



**Professional Development Day for Teachers of
Agriculture in New South Wales
Homebush Bay, Sydney, 26 November 2010**

Final Report

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Preface

The Primary Industries Education Foundation was established to encourage learning about primary industries in Australian schools. There has been ongoing concern regarding the interest in and support for education about agriculture in NSW.

This report is a result of collaboration between the Primary Industries Education Foundation and four major organisations involved in agriculture in NSW, namely Industry & Investment NSW, Royal Agricultural Society of NSW, The Land Newspaper and NSW Farmers' Association. Each of these organisations wishes to support improved learning about agriculture, food and fibre production within the State. One way of doing this is through the professional development of teachers.

The Primary Industries Education Foundation plans to develop methodologies for the professional development for teachers. As a result of the interest of all these organisations it was felt a day clearly focussed on the needs of the curriculum of agriculture teachers would be a good way to pilot a professional development program.

Many of the issues are not new; they are all challenges the teaching profession has faced for many years. However, if we can develop mechanisms for greater support for teachers in schools the outcomes in improved learning about primary industries will flow.

I commend this report to you and thank everyone for their contribution to the success of the professional development day.



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Executive Summary

A Pilot Professional Development Day for Teachers of Agriculture in NSW was held at the Royal Agricultural Society, Sydney Show Ground, Homebush Bay on 26 November 2010.

From this Pilot Program a number of important issues emerged.

- there is a need for industry driven professional development for teachers which directly meet the needs of the curriculum;
- there is goodwill and a desire between government, industry and schools for this to occur;
- to be successful there must be a contribution from each of the stakeholders in-kind or in-cash;
- the greatest cost is incurred by the schools for teacher relief. In case the average cash cost for teacher relief was \$316 per day;
- agriculture teaching can be supported from outside the school by industry based professional development, availability of teaching resources, promotion of industry linkages;
- agriculture teaching can be promoted within the school by cross-curricula teaching, promotion of visit to the school farm/plot by the School Council/P&C/Principal/ School Executive;
- a shortage of well trained teachers of agriculture already exists and this will become worse in the future;
- there is a fear that unless action on a number of fronts is taken the teaching of agriculture will decline in NSW schools.
- opportunities exist for the content of Professional Development Days to be extended through new media to those who did not attend on the day.

Summary of costs	cash	in-kind	total
Organisation/dev/admin	0	3,688	3,688
Promotion	165	0	165
Speakers	680	6,200	6,880
Venue and catering	1,293	1,357	2,650
Teacher relief	12,960	0	12,960
Teacher travel/accomm/leave	11,014	4,200	15,214
Evaluation	230	0	230
Total cost	\$26,342	\$15,445	\$41,787

Acknowledgements

The successful Pilot Professional Development Program could not have been staged without the strong support of the following:

The Hon Steve Whan MP, Minister for Primary Industries, Minister for Emergency Services, and Minister for Rural Affairs;

Dr Richard Sheldrake, Director-General, Industry & Investment NSW and senior staff of Industry & Investment NSW;

Mr Glenn Dudley, President, Royal Agricultural Society of NSW; Mr Peter King, Chief Executive Officer, Royal Agricultural Society of NSW; Mr Bernie O'Sullivan, General Manager - Agricultural Development, Royal Agricultural Society of NSW and Ms Paige Cape, Coordinator - Agricultural Development, Royal Agricultural Society of NSW;

Mr John Dwyer, General Manager, The Land and staff of The Land;

Mr Phil Hurst, President, NSW Agricultural Teachers Association and members of the NSW Agricultural Teachers Association;

Ms Sally Bannerman, NSW Department of Education and Training and staff of NSW Department of Education and Training;

Board Members, Primary Industries Education Foundation and Mr Ben Stockwin, Interim Chief Executive, Primary Industries Education Foundation.

The speakers and their sponsoring organisations who all gave their time at no cost to the event were:

Dr Robin Dobos, Research Scientist, Animal Systems Modelling and Analysis, Industry & Investment NSW and research is funded through CRC Spatial Information, Meat and Livestock Australia and CRC Beef;

Dr Kendra Kerrisk, AMS Research Leader in the FutureDairy Project, Faculty of Veterinary Science, Future Dairy, University of Sydney. FutureDairy is funded by The University of Sydney, Dairy Australia, DeLaval and Industry and Investment NSW;

Ms Jane Swan, Teach of Agriculture, Dapto High School, travel funded by NSW Premiers Travel Award;

Associate Professor Beverley Henry, Principal Research Fellow, Institute for Sustainable Resources, Queensland University of Technology, research funded by Meat and Livestock Australia;

Ms Sheryl Thornthwaite, Teacher of Agriculture, Galston High School.

Service providers were:

Anvil Media who recorded the presentations so that methods for further distribution can be undertaken;

Dr Brian Walsh for administering the surveys, collating and presenting the results and for compiling this report.

Overview

A professional development day for teachers of agriculture in New South Wales was convened by the Primary Industries Education Foundation and held at the RAS headquarters, Homebush Bay, Sydney, on Friday 26 November 2010. The day was supported by the Royal Agricultural Society of NSW, NSW Farmers' Association, Rural Press, and Industry and Investment NSW.

The aim of the day was to:

- provide specialised scientific and other input to assist the teaching of new electives within the amended Higher School Certificate agriculture syllabus;
- use the day as a pilot program to gather feedback from teachers on needs for professional development;
- obtain an accurate idea of the costs and logistics associated with the provision of this type of activity;
- identify ways teaching of agriculture can be further promoted within and outside schools in NSW.

The day was attended by 66 people, comprising 56 teachers and 10 presenters and observers. The observers represented PIEF, RAS and I&INSW.

The program featured presentations by specialists in animal systems modelling, robotic milking technology, organic farming techniques, teaching in the UK and Ireland, methane gas production in ruminant animals, and analysis of a research paper. The presentations were followed by an open forum discussion on ideas for future initiatives by PIEF to support teachers.

The average cash cost of attendance incurred by teachers and schools combined was \$470 per head, and if relief was provided in all cases, this would have risen to about \$532.

The total cost incurred by PIEF and sponsors in organising and providing the day was \$10,813. This consisted of \$2,368 cash costs and \$8,445 in-kind contributions. The overall cost of course provision (cash and in-kind) was \$193 per head.

