

# NSW Association of Agriculture Teachers



## WINTER 2019

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### NAAE 2020 CONFERENCE

We look forward to welcoming you to Yanco in January 2020 for the annual NAAE Conference.

The small township of Yanco is situated 8km south of Leeton and was the starting point for development of the Murrumbidgee Irrigation Area (MIA). The establishment of a residential State High School at Yanco in 1922 was the product of several important developments in NSW education and agriculture. In 1900, the pastoralist Samuel McCaughey purchased North Yanco station which was to become Yanco Agricultural High School. After 90 years, Yanco Agricultural High School continues to provide a fully academic and practical public education with an emphasis on agriculture for any student within NSW.

The school has developed the Uroly Murray Grey and McCaughey Limousin cattle studs and the McCaughey White Suffolk sheep stud. The school's highly successful show stock team prepares and exhibits cattle at regional, state and interstate shows and continues to win praise and trophies for equine activities and cattle preparation, display and handling.

For more information and registration [www.naae2020.com.au/](http://www.naae2020.com.au/)

The cost for attendance to this 5 day Conference is \$600 per person including GST.

If you wish to attend the Dinner only, the cost is \$100 per person including GST.

For those attending the full 5 day Conference – we require a \$200 deposit paid by Friday 2 August 2019.  
All outstanding payments are due Friday 18 October 2019.

**Step 1.** [Click here](#) to fill out the registration form.

**Step 2.** Make your payment/s via Direct Deposit using the banking details on the registration form.

If you require an invoice, this can be provided to you via email upon request.

If you have any questions about the registration and payment process, please send us a message via the contact form below.

## Itinerary

### Sunday 12 January

Day 1 Yanco (TBC)

1.00pm – 3.00pm	<p>Welcome!</p> <p>Delegates arrive at Yanco Agricultural High School (YAHS)</p> <p>Delegates collect their welcome pack</p> <p>Pick people up from Griffith/ Narrandera and Wagga Airports/ Train Stations</p>
3.00pm	Kayaking along the Murrumbidgee River (YAHS)
6.00pm	Tour of YAHS
7.30pm	Local Food and Beverage Delights whilst Meeting and Greeting

### Monday 13 January

Day 2 Yanco (TBC)

7.00am – 8.00am	Breakfast
8.00am – 9.00am	Delegates Arrive to Central Meeting Point
9.00am – 10.45am	<p>Conference Introductions</p> <ul style="list-style-type: none"> <li>• Leeton Mayor</li> <li>• Murrumbidgee Irrigation</li> <li>• IREC</li> <li>• Keynote Speaker</li> </ul>
10.45am – 11.00am	Morning Tea and split into groups
11.00am – 1.00pm	<p>Group A – Yanco Ag Institute Tour (Rice Trials)</p> <p>Group B – World Skills Challenge (YAHS Equine Centre)</p>
1.00pm – 1.30pm	Lunch at YAHS
1.30pm – 3.30pm	Group A – World Skills Challenge (YAHS Equine Centre)

Group B – Yanco Ag Institute Tour (Rice Trials)

3.30pm – 4.30pm Afternoon Tea whilst at State Meetings

4.30pm – 6.30pm Relax Options

- Leeton Shopping
- Pool / Swimming
- River Walk

7.00pm – 11.00pm YAHS Dining

Shorthorn BBQ Dinner and Barellan Beer Drinks

Shorthorn and Barellan Beer Guest Speakers

### Tuesday 14 January

Day 3 East and West Tours (TBC)

7.00am – 7.45am	Breakfast
Option 1: EAST TOUR	
8.30am – 9.30am	Southern Cotton Tour (Whitton)
10.00am – 10.45am	McFarlane Farming Tour (Yenda) Morning Tea on Bus
11.00am – 12.00pm	Casella Wines Water Works (Yenda)
12.15pm – 1.15pm	Lunch @ Yenda Hotel (Drinks at own cost) Casella Family Brands Presentation
1.30pm – 3.00pm	Aquna Murray Cod (Bilbul)
3.00pm – 3.15pm	Afternoon Tea @ De Bortoli Wines (Bilbul)
3.30pm – 4.30pm	De Bortoli Wines Tour (Bilbul)
Option 2: WEST TOUR	
8.30am – 9.15am	Burge's Beds in Bays (Coleambally)
9.45am – 10.15am	Irrigated Hay Production (Coleambally) Morning Tea on Bus
10.45am – 11.45am	Wiseman's Organics (Coleambally)
12.00pm – 1.00pm	Lunch @ Brolga Hotel, Coleambally (Drinks at Own Cost) Coleambally Irrigation Presentation



1.15pm – 2.00pm	Witham Irrigation Layout (Coleambally)
2.45pm – 4.00pm	Southern Cotton Tour (Whitton) Afternoon Tea Provided
5.00pm – 6.30pm	Murrumbidgee Regional High School Griffith Site Ag Farm Workshops

- Intro
- Succulents
- Kubota Hay Making
- Pasture Renovation
- Big Machines
- A Steggles Show
- Pig Crackle and Show
- Irrigation Techniques

7.00pm – 9.00pm	Pasta Dinner @ Calabria Family Wines
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9.00pm – 10.00pm	Travel Back to YAHS
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## Wednesday 15 January

Day 4 Yanco/Leeton (TBC)

7.30am – 8.15am	Breakfast
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8.30am – 1.30pm	Local Bus Tours
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Buses will rotate between the following to assist with management:

- Pacific Fresh Citrus (Leeton)
- Webster's Walnuts (Leeton)
- Tastes of Leeton (Leeton)
- SunRice (Leeton)
- JBS Swift Feedlot (Yanco)

1.30pm – 2.30pm	Lunch @ Yanco Hotel (Drinks at own expense)
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2.45pm – 4.30pm	NAAE Biennial General Meeting @ YAHS
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- State Reports
- Election on New Bearers
- 2022 Conference Discussion

4.30pm – 5.45pm	Conference Dinner Preparations (Formal Attire Required)
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6.00pm – 6.30pm	Travel to Billenbah on the Bidgee (Yanco)
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6.30pm – midnight	Conference Dinner, Guest Speaker and Presentations @ Billenbah on the Bidgee
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## Thursday 16 January

Day 5 Yanco/Leeton (TBC)

8.00am – 9.00am	Breakfast and Vacate
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9.00am – 11.00am	Deliver people to various Airports and Train Stations
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## #THEBIGDRY

### SOME GOOD NEWS FOR SCHOOLS STILL STRUGGLING THROUGH

On your behalf NSWAAAT has contacted several drought support organisations to chase up possible assistance for school ag farms and for ag students in areas still struggling through #thebigdry .

