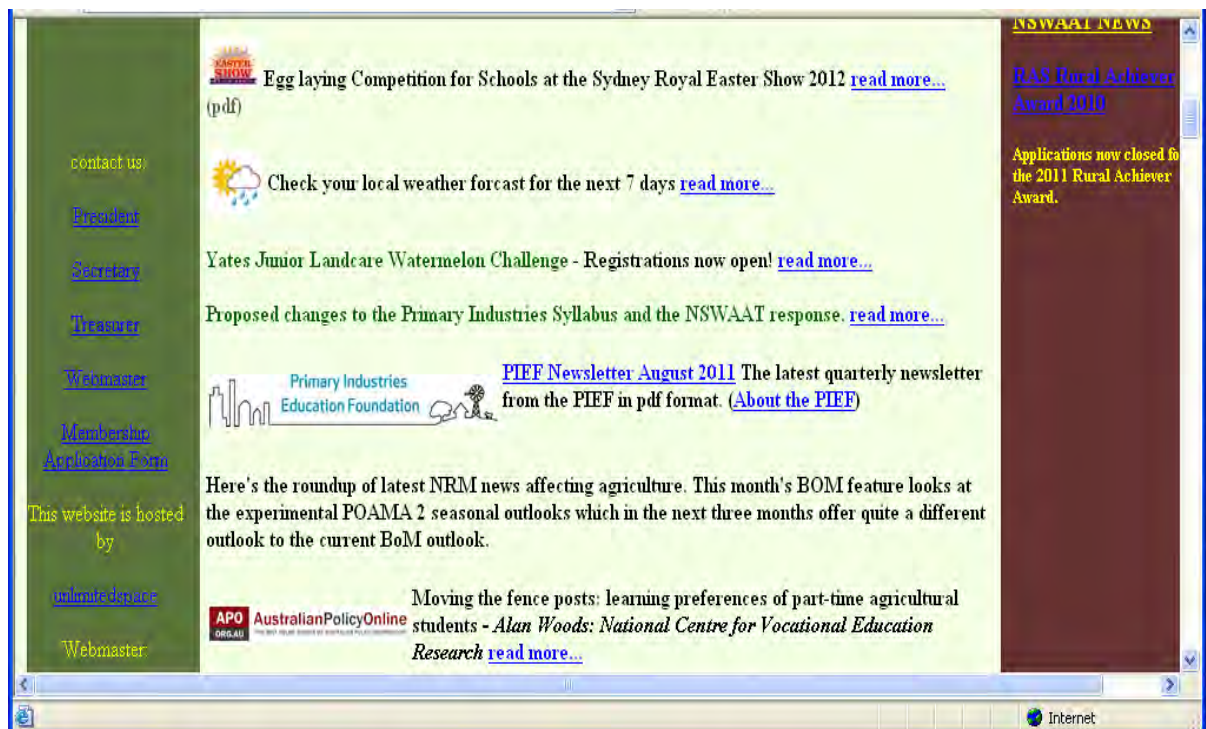
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Career Harvest



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NSW Agriculture Teachers



Will He?
Will He?



Or



Won't He?