The open forum revealed shared concerns about the training of future agricultural teachers and the need for ongoing professional development through access to rural industries, organisations, specialists and practical sessions. There is also a need for the development of resources for agriculture teachers, including Smart-Board compatible materials.

The teacher questionnaire indicated that the school council had visited the agriculture plot at significantly less than half of the attendees' schools in the past year. In contrast, principals and school executives visited the plot in a majority of schools. Teachers reported that many cross-curricula opportunities were provided by school farms. The farms are used for a wide range of non-agricultural subjects and areas such as geography, science, HSIE, art and biology.

The evaluation forms for the day indicated that the course met the expectations of most participants and was delivered at about the right pace, the instruction received was of a high standard and the topics covered were useful.

Teachers indicated PIEF can support them in a variety of ways, particularly by providing further training, support materials and contact with industry networks, and by promoting agriculture to students and government.

The Next Steps

Now that the initiative has commenced, it is important to identify the next steps. These include:

- identify a date and time for further professional development for teachers of agriculture in NSW;
- identify resources to organise the above event. It is suggested a similar venue, timing and program be used in 2011;
- examine ways to extend the information delivered at this event to teachers who could not attend. The day was videoed and it is proposed to trial a summary video of one of the talks. It is also proposed to identify ways to accumulate information on each of the talks in a place (probably the Primary Industries Education Foundation website) that is accessible to teachers. It should be noted that emailing Power Point Presentations to participants is not easy or convenient in many cases because of file size;
- examine ways that other professional development programs can be undertaken for teachers in non-agricultural disciplines and in primary schools;
- examine opportunities to run professional development for school teachers in each state and territory, convened by the Primary Industries Education Foundation in association with state-based organisations.

Program

- 8.30am Registration commences
- 9.00am Welcome
Mr Glenn Dudley, President, RAS of NSW
- RAS Education Initiatives
Mr Peter King, Chief Executive, RAS of NSW
- 9.15am Dr Robin Dobos
Research Scientist, Animal Systems Modelling and Analysis
Industry & Investment Armidale NSW
Managing livestock in the 21st century – tools and concepts
- 10.15am Morning tea
- 10.30am Dr Kendra Kerrisk
AMS Research Leader, Faculty of Veterinary Science,
Future Dairy, University of Sydney
Development of robotic milking technology for dairy cows
- 11.30am Ms Jane Swan, Teacher of Agriculture, Dapto High School
*An investigation of organic farming techniques and teaching
in the UK and Ireland*
- 12.15pm Lunch
- 1.00pm Assoc. Prof. Beverley Henry
Principal Research Fellow, Institute for Sustainable
Resources, Queensland University of Technology
Ruminant animals and methane gas production
- 2.00pm Ms Sheryl Thornthwaite, Teacher of Agriculture, Galston
High School
Analysing a research paper
- 3.00pm Afternoon tea
- 3.15pm Open discussion
- Ideas for future initiatives by PIEF to support teachers
- 4.00pm Close

Plenary Session – summary of discussion

Teacher training

- a large number of agriculture teachers will retire soon and there is a problem getting teachers to be agriculture teachers. University training of agriculture teachers needs to be addressed
- Promote the training of agriculture teachers
- Why can't science teachers re-train in agriculture (as they can in some other areas)?
- Industry scholarships for teacher training in agriculture
- A three year agriculture degree is not enough in terms of units to become a teacher, ie there are problems that need to be sorted out
- Lack of training for agriculture teachers at universities
- Re-introduce education as a subject in the fourth year of agriculture at universities

Further Professional Development and networking

- industry presentations on marketing of primary products, to get updates from real producers and processors
- speakers on hard-to-resource areas, eg catchment management, water sharing agreements, Murray Darling Basin
- hands-on practical sessions, eg animal handling
- provide funding for networking days for country teachers
- Run PD days for other teachers (eg Maths, Geog) so they can incorporate agriculture into their subjects
- Run a PD day at Tocal, with hands-on sessions and industry access
- Provide information on sources of funding, and provide networking opportunities in this area
- Provide access to industries, industry organisations and industry experts to maintain currency
- need to be able to link industries to schools
- use on-site visits
- run regionalised workshops for teachers, based on commonality of agricultural industries

Resources

- more DVD's on new technology and update existing DVD's
- more web links on research material
- develop resource packages for P.I. teachers as distinct from agriculture teachers – The Chair indicated PIEF would discuss with the agriculture teachers association, TAFE etc
- promote agriculture to school councils and principals to keep agriculture going
- the PIEF website to include contacts for work placements and a discussion forum for agriculture teachers (perhaps organised by State or region)
- It is essential that resources for primary school teachers are smart-board compatible
- Provide industry contacts for farm visits

Other

- important to help primary school children early on and monitor their progress in agriculture to assist them to pursue agriculture through their time at school
- Rural Youth Club teams are no longer supported at the RAS show
- In the national curriculum it is important that agriculture and P.I. remain as entities and keep being taught in schools
- Provide literacy and numeracy programs with an agricultural flavour
- Promote PIEF to school principals
- essential to incorporate "primary skills", ie "where does food come from?"

Evaluation – summary of feedback forms

	1	2	3	4
Delivery				
1. The course met your aims and expectations		3	13	30
2. The instruction received was of a high standard		1	13	32
Course Content				
3. The course was presented at a level I could understand	1		13	32
4. The topics covered were useful		3	12	31
5. The training materials (if applicable) were clear and helpful		2	15	27

Other comments:

- 2. Technically sound but boring in presentation at times
- 4. elements were useful, some extended too far