To see how bad things still are, refer to the map showing the current extent of the drought in NSW at [www.edis.dpi.nsw.gov.au](http://www.edis.dpi.nsw.gov.au) .

Availability and affordability of stockfeed and equipment for schools' livestock has been raised as an issue, and there are a few suggestions:

- Register with Rural Aid for one-off community assistance. Download an application form at [www.ruralaid.org.au/community-assistance](http://www.ruralaid.org.au/community-assistance) and complete on behalf of your school.
- Depending on your locality and situation, you may be able to access hay or other stockfeed through Aussie Helpers, who have depots at Gunnedah and (just setting up) at Dubbo. If interested, you could email Brian Egan with a request and details (including contact name, school, area, school livestock needing stockfeed, plus any other relevant info) at [admin@aussiehelpers.org.au](mailto:admin@aussiehelpers.org.au) . The website is [www.aussiehelpers.org.au](http://www.aussiehelpers.org.au) and contact number 1300 665232.
- Schools needing help with ag equipment or getting to their local or major shows with their show team could register for a small request for equipment (eg boots or shirts for a student from a struggling family) with



GIVTT. Register in the name of the P&C or the Ag teacher on behalf of the school at <http://www.givtt.or.au>. GIVTT are happy to help out with costs to parents so that ag and the students can stay involved.

- For any schools' primary producer families needing assistance on an individual farm basis, you could encourage them to lodge an application with Drought Angels at [www.droughtangels.org.au](http://www.droughtangels.org.au). Stockfeed is not available here for schools.
- Students' families may also like to approach other drought assistance services, through details on the NSW DPI DroughtHub site <https://www.dpi.nsw.gov.au/climate-and-emergencies/drougthub>.

Any new sources of likely drought assistance or contact details which come through to us will be posted as updates on the NSWAAAT Facebook page.

For any questions, suggestions or feedback, please email Belinda Haigh [belinda.haigh@det.nsw.edu.au](mailto:belinda.haigh@det.nsw.edu.au)



Royal Agricultural Society of NSW

## AgVision

AgVision is a leading agricultural careers expo

Dedicated to supporting and informing year 9-11 students and their educators of the range of careers available in agriculture, science, technologies and agribusiness, through a series of hands-on workshops led by industry experts

Wednesday 7 August 2019

Sydney Showground,  
Sydney Olympic Park



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## WHY TEACH AG?

The new 'Why Teach Ag?' Video is now available on the NSWAAAT Youtube channel..



Check it out at <https://www.youtube.com/watch?v=L39m3XxIT0>

## RURAL AND REMOTE AGRICULTURE SUPPORT

As a teacher, teaching Agriculture in a rural and/or isolated school, it can be very difficult. There is usually only one Ag teacher per school, and schools are located far apart. There is a lack of Agriculture trained teachers available across the state and many science and PE teachers are filling the roles to keep agriculture alive in these schools. As a result, the team at Rural and Distance Ed (Bathurst) have put in place extra support systems to help rural Ag teachers stay in touch with others in similar schools, with similar resources.

The Rural and Remote Agriculture Support Program (RRASP) has been active for the past 9 months, slowly building a community of Ag teachers living and working in these communities. The program was initiated by the Rural and Distance Education team and is managed by Sam Jarrett from Mount View High School.

RRASP offers monthly online meetings with other rural teachers discussing relevant issues and upcoming events, a Google Team Drive to share resources and information and a Group Chat site for quick questions and answers.

There are TPL opportunities for networking in rural areas and up to date information weekly on TPL opportunities run by DoE, NESA, DPI, SACEC and Universities. Finally, there is email, phone and private VC support every Thursday/Friday for rural and isolated Ag teachers who may have questions about resources, farm management or assessments. You may want someone to work with on setting up Stage 6 assessment schedules or writing new assessment tasks, maybe you are new to teaching agriculture and need to know what compliance needs to be covered for the farm.

If you are a rural or isolated Ag teacher interested in joining RRASP or want to find out more, please contact Sam Jarrett at: [samantha.mcauliffe1@det.nsw.edu.au](mailto:samantha.mcauliffe1@det.nsw.edu.au)

## WOOLMARK ONLINE

The Woolmark Learning Centre provides a self-directed online learning opportunity for both teachers and students across a range of entry levels. The innovative digital approach incorporates a range of interactive learning experiences to facilitate an understanding and appreciation of wool from source to end product. There are two courses currently available.

The Wool Introductory Course introduces the wool supply chain, from farm to fashion. By completing the short online course, users will have gained knowledge of the origins, benefits and manufacturing processes of wool.

Take a tour of the Wool Introductory Course at intro [www.woolmarklearningcentre.com/](http://www.woolmarklearningcentre.com/)

The Wool Appreciation Course delivers design students, trade and retail stakeholders foundational knowledge about the wool supply chain. It is delivered through 15 interactive learning modules. Students can complete the course at their own pace through a process of self-directed learning.

The modules included in the course include:

1. What is wool?
2. Introduction to wool
3. Why wool?
4. Wool production
5. Manufacturing wool yarn
6. Wool yarns
7. Manufacturing wool knits
8. Manufacturing woven fabric
9. Dyeing
10. Finishing
11. Merino innovations
12. Product quality during manufacture
13. Maintaining product quality during use
14. Quality assurance
15. The Woolmark brand

NOTE: Upon completing the online Wool Appreciation Course the learner receives a Credly badge, which can be displayed on their digital professional portfolio, such as LinkedIn.

The Woolmark Learning Centre badges recognise a fundamental knowledge and understanding of the wool fibre, and the myriad of processes that make up the global wool supply chain.