General

6. What were the strong points of the course?

- Meeting lots of other Ag teachers
- Learning new information
- Good / Excellent / knowledgeable presenters x6
- Excellent topics
- Quality presenters x2
- Gaining information relevant to electives of the new syllabus
- Livestock in the 21st Century
- Robotic Milking x2
- Gas emissions
- Research Methodology
- Good Resources x4
- Up to date information on research x6
- Great overview to bring it into perspective
- Clarity / Clear information x2
- Good links to syllabus
- Good food and discussions
- Snippets of information
- Overview of research conducted by Dr Robin Dobos, Dr Kendra Kerrick
- Presentation by Sheryl Thornthwaite on Analysis of a Research Paper x3
- Lunch
- Good presentations
- Good range of topics
- Relevant, useful teaching tools
- Excellent presentations and content
- “raising the bar” on the content of the electives
- Well detailed, orderly and in depth info
- Spoke clearly
- Variety of lecturers
- Show them the syllabus and have them stick to it
- Good / relevant industry info x2
- Having presentations from people involved in current research fields
- AMS – Kendra Kerrick
- Livestock management – Dr Robin Dobos
- Livestock & Methane production – Ass Prof Beverley Henry
- Topical for teaching syllabus
- New technology / current or emerging concerns in Ag
- Providing scientific information regarding the electives

- Continue to hold relevant courses to address info (& Provide it) for use in classrooms
- Make it relevant to the senior ag syllabus
- More Australian examples needed
- Spend time brainstorming curriculum ideas – especially for Sydney based schools
- 1st presentation not at appropriate level, others high interest
- More links to syllabus
- Move the PD day around twice a year – Sydney, Queanbeyan, Yanco, Tocal, Dubbo
- New HSC has 3 electives, specifically target them & provide resources
- Course should be held every year
- Breaking it up with a visit to industry or practical session

	Invitation	Newsletter	Word of mouth
10. How did you find out about this event?	15	2	9
Other:			
• internet – Ag Association	2		
• have been involved with PIEF for the last year			
• email	14		
• NSWAAAT flyer via email	6		
• DET regional network			

11. What subject do you teach?	Agriculture:	39
Other:		
• Primary Industries	13	
• Chemistry		
• Biology	3	
• Senior Science	2	
• Junior Science	2	
• Science	12	
• Maths	2	
• Design & Technology	2	
• Chemical trainer for Tocal College		

- 12. Are there any other courses we could provide that you would be interested in?**
- Any “practical” activities relating to Agriculture and Primary Industries
 - Any courses that bring agriculturalists together for improving student outcomes
 - ICT in Ag
 - Ag & Technology
 - Practical activities for Ag students
 - Research into cropping
 - GPS in machinery etc.
 - Anything related to stage 6 Agriculture
 - Stages 4 & 5 Agriculture
 - The role of company Agriculture in Australia
 - Marketing and deregulation of Rural Commodities e.g. land, wheat, milk
 - Animal or plant production which one will become more important in Australian Agriculture
 - Technological training
 - More on other aspects of the electives (HSC Ag) x2
 - Primary industries x3
 - HSC coursework
 - Anything that can be used in the classroom to extend student knowledge is useful
 - Development in Ag research & technology
 - Yes, please advise x2
 - Whole syllabus

- HSC core work
- Plant production technology
- Managing small ag plots
- Crop production
- Visits to robotic dairies etc
- Preparation of livestock for shows
- Experimentation / design in Ag – good for schools
- Alternative production systems – aquaculture, bees etc.
- Visiting innovative farms
- Preparing & exhibiting livestock / sheep / cattle / poultry x2
- Experimentation / assessment in ag in the ag plot
- Honey production in schools
- Junior judging at the show – all the processes involved across all junior judging areas
- Yes, please add me to your database
- Soil science
- Fencing
- Cattle judging
- Teaching HSC biotechnology
- Teaching HSC exam technique
- Farm tours
- Tours to industry facilities
- Skills based activities

Teacher questionnaire (blank)



Promoting the Study of Agriculture in High Schools QUESTIONNAIRE

The Primary Industries Education Foundation aims to encourage learning about Primary Industries in schools which includes agriculture as a specialised subject in the junior and senior secondary school. This brief questionnaire is aimed at finding how this is being done and can be supported within the school.

1. Valuing agricultural studies

- i. Has the School Council visited or been invited to visit the agriculture plot or school farm this year?

- ii. Has the Principal and School Executive been invited or have visited the agriculture plot or school farm this year?

2. Are there any cross-curricular opportunities provided by the school's farm? If so, have these been taken up?

3. How can the Primary Industries Education Foundation assist you as an Agriculture teacher?

Response to teacher questionnaire

1. Valuing agricultural studies

i. Has the School Council visited or been invited to visit the agriculture plot or school farm this year? [Summary of responses: 12 yes; 23 no; 8 other]

- Yes x 4
- Yes – various members of the School Council are well aware of activities occurring on the school farm
- Yes and are booked in for a visit at the start of 2011
- Yes members have attended but not as a specific invitation
- Yes – P & C
- Yes, regarding money to be spent on resale etc
- yes – only because we put in for a trade training centre grant and also to discuss / locate the future purchase of new stock yards
- yes – members of P&C visit informally on occasions. May buy plants, borrow tools for working bees etc.
- yes – year 6 orientation programs
- the P&C had a tour of the school farms 1 month ago
- A number of students on the council are ag students – and it is a popular elective. It is often in school news Because we do lots of projects/get lots of grants to do environmental work under the auspices of agriculture
- school VET audit
- school council has not visited school farm as a group. The chair of the advisory committee (current parent & donated 3 steers) did visit when delivering steers. There has not been a formal invitation to school council.
- don't have a school council. P & C are very active and support ag at the school actively.
- no x 14
- no – not the school council
- no - parents are coming on to the farm often
- No – agriculture not seen as a high profile subject in this very well known and highly regarded independent Sydney school
- not to my knowledge
- no - ??? ag teacher on leave
- no. school council never in the last 16 years
- Neither
- Not this year. Have had visits in the past x 2
- Invited but have not visited
- n/a x 2
- school has no council. P&C have not visited farm but have made a small donation some years ago

ii. Has the Principal and School Executive been invited or have visited the agriculture plot or school farm this year? [Summary of responses: 24 yes; 12 no; 4 other]

- Yes x 6
- Yes, they lead incoming year 6 students to our “taster” ag classes designed to attract new intakes of students each year – but they always wear inappropriate footwear – so do not enter the paddocks
- Yes – the principal is extremely active and interested in all aspects of our commercial operations. He frequently visits the farm and is constantly in negotiations with the operations manager. The two deputy principals show little if any interest in the farm
- Yes – Principal and SED have visited this year
- Yes, many times visited
- Yes – social function, photoshoots, executive meeting, walk around doing a teaching space audit
- Frequent and also shows visitors the farm environment. Recently planted first grape of the vineyard
- Yes – visits regularly and brings visitors to the school onto the farm
- Yes – HT science uses ag farm for science
- Yes – deputy to observe ag club also deputy and headmaster came to Royal Easter show to watch / support boys / cattle

- Yes to the opening of the cattle team shed – no one attended
- Yes, our principal comes to most shows we are involved in as often as possible
- Yes – principal and deputy re rural youth activities – also programs running
- Yes – principal occasionally visits school farm
- Yes – which is fairly unique
- Yes – attended Ag Open Day – reluctant to walk the distance to the Ag farm in the heat (assume this is the main reason they don't visit)
- Daily tours of the ag section by deputies as part of showcasing the school. The principal bring 'dignitaries' across as well regularly.
- Yes they visit on a regular basis, especially DP
- Our school principal is very supportive of agriculture in the school, being from a farm himself and he has visited. The rest of the executive are always welcome but haven't officially been invited and rarely visit.
- He has visited but as he is not Ag trained he shows little interest in the subject
- HT came down just before the Royal Show she came down once last year.
- Has visited on few occasions
- Yes the principal has visited several times
- Principal – yes and only visited due to trade training centre. School exec – not that I am aware of
- Principal – only because a steer from her property was being prepared at school farm. Before this rarely unless a problem
- The deputy has visited once
- The headmaster & school executive visited once. It was as part of a meeting to discuss plans for restructuring the farm facilities – new yards, sheds, fencing etc
- Principal visited farm enroute to staff function on the farm, and to the ex-farm cottage
- No x 4
- No – agriculture not seen as a high profile subject in this very well known and highly regarded independent Sydney school
- No – besides once coming to collect a student to take up to the main office
- Invited on numerous occasions but have not visited
- No, but he's very supportive and cooperative for any new ideas especially connections between our school and the wider community.
- Not this year, however they are kept aware of happenings on the farm
- No one else – invited principal – didn't visit
- No idea
- One executive has been there 20 years and never visited

2. Are there any cross-curricular opportunities provided by the school's farm? If so, have these been taken up? [Summary of responses: 54 yes; 1 no; 8 other]

- Yes – landscape photography. No dig gardens in Technology. Growing herbs in Technology. Water sampling in Biology.
- Link extra curricular projects in science to ag sciences. Science student mandatory projects (stage 5) are being enabled as an option for students to carry out ag investigations. Art/photography – Archibald Art4Ag competition and normal class tasks. Food technology – growing herbs and veggies
- Yes – art dept/geography and maths classes are at various times actively engaged in and on the farm property
- Geography for landscape studies
- Yes – primary school links 1 group / week for term 4
- Links between Ag & science and maths department
- Yes – archaeological dig (in 2007/8), visual arts – animal studies, IO, Special Ed, Construction, Community of Schools – Scarecrow competitions, Primary and Preschool visits.
- Yes, at every opportunity from special needs students from local primary school & technology junior classes who grow their own food and then cook it at the college hospitality facilities.
- Environmental Ed, science
- Yes – show team, steers & sheep

- There is a mandatory agriculture course runs for one term for year 8 students. Also there are crosses between Science & Ag in research studies
- Yes – science, art, HSIE, cattle team all use the school farm as well as community groups who need help with various displays at local & Sydney shows
- Yes – art use the school farm
- Primary schools “community of schools” all feeder primary schools come for at least 1 visit/year
- Special ed use veg gardens for growing food
- Drama sometimes use ag plot / animals
- Food from ag is used in food tech (herbs, veggies, beef etc)
- Rural youth, other faculties using farm
- Hospitality, D&T provide veggies for cooking
- Yes.
- Yes. Not really. Often difficult to achieve in high schools
- Plant prop program runs in partnership with an outside agency – a field studies centre
- Yes – outdoor educational facility is part of the farm. Farm located a long way from the school campus – major logistical problems
- Yes. The geography faculty have been using the bottom end of the school farm to study dryland salinity and its affects on land & vegetation, as well as monitoring water table levels measured with piezometer bores by the local shire council.
- Yes – visits have been organized for Biology and Visual Arts students. Also the primary school attached to senior campus.
- Ag open day – showcases agricultural activities we’ve been involved in, work students have done & what’s happening at Ag Farm – annual event
- Yes – some individual teachers e.g. from art, geography etc
- Visits by international students
- Yes – available. Not often taken up. However are referenced to / used in my classes and discussions with students
- Yes – maths teachers measuring sizes of plants
- Support kids down there all of the time
- Science classes – measuring, observing
- Yes however there is scope to increase this I feel
- Yes, but no
- Yes. With science – plant trials
- HSIE – weather monitoring
- Food tech – herbs
- Yes – science faculty use the greenhouse & collect bugs
- The support unit for integration students
- Farm has aboriginal bush tucker garden which other faculties use at times
- Extra curricular – show team students don’t have to study ag
- Yes, integration of agricultural with food technology
- Green houses in science
- building projects for construction
- produce for kitchens
- yes, the farm facilities e.g. green house are used by Science (Biology)
- yea – with food tech – kitchen gardens
- construction projects for construction classes some small cementing jobs – limited, difficult to organize
- primary school education days
- yes, with food technology
- school’s harvest competition (paddock to plate)
- building & construction has built sheds
- yes – DT in years 7&8
- construction students concrete in the plot
- Year 8 students are rostered onto a farm management program where they assist with maintaining farm facilities and livestock

- Year 7-12 students have opportunity to join show cattle team – currently 10% of school are members
- Any student wanting to complete community service may do so on the farm.
- Art students sometimes go to farm to sketch
- Long distance race (PE) entails running on a small part of the farm
- Yes, not properly but things are in the works
- farm is not used by any other faculty other than geography using Stevenson screen.
- Only with the autism unit in the school where students come and have some lessons in plant production.
- not so far