Explore the online Wool Appreciation Course at [woolmarklearningcentre.com](http://www.woolmarklearningcentre.com)

# Sydney Royal Easter Show

## 2019 School Competitions Results

Congratulations to all school's who exhibited at the 2019 Sydney Royal Easter Show. Some of our high achievers include:

**Purebred Grand Champion Steer & Carcase** Toll Cattle & St John's College Dubbo, NSW

**Champion Trade Steer / Heifer** Calrossy Anglican School, Tamworth, NSW

**Schools District Exhibits Display Competition** Lake Illawarra High School, NSW

**Schools Wether Production Class** West Wyalong High School, NSW

**School Produce Competition Champions**

**Class 150 + 152** Marsden Park Public School

**Class 154** St Mary Mackillop College

**Class 151 + 153** St Columba's Catholic College

**Class 155** Tomaree High School

**National Honey Show Champion School Exhibit** Chiffley College, Bidwill, NSW

**Most Successful School Commercial Pig Competition** Hurlstone Agricultural High School, Glenfield

**Most Successful School Steggles Sydney Royal Meat Bird Pairs Competition** Caroline Chisholm College, Glenmore Park, NSW

**Most Successful Exhibitor School Egg Laying Competition** Abbotsleigh Senior School Agriculture Club, Wahroonga, NSW

**Champion School Poultry Exhibit** Tuggerah Lakes Secondary College, Berkeley Vale, NSW

**Champion Giant Pumpkin – Primary** St Catherine of Siena Primary School, Prestons, NSW

**Champion Giant Pumpkin – Secondary** Picton High School, Picton, NSW

**Meat & Dual Purpose School Interbreed Competition Grand Champion** Monkitee Braidwood, NSW

**Most Successful School Meat & Dual Purpose School Interbreed Competition** Peel High School, NSW

### Are you a Blue Ribbon School?

Bring agriculture into your classroom and find hands-on learning experiences for your students as a competitor in the Sydney Royal School Competitions.

The 2019 School Competitions are open to primary and secondary school students from all over New South Wales and end with a big day out at the Sydney Royal Easter Show.

[FIND OUT MORE](#)

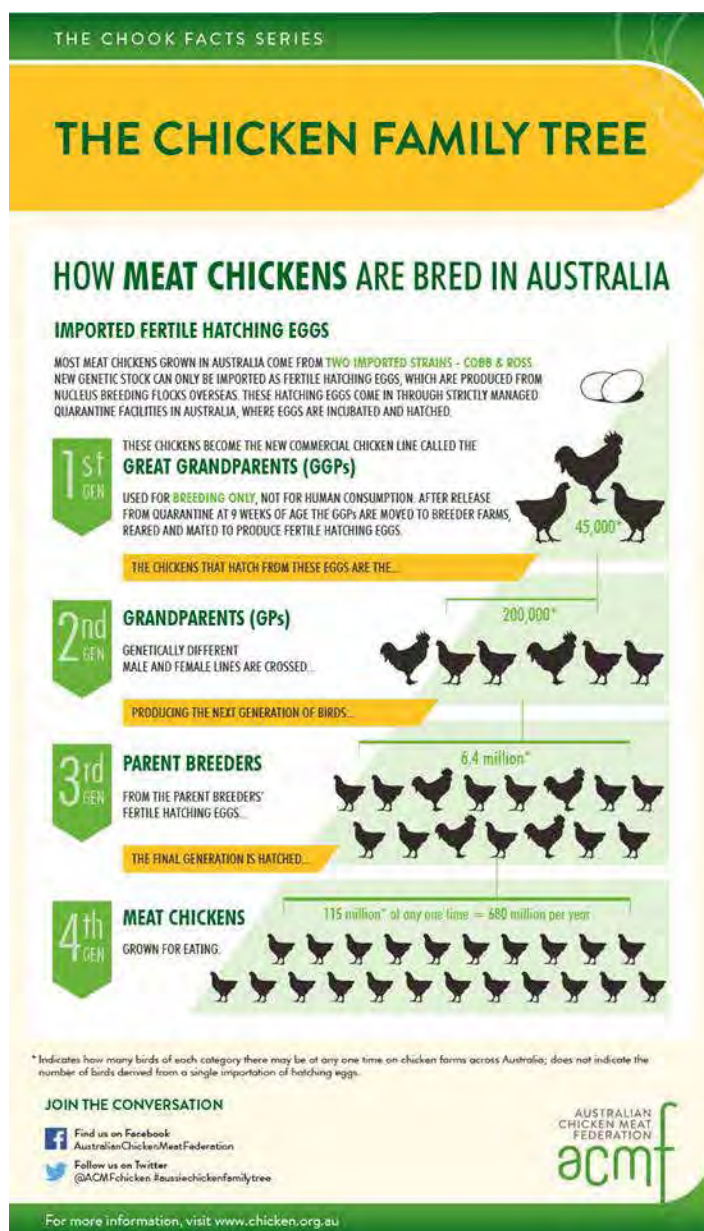


Royal Agricultural Society of NSW

## CHICKEN MEAT

Like the Australian Chicken Meat Federation Facebook page to access infographic on the industry

<https://www.facebook.com/AustralianChickenMeatFederation/>





# FLAT OUT FARMING

NSWAAT Conference – Central West Forbes.

On 4th - 8th January 2019 we held the bi-annual NSWAAT conference in Forbes. Despite the drought the conference was a success due to the dedicated committee members which consisted of Georgie Price, Rachel Eagles, Damian Byrnes (Forbes High School), Col Hawthorn, Susan Earl, Laura Tandy (Red Bend Catholic College) and Anne Earney (Condobolin High School).

Conferences like this are more affordable for delegates with sponsorship. This year we were lucky enough to have the following sponsors:

Gold: Kubota

Silver: NSW DPI

Bronze: Gallagher, PIEFA / Career Harvest

In kind: DPI, Gallagher, AWI, Forbes Shire Council

## Highlights

### Watermelon Farm

- Process of growing watermelons on a large scale - from start to finish.
- Problems they face and the benefits of their production system.
- We saw the end products and how they are packaged ready for the supermarkets.



### Pengilly's Shearing shed. AWI, Jemalong Wool, Biowaste

- A guided tour of Pengilly's new shearing shed which contains all the new designs in handling sheep and wool. The shed cost over \$1 million dollars to build.
- Pengilly's also run a very successful lucerne and prime lamb production system which last year produced over 180,000 small bales of lucerne as well as 000's of large bales.
- They also turn over a thousand of prime lambs and grow thousands of acres of cereals incorporating Biowaste in their pasture and cropping systems
- Ben Watts talked about AWI and the Merino Wether Challenge in Dubbo.



### Gundamain Feedlot

- We heard about how Gundamain operates.
- Bus tour of the pens, shelter, water and feed set up.
- Looked at the technology used for the daily running of how cattle are cared for at Gundamain.



### Eureka Roses

- We looked at how roses are propagated, cared for and sold at different stages.
- Hot house set up - irrigation



### Moxey's Dairy

- Drove into Moxey's farm viewing maize being grown for silage.
- We had a chat about how Moxey's is owned and operated.
- High-tech dairy enterprise milking 6000 cows three times per day using two milking parlours one rotary and one herringbone.
- All cows are fed in house with silage grown on farm.
- Currently building their own power station which will use bio-waste from the dairy to supply all the farm's energy needs.
- Moxey's recirculates water to clean out pens, waste

goes into a paddock which is turned for 21 days then spread onto paddocks.