3. How can the Primary Industries Education Foundation assist you as an Agriculture teacher?

- Provide school related agriculture learning courses ie silage, hay and compost making in schools. How to form networks for agricultural matters with business and the community.
- Keep pressure on politically so “kids know where food comes from” and ag curriculum K-12 is established
- Support projects to take kids out to ag experience/out to community. EG we are training a “kids teaching kids” program funded by an Eco Schools Grant from DECCW where stage 5 ag students will teach/demonstrate sustainable ag with primary schools (4 targeted) as a case/pilot study “outreach” project
- Resources that could be used within the classroom, for example DVD’s/powerpoints on up-to-date happenings in agriculture and PI
- Involvement of organizations such as MLA/Graincorp/Fertiliser Co
- The running of residential training schools for both teachers and students of all ages to expand their lack of knowledge in the role that PI play in Australia
- Publicise young heroes in ag to make it sexy. Promote the range of career opportunities. Career advisors often not committed to ag.
- Useful classroom resources designed to fit curriculum
- Make available case studies that address directly the senior syllabus.
- Listing of school friendly farms
- More info giving sessions and further networking with colleagues across the state (both large and small)
- I am still trying to have a cluster of school in the Blacktown area combine to have a class that runs as a vet subject. Your support would be most welcome.
- Workshops – similar to today’s
- Workshop material online for those who cannot get to the workshop
- Source good & relevant information for both junior and senior agriculture and primary industries.
- Conferences
- Educational support materials eg. Booklets and new electives
- Provide inservices on new technologies affecting agriculture in Australia.
- Provision of materials e.g. suitable research studies.
- Resources
- Promote the above – write a program
- Invite a think tank
- More days like this
- Coordination of the production of up to date audio visual resources
- Pressure governments to keep / increase ag & primary industries teaching in schools and to train new teachers
- Update the ‘competency assessment examples’ on the ‘Go Vet’ website
- Provide an opportunity for a qualified and experienced Primary Industries teacher to develop a comprehensive range of teaching materials / resources for NSW HSC Primary Industries VET teaching.
- By providing more accessible / affordable ways to regain / attain accreditation to teach Primary Industries
- Keep me informed of any further training / information days relevant to agriculture teaching or primary industries teaching
- Ensuring agriculture / primary industries remains in the national curriculum
- Sourcing good teaching resources

- More professional development days (like today)
- The opportunity to network / talk to other Ag teachers and people in the industry (e.g. research & development)
- Resources to use with students - dvd's, pamphlets
- Funding – improve resources at ag farm – technologies
- Travel to see the new technologies
- Increase awareness of importance of agriculture to schools – executives etc.
- Resources\
- Funding
- Research opportunities (e.g. trials on our farm)
- Opportunities for students to see cutting edge technology
- Professional development days, liaising with industry to promote the industry within schools e.g. available properties to visit, resources, support, supply of products (e.g. send stock, equipment, small sizes for small farms)
- Inservice courses such as this one are valuable as it can be difficult for teachers to access personnel involved in agricultural research in their field
- Publishing / circulating material in print or visual form that links to agriculture / primary industries
- Teaching resources: dvds, fact sheets, lesson plans, posters etc
- Support for the plight of agriculture as an elective which may be viewed at a lesser priority in timetabling and teacher allocation.
- Need to promote the importance of agricultural education in schools.
- Supplying resources which are easy to access and use for school kids
- To organize more information days like today to keep teachers up to date. Also to include ?? units to innovative farms
- Need syllabus based resources (dvds, blackline masters)
- HSC summary guide (Excel study guide)
- City based schools have limited access to farms need cheap, easy to get to farms
- Usable classroom resources
- Professional development
- Related to syllabus – PI & Ag
- Locally based / regions
- Discounts sourced by buying as a group
- Days like this are really great
- Provide or develop teaching resources directly related to syllabus outcomes
- Developing resources and organizing speakers, field days which are relevant to the syllabus requirements of both senior and junior ag programs
- Teaching programs – send principal information on the state of agricultural education in NSW
- Resources up to date aimed at students rather than industry especially DVDs would be a great help.
- Teaching resources, information particularly with the syllabus to be up to date with technology.
- Program examples
- Keep providing these opportunities
- Providing teaching resources
- Developing professional development opportunities
- Continue to campaign to have agriculture included in the national curriculum
- Similar as today for other sections of the electives
- Create dvds for different enterprises to a level which suits junior and senior students e.g. potatoes, sweet corn, crayfish aquaculture, oranges, peaches etc, especially incorporating marketing, OHS, technology
- Keep up the good support
- Resources for classes

Schools and organisations attending the day

1	Abercrombie, Andrew	Galston High School
2	Alexander, Danielle	Xavier College Llandilo
3	* Archer, Dr Cameron	Primary Industries Education Foundation
4	Armas, Gonzalo	Henry Kendall High School
5	Baldwin, Shelley	Caroline Chisholm College
6	Bannerman, Sally	Department of Education and Training
7	Blake, Erin	Hurlstone Agricultural High
8	Bryson, Ian	Knox Grammar School
9	Caskey, Hannah	Wee Waa High School
10	Chandler, Megan	Narara Valley High
11	Chirgwin, Carl	Griffith High School
12	Crowley, Gregory	Dubbo College Senior Campus
13	Dagher, Elena	Bossley Park High
14	Diskin, Alison	The Kings School
15	* Dobos, Dr Robin	Industry & Investment NSW
16	Dowsett, Michelle	Blayney High School
17	Evans, Nicole	Bede Polding College
18	Fawbert, Ian	Northholm Grammar School
19	Finlayson, Jemima	Moss Vale High
20	Forsberg, Rob	St Joseph's College
21	Gower, Milton	Macarthur Anglican School
22	* Gregory, Peter	NSW Farmers' Association
23	Harris, Graeme	Farrer Memorial Agricultural High School
24	Harris, Leoni	Frensham College
25	Hawthorn, Colin	Red Bend Catholic College
26	* Henry, Assoc Prof Beverley	Queensland University of Technology
27	Hooke, James	Tocal College
28	Hurst, Philip	Hawkesbury High School
29	Johnston, Karen	James Ruse Agricultural High School
30	Jones, Ken	Blayney High School
31	Jones, Peter	Windsor High School
32	Kelly, Arthur	Camden High School
33	Kelly, Jarrod	Kyogle High School
34	* Kerrisk, Dr Kendra	University of Sydney
35	Kesby, Prudence	St Mary's Collegem
36	Koller, Mykel	Nagle Catholic College Blacktown
37	Laidlaw, John	Mudgee High School
38	* Leake, Deborah	Meat & Livestock Australia
39	Mesiti, Luciano	Plumpton High School
40	McAlpin, Greg	Hurlstone Agricultural High School
41	McKay, Richard	Green Point Christian College
42	Mildwater, Coralie	Marian College Round Corner
43	Mukogo, Tendayi	Hennessy Catholic College Young
44	Murray, Andrew	Cranebrook High School
45	* Newcombe, John	Industry & Investment NSW
46	O'Brien, Craig	Moss Vale High School
47	Paul, Evan	Hawkesbury High School
48	Powell, Travers	Tocal College
49	Randall, David	Richmond High School
50	Rivett, Sally	Pymble Ladies' College
51	Roberts, Gail	James Ruse Agricultural High School
52	Ross-New, Paul	Kingswood High School
53	Saxon, Dani	Cranebrook High School
54	Smith, Jade	Dunedoo Central School
55	* Swan, Jane	Dapto High School
56	* Thornthwaite, Sheryl	Galston High School
57	Trench, Brian	Camden Park Environmental Education Centre
58	Uddin, Jashim	Tuggerah Lakes Secondary College, The Entrance
59	* Walsh, Brian	Primary Industries Education Foundation
60	Watson, Shane	St Columbas High School
61	Wearne, Peter	The King's School
62	West, Bruce	Tocal College
63	Westerhof, Nicolet	Elizabeth Macarthur High School
64	Wilson, Graham	Mudgee High School
65	Woodward, Jennifer	Byron Bay High School
66	Wright, Michael	Murrumbidgee Rural Studies Centre