- Data collected from each cow

#### **Matt and John Duff Summer cropping operations**

- Looked at growing cotton
- Discussed technologies they use for all their enterprises
- Crop rotations.
- Water allocations
- Discussed crops grown throughout the year and animal enterprises.



#### **Evolution Mining Cowal Gold Operation**

- Tour of Lake Cowal mine site
- Environmental education centre.

#### **Manna Mountain Wiradjuri Cultural Heritage site visit.**

- Local indigenous site at Manna Mount, where tour guide highlighted the importance of the indigenous culture and heritage in the local area



#### **Jemalong citrus visit**

- Discussed size of farm
- Water allocation

#### **Jemalong Irrigation Scheme - Irrigation in the 21st Century**

- The Jemalong Irrigation Scheme has installed digital technology into the control system which delivers

40000 megalitres to over 96,000 hectares of farming land surrounding the Lachlan River.

#### **Central West Livestock Exchange**

- Tour of the 3rd largest stock selling centre in NSW
- Separate complexes for cattle, sheep and pigs
- Low stress stock handling
- Animal welfare

#### **Forbes High School Farm Visit**

- Quick tour of the facilities at Forbes High School
- Animal enterprises - Chickens, cattle, sheep - discussing what programs we do and why, look at equipment and facilities for these
- Plant enterprises - vegetables, lucerne, oats, wheat - discussing what programs we do and why, look at equipment and facilities for these
- Storage sheds, sheep and cattle yards, tools and equipment.

#### **Auswest seeds - trial information and tour**

- Tour of Auswest seeds shed
- Talk to agronomist about trials conducted and how they can be implemented in a school setting, get results from trials that can be shared between delegates.
- Watch and learn about seed cleaning
- New varieties coming out
- Local business started by West Family



#### **Super Bee Honey Factory**

- Look at how the factory operates, labelling, processing,
- Information on honey production in Australia
- Marketing

#### **Rat Breeding Facility**

- Rat breeding - gestation,
- Cages rats are kept in
- Cleaning
- Market

#### **Gallagher**

- New fencing equipment and handlers.
- Demo on fencing.





# SAVE THE DATE

## NAAE National Conference

### 'Just Add Water'

**12-16th Jan 2020**  
**Yanco NSW**

**All Current NSWAAAT Members will get a \$50 incentive to attend**



Like Us on Facebook

#### Wool Junior Judging - Steve Chester

- Steve demonstrates how to class wool and explains terminology used in junior judging in relation to Wool.
- Discusses what to look for in a fleece (use of top and noil, colour, staple strength, crimp, etc) to complete the judging sheets correctly.

#### Kubota

- Kubota representative to discuss what Kubota has to offer, support for schools.
- Kubota on display – tractor, mowers,



#### Junior Judging workshop vegetables - Dave Herbert

- Practical workshop on how to judge vegetables (what to look for, say etc) and what to teach students to help them answer for show competitions.

#### Animal Nutrition - Landmark - Courtney Lloyd

- Courtney is a specialist in animal nutrition. She has an excellent Powerpoint presentation (teacher resource) detailing the 5 freedoms, rising plane of nutrition and pasture management for optimum animal growth.



#### Stage 5 ag new syllabus - Sally Bannerman

- New syllabus coming out soon.

#### Drones, sensor probes - Ben Watts

- Technology in Agriculture where and how it can be used in schools
- Rules and regulations
- Cost
- Difference in Drones - purposes





# Teacher Professional Development Workshops



Royal Agricultural Society of NSW



**Knowing & Growing: Agriculture and Food**

This new professional development is designed to provide support to Stage 4 and 5 Agriculture and Technology Mandatory teachers through training and provision of resources developed for the new Technology Syllabus. This 3 hour NESA accredited event will be run in multiple locations across NSW to provide opportunities for Sydney and regional teachers to attend.



**Transforming Milk into Camembert**

Stages 4-6 teachers are invited to a 6 hour NESA accredited training day with a focus on the Dairy industry. This workshop focuses on the process of transforming primary produce into value-added consumer products with an understanding of the chemical and biological changes that take place during the cheese making process.

For further information and assistance with these events and other programs from the RAS contact the Education team

W: [www.rasnsw.com.au/education](http://www.rasnsw.com.au/education) E: [education@rasnsw.com.au](mailto:education@rasnsw.com.au) P: 02 9704 1147



## DPI

- Yabby unit



## Animals in Schools & Biosecurity

- Sally Bannerman to discuss Animals in schools - record keeping, any up to date info.
- Discussion and support to new teachers.
- Talk about meeting compliance with biosecurity in schools and with LPA. MLA



## Conference dinner Eat Your Greens Eugowra.

- Guest speaker Chris Groves Vice President of the NSW Farmers Association
- President's speech
- Thank you to all our sponsors
- Delegates hit the dance floor with Michael Green playing.



On behalf of the committee we would like to thank the sponsors, farmers, presenters, local business', local hotels and other food venues, the Plainsman Motel, guest speakers, Mel Sinclair and Gerad from Cenwest Tours, Luciano Mesiti and Graham Quintel and anyone who contributed in any way. We hope everyone who came learnt some new things and networked with other Ag teachers.

Georgie Price (Committee member of Flat Out Farming 2019)



# Flat Out Farming





## CAMEMBERT WORKSHOP

Transforming Milk into Camembert Workshop at Farrer Memorial Agricultural High School

Wednesday, 20 November 2019 9:00 AM - 3:00 PM



Register at

<https://www.myras.org.au/Registration/emc00/PublicSignIn.aspx?&SessionID=fe7fe6fh2fb9fg6&Lang=01>

## FOLLOWING THE THREAD

Cotton Australia has a new resource for Technology Mandatory classes. 'Following the thread' developed by Greg Mills and Angela Colliver from FutureGen Education, aims to help teachers and students in secondary schools investigate how cotton is produced in managed environments and source information and resources about how the characteristics and properties of cotton and cottonseed determine how these products can be used.



Using the 'Solution Fluency' students develop knowledge and understandings about how cotton is grown, produced and processed in managed environments. Students also investigate and explain how both cotton and cottonseed oil have certain characteristics and properties that determine how they can be used.

Using 'design and production skills' students design either a cotton muslin bag or an infused cottonseed oil with a

detailed label design that educates consumers about how it was produced.

The resource book includes two possible projects for students to design solutions for, a step-by-step learning sequence for teachers to follow or adapt, a design folio for students to use and document their project ideas, and three assessment rubrics to make it easy for teachers to assess and report on what the students know and can do.