* presenter/observer

Attendance costs form



Professional Development Day for Agriculture Teachers Sydney Friday 26 November 2010

Attendance costs for individual teachers

Name:

School:

Contact phone number:

email address:

Travel

private car approximate kms:

 engine size: less than 1601cc

1601 to 2600cc

more than 2600cc

(cost will be calculated using ATO rates)

or

other mode of travel, specify, eg plane, train, car hire:

 Total cost: \$(include taxi fares, parking fees etc)

Accommodation and meals

Number of nights away:

Accommodation costs: \$.....

Meal costs: \$.....

Other out-of-pocket expenses: \$.....

Other

Did you take leave to attend this course? Y or N (please circle)

If yes, how many days:

Did your school provide teacher relief? Y or N (please circle)

If yes, cost to the school per day?: \$.....

Comments

.....

.....

.....

.....

Attendance costs for teachers and schools

Teachers were asked to record their costs of attending the day, as well as any costs incurred by the school in releasing them to attend. A summary of these costs is as follows:

51 responded to the teacher costing form.
12 took leave to attend.
41 received teacher relief at any average cost of \$316 for the day.
The average cost of travel, accommodation, meals and OOP expenses was \$216 per head, ranging from \$0 to \$1,077 per head.
The total average cost per head (to teacher and school combined) was \$470 (if relief was provided to all, this would have risen to about \$532 per head).

Comments made by teachers on their cost forms

- plane travel costs variably according to fare availability
- school relief is critical for many teachers to go on professional development training
- teacher relief covered by extras to other school teachers – which is a bit of in-kind stress for other school staff. It is about \$300 for relief teacher to cover normal day load.
- School is very supportive of agriculture. Independent & catholic schools have a separate ag network (the only one currently running). We need to connect!
- Was enrolled, cover was given, but currently away from school on worker's comp
- Was nominated by the New England region (DET), they covered all expenses. I then report to the PI/Ag teachers when I return
- If a day such as this was promoted through the Diocese then it is more likely to be approved for teacher relief. As it stands PD is supported (ie costs incurred are reimbursed as long as funds in budget). Fellow teachers cover classes
- I&I employee from Tocal College. Cost is estimated as attendance is a part of a travel itinerary that allowed attendance
- Great day, thank you
- Currently on LSL. If I had been at school a casual would have been required to cover lessons. This would have cost approx \$350
- attended as part of my work, cost of my day covered by DET, CEC, AIS
- would help if copies of presented materials are given or made available somehow (maybe on-line, emailed to participants). Some will be but how about others?
- cost of cover for relief teachers is a major cost and limits our abilities to attend in general.

Primary Industries Education Foundation
Costing for Professional Development Day for Ag Teachers

Course - development and delivery costs

	Sponsors		PIEF		Total		Notes	
	cash	in-kind	cash	in-kind	cash	in-kind		
Course development								
Professional fees		1,400			0	1,400	1	
Pre course costs								
Promotion (web & fees)			165		165	0	2	
Admin - inquiries, regist, organisation		2,088			0	2,088	1, 3	
Course delivery costs								
Venue and catering	1,293	1,357			1,293	1,357	4	
Speakers - fees/salaries		5,500			0	5,500	5	
Speakers - travel and accommodation		700	680		680	700	6	
Materials, manuals, name tags		200			0	200		
Post course costs								
Admin - certificates, data entry, evaluation			230		230	0	7	
Totals	1,293	11,245	1,075	0	\$2,368	\$11,245		
Grand total						\$13,613		
Attendees (exclud presenters/observers)	56		cost per head		\$42	\$201		
			overall per head		\$243			

Course - attendance costs

	Teachers		Schools		Total		Notes	
	cash	in-kind	cash	in-kind	cash	in-kind		
Travel and accommodation	11,014				11,014	0		
Leave taken (12 days, \$350 per day)		4,200			0	4,200		
Teacher relief			12,960		12,960	0		
Totals	11,014	4,200	12,960	0	\$23,974	\$4,200		
Grand total						\$28,174		
			cost per head		\$470	\$82	8	
			overall per head		\$552			

Notes

- PIEF Chair course development and admin, est 35 hours, split 50/50 between development and admin, nominally costed at approx internal I&I rate for Prof Officer Gr4, \$80 per hour
- Web, and media editing services
- Clerical Officer 16 hours at \$43 per hour
- In-kind is difference between RAS's internal cost (\$1,293) and its external rate for this service (\$2,650)
- Estimated speaker fees (3 speakers at \$1,500 per day, 2 at \$500 per day)
- In-kind estimate (\$700) for those speakers who met their own costs without reimbursement
- 4 hours clerical officer at \$30 per hour, 1 hour professional fee at \$110 per hour
- Course attendance costs are based on 51 respondents for this form

Media

The following media release and press coverage of the day are attached:

- media release by Steve Whan, Minister for Primary Industries, 24 November 2010
- coverage in *The Land*, 2 December 2010
- coverage in *Agriculture Today*, 2 December 2010
- coverage in *The Land*, 23 December 2010
- coverage in the *Yass Tribune*, 1 December 2010.



Minister Steve Whan
Minister for Primary Industries
Minister for Emergency Services
Minister for Rural Affairs

MEDIA RELEASE

Teaching teachers about modern agriculture

24 November 2010

Government and industry have joined forces to create a professional development program to improve the knowledge of teachers about modern agriculture, Minister for Primary Industries, Steve Whan, said today.

A pilot professional development day is to be held at Sydney Showground on 26 November to assist teachers of new electives in the amended Higher School Certificate agriculture syllabus.

In 2011 the program will be extended to include primary school teachers and teachers of related subjects, such as food technology.

“The aim of the Primary Industries Development Program is to reinvigorate interest in primary industries and in particular agriculture, by demonstrating that it is a valuable and high-tech industry operating at the cutting-edge of science and technology,” Minister Whan said.

“This great new initiative is designed to bring agriculture back into the forefront of education by showing teachers that agriculture is vital to our future prosperity.”

Mr Whan said farming has changed significantly over the years and today’s teachers need to know how modern agriculture is adapting to continue feeding and clothing us whilst protecting the environment.

“Teachers attending the pilot professional development day will learn from some of Australia’s leading agricultural researchers how cutting-edge technology is being used to efficiently produce high quality food and fibre on our doorstep,” he said.

“They will also learn about the increasing importance of primary industries to the NSW economy and Australia’s export income.

“I congratulate Industry & Investment NSW, Royal Agricultural Society of NSW, Agricultural Publishers, NSW Farmers Association and the Primary Industries Education Foundation (PIEF) for developing this important professional development program.”

Mr Whan said the Primary Industries Professional Development Program was initiated by the PIEF to overcome waning interest in agriculture and primary industries education.

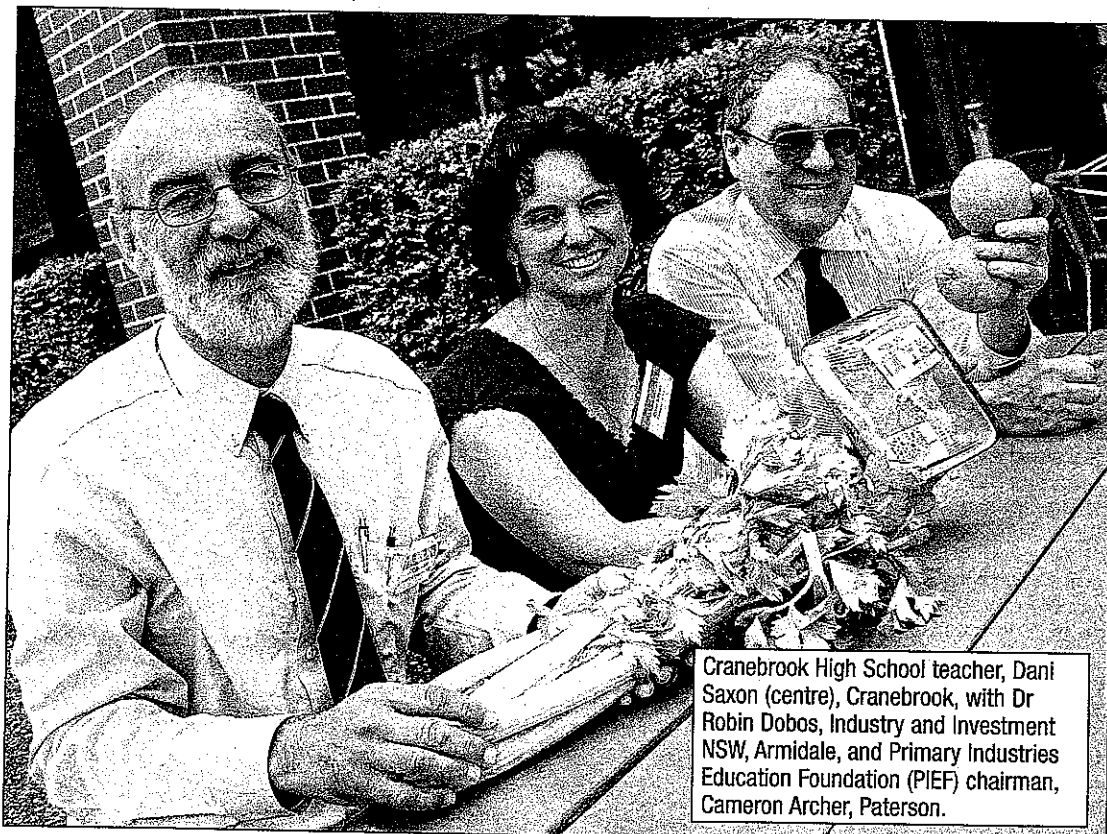
“This professional development program is the first event convened by the newly formed PIEF, a national not-for-profit company set up with the support of the primary industries sector, educators and government,” Mr Whan said.

“It has been developed with guidance from the Department of Education and Training and is supported by NSW Agriculture Teachers Association.”

MEDIA CONTACT:

Garth Montgomery
Tom Braz, I&I NSW

9228 3800 or 0408 864 851
0428 256 596



Cranebrook High School teacher, Dani Saxon (centre), Cranebrook, with Dr Robin Dobos, Industry and Investment NSW, Armidale, and Primary Industries Education Foundation (PIEF) chairman, Cameron Archer, Paterson.

Technology in spotlight

THE chance to learn about new technologies in the agriculture industry was a key reason Cranebrook High School teacher, Dani Saxon, Cranebrook, wanted to attend the professional development day at Sydney Showground last week.