Find it in the 'Cotton Classroom' <https://cottonaustralia.com.au/cotton-classroom/lessons-and-units>

## SCIENCE WEEK

Contributed by Angela Colliver, Manager, Future Gen Education

National Science Week in schools—get involved!  
10–18 August 2019

[www.scienceweek.net.au](http://www.scienceweek.net.au)

Each year, the Australian Science Teachers Association (ASTA) chooses a topical theme for schools to inspire and support them in their annual celebration of National Science Week. The 2019 theme, 'Destination Moon: more missions, more science', was chosen not only to celebrate the 50th anniversary of the Apollo 11 mission that landed the first two people on the Moon, but also to inspire teachers and their students about space science in general, and especially with the recent establishment of the Australian Space Agency.

The theme focuses on:

- how scientists, engineers, designers, mathematicians, flight directors, software experts, aerospace technicians and the technologies they used made the NASA Apollo 11 mission a success;
- the space technologies and designs that have made more missions into space possible;
- the space industry capabilities being envisioned and prototyped today, that will inevitably fulfil humanity's ambitions of returning to the Moon and other destinations in our solar system.

### Teacher resource book

To help schools celebrate the 2019 National Science Week school theme, Angela Colliver has supported ASTA to develop a digital resource book of ideas. *Destination Moon: more missions, more science: A resource book of ideas for National Science Week 2019* which provides learning activities to support teacher and student involvement. Teachers can use these activities to plan, publicise, provoke, stimulate, support and inspire their National Science Week festivities.

Have you thought about agriculture classes investigating what types of food sources have already been produced in space during National Science Week?

Did you know that the first food grown and harvested in space—a crop of red lettuce—has been eaten by astronauts aboard the International Space Station. The lettuce was



grown for 15 months with a system called Veg-01, which uses red, blue, and green LED lights to grow plants in a small space.

China made claims earlier this year that it had spouted seeds on the Moon and NASA is currently exploring techniques to grow food in space.

Imagine food technology classes investigating meals in space as the job of some NASA chefs is to create and prepare delicious menus, then work out how they can be stored, transported and eaten in space.

Classes might investigate the huge variety of foods which are preserved in many different ways: plastic or foil pouches, cans, freeze-dried, semi dried etc. A popular meal, freeze dried prawn cocktail, is served in a plastic pouch and to reconstitute the meal water is added through a syringe. The astronaut waits for the food to soak up the water and then the meal is ready for eating.

Classes could investigate dried foods and rehydrate them. Then, students design a menu using only dried foods and describe how they could be rehydrated and served. The resource book is complemented by a National Science Week student journal that can be downloaded and printed. It is intended for older students to record their ideas: from defining the problems posed in the suggested activities to

debriefing the solutions they devise.

A timeline of Australia's history in space also complements the resource book. It tells the story of Australia's involvement in space from the earliest exploits at the Woomera testing range in South Australia through to the establishment of Australia's Space Agency.

The resource book, student journal and timeline are digital resources that are freely available to view and download from the ASTA website ([www.asta.edu.au](http://www.asta.edu.au)).

## KNOWING GROWING

### [Tech Mandatory regional workshops - Knowing Growing](#)

Knowing & Growing is a 3 hour NESA accredited teacher professional development workshop touring regional NSW from June-September. Targeted at stage 4 and 5 Agriculture and Technology Mandatory teachers, participants will receive training and resources designed to enhance the quality of agricultural education in Australia. Knowing & Growing is proudly presented by the NSW Department of Primary Industries, the Primary Industries Education Foundation of Australia and the Royal Agricultural Society of NSW.



Cost: \$50 per person  
Tickets on sale and venue details: [www.stickytickets.com.au/knowninggrowing](http://www.stickytickets.com.au/knowninggrowing)

Dates and locations:

Wagga Wagga – 30 July 2019

Yanco – 31 July 2019

Tumut – 1 August 2019

Wollongbar – 13 August 2019

Grafton – 14 August 2019

Kempsey – 15 August 2019

Dubbo – 27 August 2019

Forbes – 28 August 2019

Orange – 29 August 2019

Narooma – 10 September 2019

Vincentia - TBC

This event is designed to provide support to Stage 4 and 5 Agriculture and Technology Mandatory teachers through training and provision of resources developed for the new Technology Mandatory syllabus being implemented in NSW schools out in 2019. This event will be run after school hours (4-7pm) in multiple locations across the state to provide opportunities for regional teachers to attend.

NESA accredited: Completing the Knowing & Growing: Technology Mandatory teacher professional development will contribute 3 hours of NSW Education Standards Authority (NESA) Registered PD addressing 2.6.2 and 3.2.2 from the Australian Professional Standards for Teachers towards maintaining Proficient Teacher Accreditation in NSW.

## NSW DPI

NSW Department of Primary Industries  
**SCHOOLS PROGRAM**



### 1. New Teaching resources

- Careers in primary industries - Synthetic biologist: Dr Hugh Goold talks about what it means to a synthetic biologist and his work with the Yeast 2.0 project. [https://youtu.be/TYRrvT\\_64X4](https://youtu.be/TYRrvT_64X4)
- Numeralla free range egg farm 360 video: Numeralla

is operated by the CB Alexander Foundation and is located on the northern side of Tocal. Come with Manager Pat Gallagher to see how the farm operates. [https://www.youtube.com/watch?v=7MnGH7U1oMA&list=PLCw\\_zxSFv4qdluVThRWpM6R39KFqro5BA&index=5](https://www.youtube.com/watch?v=7MnGH7U1oMA&list=PLCw_zxSFv4qdluVThRWpM6R39KFqro5BA&index=5)

### 2. Tocal College Open Days - October 4 & 11, 2019

An opportunity to visit Tocal and experience first hand all that it can offer students who are eager for a rewarding career in agriculture, agribusiness or horse breeding and training. More details <https://www.tocal.nsw.edu.au/future-students/college-open-days>

### 3. Teacher professional development

NESA accreditation for Tocal VET courses

[Safe tractor operation and maintenance](#)

This course for small area farmers and rural employees covers the safe operation of tractors with and without attachments and basic maintenance.

Cost: From \$630 weekdays, or \$745 weekend depending on location. GST-free.

Future dates:

- Tocal College, Paterson (near Maitland) 25th Jun 2019
- Tocal College, Paterson (near Maitland) 18th Jul 2019
- Tocal College, Paterson (near Maitland) 27th Aug 2019

This course will contribute 14 hours of NSW Education Standards Authority (NESA) Registered PD addressing Standard Descriptors 4.4.2, 6.2.2, 6.4.2 and 7.2.2 from the Australian Professional Standards for Teachers towards maintaining Proficient Teacher Accreditation in NSW.

SMARTtrain® chemical application (Level 3) online  
An online course aimed at people who use chemicals in their workplace and will help you safely apply, transport and store chemicals using best practice methods whilst meeting legislative requirements.

Cost: \$320 GST-free

This course will contribute 14 hours of NSW Education Standards Authority (NESA) Registered PD addressing Standard Descriptors 4.4.2, 6.2.2, 6.4.2 and 7.2.2 from the Australian Professional Standards for Teachers towards maintaining Proficient Teacher Accreditation in NSW.

[SMARTtrain® Chemical application reaccreditation \(Level 3\) online](#)

This online course is for participants with immediate computer skills, reliable internet access and a valid email address. Candidates must have previously completed a Level 3 chemical accreditation and supply a copy of a



current chemical accreditation card on enrolment.  
Cost: \$250 GST-free.

This course will contribute 7 hours of NSW Education Standards Authority (NESA) Registered PD addressing Standard Descriptors 4.4.2, 6.2.2, 6.4.2 and 7.2.2 from the Australian Professional Standards for Teachers towards maintaining Proficient Teacher Accreditation in NSW.

## Industry news

- Weekly commodity report: <https://www.dpi.nsw.gov.au/agriculture/commodity-report>
- Drought package announced - see attachment for more details

### NSW BUDGET: MORE SUPPORT FOR FARMERS, ECONOMIC STIMULUS FOR LOCAL COMMUNITIES

The NSW Government is continuing to support regional communities, businesses and workers experiencing the flow-on effects of the drought through a new regional economic stimulus package.

During a visit to Coolamon in the State's southwest today, Premier Gladys Berejiklian announced the upcoming State Budget would include \$355 million to extend emergency drought support for farmers and funding to fast track investment in regional infrastructure.

The funding brings the NSW Government's investment in drought support to more than \$1.8 billion.

Ms Berejiklian said the package will fund many critical town water projects as well as other shovel-ready infrastructure projects that will stimulate local economies.

"The impact of this drought has spread quickly off farm and is now being felt by businesses and households in towns and cities across regional NSW," Ms Berejiklian said. "When farmers can't contract tradies and other workers, there is a flow on effect felt throughout local businesses such as cafes and local stores. This funding package will support these rural communities in their time of need." Examples of shovel ready projects that could be funded by the stimulus package include regional airport upgrades, activation of industrial lands and CBD revitalisation projects.

Ms Berejiklian was joined in Coolamon by Deputy Premier John Barilaro, Treasurer Dominic Perrottet and Minister for Agriculture Adam Marshall.

Mr Barilaro said the NSW Government was continuing to stand shoulder to shoulder with farmers and their communities battling the drought.

"The lack of rain on farm is having a devastating flow on effect in regional businesses," Mr Barilaro said. "Every dollar spent by farmers at their local store helps keep someone employed in that business and a family in town. We recognise that in order to keep businesses open

and jobs in town, the Government needs to fast track our investment in local infrastructure."

Mr Perrottet said the package would boost water security for local communities and provide support for farmers and their local communities.

"The best drought package for regional NSW is rain, but until the skies open we will stand by communities that are doing it tough," Mr Perrottet said.

"We will always back our farmers and rural communities as they continue to deal with this terrible drought."

Mr Marshall said the assistance would allow farmers to cut the cost of farming fees and charges, continue to use transport subsidies and would provide funding for emergency water carting.

"Our farmers are doing it incredibly tough and that's why we're directing additional funds to help reduce cost of living pressures, drought-proof properties and transport stock and fodder," Mr Marshall said.

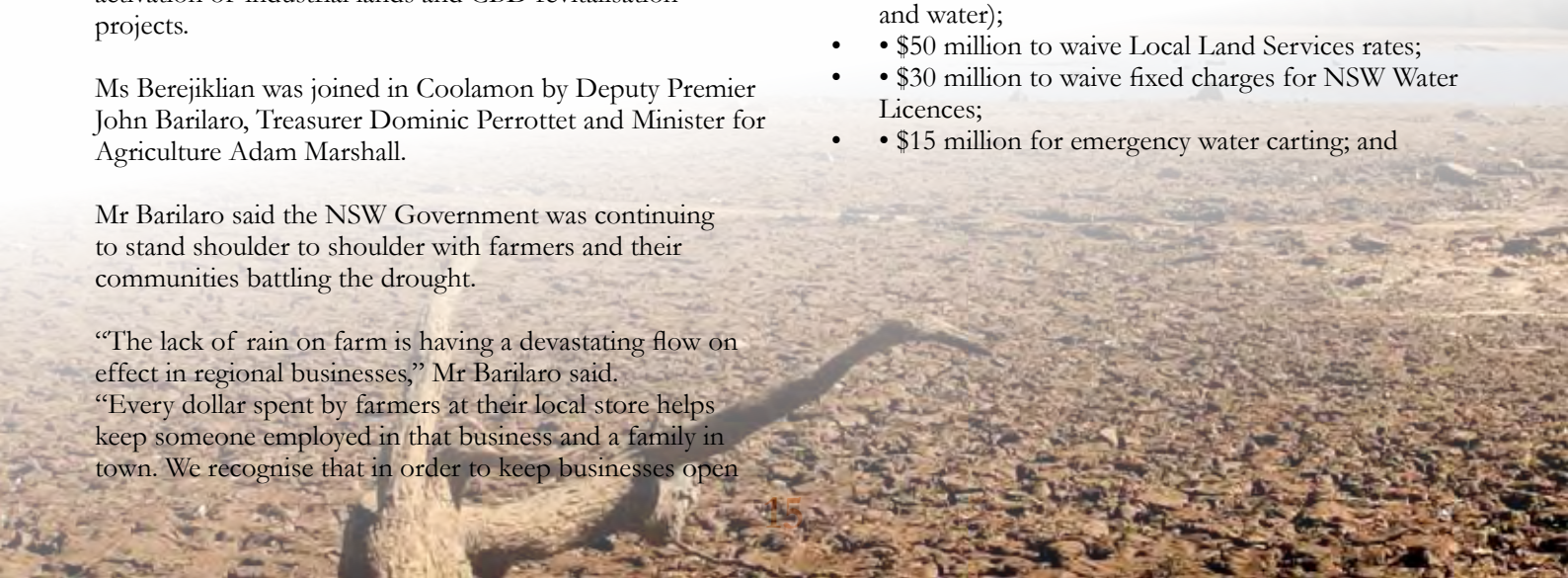
"While what is needed most is simply more rainfall I'm confident this package will help alleviate the burden associated with one of the worst droughts in living memory."