The changing HSC agriculture syllabus has shifted the focus to include more on new technologies, a move Mrs Saxon supported but also said was difficult for teachers at times.

"It gives us and our students a more realistic context of the industry," she said.

Mrs Saxon said professional development days, such as Friday, were important in providing industry linkage, and were also an opportunity to meet with other agriculture teachers and share ideas.

Planning for ag's future

By KATANA SMITH

BOOKS were dusted off and notebooks replaced farm equipment last week, as 65 of the State's agriculture teachers seized the opportunity to learn about the latest developments in their field.

The professional development day was convened by the Primary Industries Education Foundation (PIEF), with the support of the

new electives in the amended Higher School Certificate agriculture syllabus, hear from key speakers and meet with colleagues from across the State.

PIEF chairman, Cameron Archer, Paterson, was a driver behind the project and said he was overwhelmed by the response.

While the pilot program was expected to attract teachers from the Sydney Basin, they travelled from as far away as Griffith and Kyogle.

positive, with teachers keen for future programs.

"We focused on topics relevant to curriculum and people were impressed by the quality of the speakers," he said.

One of the presentations, led by Dr Robin Dobos, a research scientist with animal systems modelling and analysis for I and I Armidale, was entitled "Managing livestock in the 21st century - tools and concepts" and shared with teachers information on precision livestock farming and technological advancements.

Another, by Dapto High School agriculture teacher, Jane Swan, focused on organic farming techniques and teaching in the UK.

Royal Agricultural Society of NSW general manager of agricultural development, Bernie Sullivan, said the focus would be on further training for agriculture teachers and the possibility of training days to encourage the incorporation of agriculture-related content into other high school studies.

"It's shown there's a real need there," Mr Sullivan said.

"We were taken aback with the level of interest from agriculture teachers across the State."

Minister for Primary Industries, Steve Whan, said he hoped the day would "reinvigorate interest in primary industries and agriculture".

"This great new initiative is designed to bring agriculture back into the forefront of education by showing teachers that agriculture is vital to our future prosperity," he said.

Mr Whan said farming had changed significantly through the years and teachers needed to be aware of how it was adapting.

Organisers will now review the sustainability of the program, looking at direct and indirect costs associated with the workshop to help determine future funding sources.

Dr Archer said a survey of participants had shown that just to get teachers there and replacements in their classrooms, the average cost was \$470 a person, before the costs of the workshop itself.

"It's shown there's a real need there ... We were taken aback with the level of interest from agriculture teachers across the State"

- Bernie Sullivan, Royal Agricultural Society of NSW

Royal Agricultural Society of NSW, NSW Farmers Association, Industry and Investment NSW (I and I) and Rural Press as a pilot to develop a sustainable business model for teacher professional development.

It provided a chance for teachers to find out about the latest developments in the industry and help with

"It suggested there was a real need for further learning by existing agriculture teachers," he said.

PIEF is a newly-formed, national not-for-profit set up with the support of the primary industries sector, education and government, and Dr Archer said the feedback from participants of its first event was

Fifty teachers in pilot to learn about agriculture



Minister's message

Steve Whan
Minister for Primary Industries

THE NSW Government and industry have joined forces to create a professional development program to improve the knowledge of teachers about modern agriculture.

A pilot professional development day was held last Friday in Sydney to assist around 50 teachers of new electives in the amended Higher School Certificate agriculture syllabus. In 2011 the program will be expanded to include primary

school teachers and teachers of related subjects, such as food technology.

The aim of the Primary Industries Development Program is to reinvigorate interest in primary industries and in particular agriculture, by demonstrating that it is a valuable and high-tech industry operating at the cutting-edge of science and technology.

This great new initiative is designed to bring agriculture back into the forefront of education by showing teachers that agriculture is vital to our future prosperity.

Farming has changed significantly over the years and today's teachers need to know how modern agriculture is adapting to continue feeding and

clothing us while protecting the environment.

I congratulate Industry and Investment NSW, Royal Agricultural Society of NSW, Agricultural Publishers, NSW Farmers Association and the Primary Industries Education Foundation for developing this important professional development program.

Teachers make grade on agriculture

By **KATANA SMITH**

AGRICULTURE teachers from across the State gave their thumbs up at the recent professional development day in Sydney.

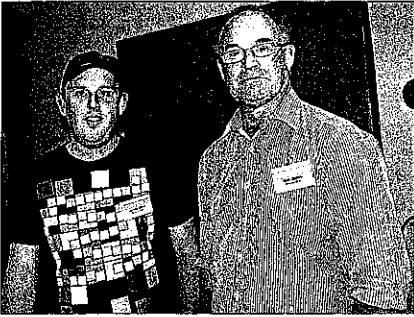
Organised by the Primary Industries Education Foundation, the day brought teachers together to teach them about developments in the

industry as well as support them in changes to the Higher School Certificate syllabus.

While it was a pilot program and expected to attract Sydney Basin teachers, organisers were overwhelmed by the response from teachers across much of the State.

Work is now being undertaken by organisers to make it a sustainable professional development program for agriculture teachers.

RIGHT: Jarrod Kelly, Kyogle High, and Ken Jones, Blayney High.



LEFT: Richard McKay, Green Point Christian College, and James Hooke, Tocol College.



LEFT: Shelley Baldwin, Caroline Chisolm College, Glenmore Park, and Mykel Koller, Nagle College, Bankstown.



RIGHT: Brian Walsh, Primary Industries Education Foundation, Paterson, and Mike Wright, Murrumbidgee Rural Studies Centre, Yanco.



Jade Smith, Dunedoo Central, and Prue Kesby, St Marys College, Gunnedah.



Leonie Harris, Frensham, Mittagong, and Peter Wearne, The King's School, Parramatta.



Sally Rivett, Pymble Ladies College, Sydney, with Gail Robert and Karen Johnston, both of James Ruse Agricultural High School, Merrylands.



BELOW: Megan Chandler, Narara Valley High, and Bruce West, Tocol College, Paterson.



LEFT: Nicole Evans, Bede Polding College, Bligh Park, and Deborah Leak, Meat and Livestock Australia, Sydney.

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"They will also learn about the increasing importance of primary industries to the NSW economy and Australia's export income.