Under today's announcement, \$170 million has been reserved for a special purpose Drought Infrastructure Package, including:

- Up to \$120 million to fast track identified major infrastructure projects;
- \$30 million on new groundwater supply for Dubbo;
- \$8.2 million construction of second water storage at Nyngan
- \$2.2 million to augment bore water supply at Coonabarabran;
- \$2 million for Albert Priest Channel critical maintenance (Nyngan and Cobar); and
- \$1.97 million towards the Coolamon Industrial Estate development.

An additional \$185 million in Budget funding will go towards on-farm drought support measures, including:

- \$70 million for transport subsidies (stock, fodder and water);
- \$50 million to waive Local Land Services rates;
- \$30 million to waive fixed charges for NSW Water Licences;
- \$15 million for emergency water carting; and



- \$10 million to waive interest charges for Farm Innovation Fund loans.

## AQUACULTURE

Contributed by David Giblin

### Aquaculture at Chifley College, Bidwill Campus

As part of their studies of Aquaculture, year 12 students of Marine Studies at Chifley College, Bidwill Campus have built their own aquaponics unit (combining aquaculture and hydroponics).

The unit comprises a 10,000 litre fish tank made from a recovered rainwater tank; three grow beds made from old spa's that have been recovered from the side of the road;



and an IBC being used as a sump tank. The spa's have been raised on frames to achieve the desired height and to allow gravity flow of water back to the sump tank.

One of the grow beds has been retained as an aquatic pond where different aquatic plants are grown and propagated; while the other two have been set up as hydroponic beds using expanded clay as the growing media. These beds have been planted out with leaf crops including lettuce and endive as a first experimental crop. All of the grow beds have been netted to exclude our resident white ibis.

We have used recycled concrete gravel on the base of each grow bed, which acts as the media for bacteria growth in the "biological filter". The gravel consisted of concrete,

brick and tile that has been crushed to a size of 20 mm. It was extremely cheap but had to be washed before it could be included in the system.

A submersible pump circulates water throughout the system by pumping water from the sump tank to the main fish pond. Gravity then moves the water from the fish pond to the grow beds and then returns it to the sump tank. The only powered movement of water is from the sump tank to the fish pond. A major issue was trying to match the input and output of water in the sump tank. It was easier to ensure that the pump was fitted with a float switch that



turns the pump off if the water level of the sump tank drops too low. Overall, the pump moves around 10,000 litres every two hours.

We originally decided to use Jade Perch (*Scortum barcoo*, also commonly called Barcoo Grunter) as the fish species in the pond. As a school we were able to source the fish from a wholesaler, Ausyfish Pty Ltd, at a much cheaper cost then purchasing through an aquarium store. We purchased 50 fish at a discounted rate of \$1.65 per fish plus shipping. The fish were shipped by courier and delivered overnight. Unfortunately, the perch don't seem to have taken to the cooler water. Because we are located in Western Sydney we can expect the water temperature to drop to around 10oC or lower in winter. We have recently switched to Koi Carp, which have a far greater tolerance to the colder water.

The whole unit cost around \$2,500 to create and we have been generously supported with a sustainability grant of \$1700 from Blacktown City Council. Most of the construction was completed during Term 4 of 2018 with finishing touches completed during Term 1 of 2019. Our students have also created their own YouTube video that gives a more detailed explanation of its construction and workings. To view the short introduction video just type in Bidwill Farm into YouTube and check out the introduction





video (a longer version is currently under production).

We will keep you updated as the year progresses.

## SWEET WIN



Chifley College, Bidwill Campus entered two honeys, a light liquid honey and a dark liquid honey, into the schools categories at this year's National Honey Show held at the Sydney Royal Easter Show. Our dark honey came in fourth with a score of 77 points



out of 100. Considering that this was our first extraction with the honey being in the frames for over a year, this was an outstanding result. The top score was 85/100 so we were well within striking range.

Our light honey scored an amazing 91 points out of 100 and took out first place in that category. In addition, that score gave us Champion School Exhibit for the 2019 show. I would also like to thank the students from Hassel Grove Public school who assisted in the extraction of this honey when they visited during their previous transition day. It is



a real pleasure to share this win with students from one of our feeder primary schools.

## COMMUNITIES ENVIRONMENT PROGRAM

Schools are eligible to apply for some of the \$22+ million that the Australian Government will invest in 2019-20 to deliver a wide range of on-ground projects that conserve, protect and sustainably manage our environment.



Under the Communities Environment Program, each federal electorate can receive up to \$150,000 in grant funding for small-scale, community-led projects nominated by the local Member of Parliament.

Eligible activities include small-scale, community-led projects nominated by the local Member of Parliament in consultation with the community which will focus on environmental priorities such as:

- waste and litter reduction
- protecting native animals, including threatened species
- addressing weeds and pest animals
- restoring and improving coasts, wetlands, riverbanks and waterways
- greening parks and urban areas.

This program aims to support the environmental priorities of local community and environment groups in their regions and neighbourhoods. It aims to not only recover and strengthen our environment, but also to build and strengthen our communities.

The sitting Members of Parliament will consult with their community to identify potential projects for their respective electorates.

Each electorate can receive funding for up to 20 projects, with the minimum grant amount being \$2500 and the maximum grant amount set at \$20,000.

For further information visit the [Communities Environment Program website](https://www.boardofstudies.nsw.edu.au/ebos/static/ebos_stats.html).

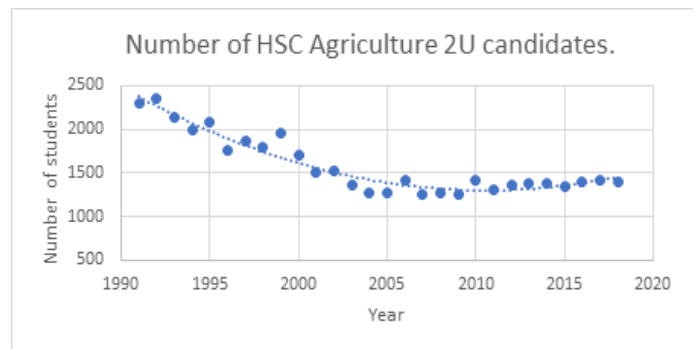
## SUBJECT CHALLENGES

### Some challenges we face as a subject

David Randall –  
Education Officer,  
Western Sydney  
University (and  
retired agriculture  
teacher)

#### 1. Subject viability

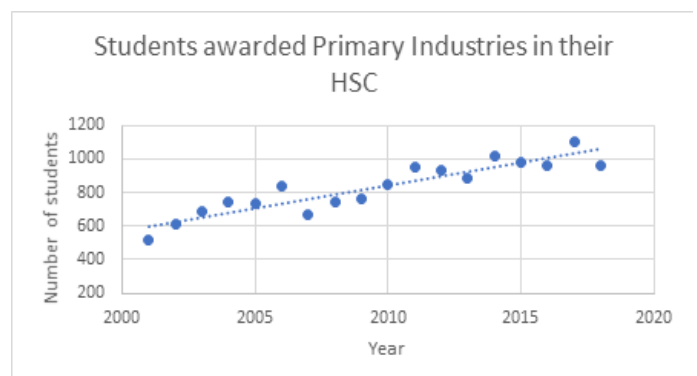
HSC Agriculture and Primary Industries. For a number of years, the number of students sitting the Agriculture 2-unit exam in the HSC was showing a steady decline. It was hard



to identify why this might have been happening, but this trend has slowed in recent years and now there is a fairly stable 1300 to 1400 candidates each year.

1. Data retrieved from: [https://www.boardofstudies.nsw.edu.au/ebos/static/ebos\\_stats.html](https://www.boardofstudies.nsw.edu.au/ebos/static/ebos_stats.html)

In 2001 the Primary Industries VET course became an option for students in the HSC and the numbers presenting that course for inclusion in their HSC has been steadily increasing from a very small base since that time. The data is illustrated in the graph below. (These numbers include those who sat the HSC exam and also those who chose not to sit the exam)



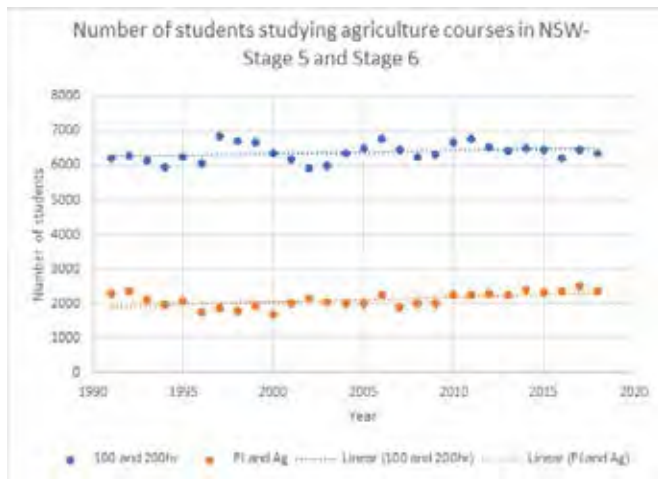
2. Data retrieved from [https://www.boardofstudies.nsw.edu.au/ebos/static/ebos\\_stats.html](https://www.boardofstudies.nsw.edu.au/ebos/static/ebos_stats.html)

#### Stage 5 Agriculture

The situation in Stage 5, has had some volatility with the development of 100 and 200 hour options in 1995. When summed together the number of students across NSW engaged in the Agricultural Technology syllabus has been stable with perhaps an indication of a slight increase in numbers.

This is also true for the Stage 6 numbers if Agriculture and Primary Industry candidate numbers





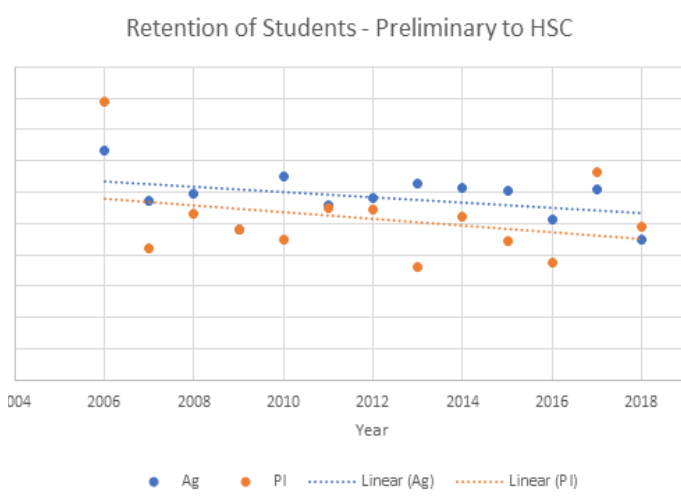
are added together.

3. Data retrieved from [https://www.boardofstudies.nsw.edu.au/ebos/static/ebos\\_stats.html](https://www.boardofstudies.nsw.edu.au/ebos/static/ebos_stats.html)

These slight increases are against a background at the HSC level of increasing numbers of students remaining at school to complete the HSC. This is a change from the normal process in the 1980's of a significant number of students exiting school after the School Certificate.

## 2. Retention rates

At the conclusion of the preliminary course students often drop subjects so they only have to study the minimum 10 units required by the HSC. Approximately 60% of students choose to only present 10 units for the HSC. Given the compulsory status of English, this should mean an average drop by a little less than 20% in students numbers for other subjects when moving to the HSC. This



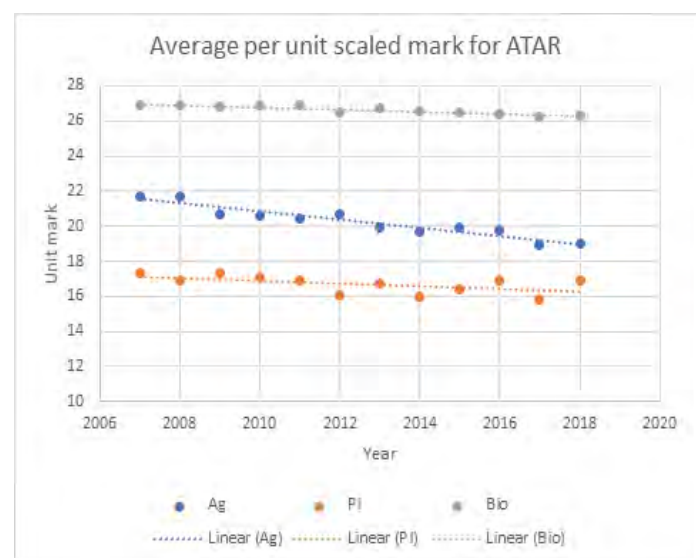
wastage rate is increased if students leave school for employment or when they turn 17.

Our subjects retention rates Preliminary -> HSC are well below the 80% we could expect, and the trend shows a decline over time. In 2018 this had dropped to 65% for Agriculture 2 Unit and even lower for Primary Industries. For comparison Biology has a retention percentage of over 70%, although this has shown some decline over time as well.

## 3. Low standard of students, or low expectations

Scaling data can be found in the annual reports prepared by UAC. (*Report on the scaling of the NSW Higher School Certificate* for each year from 2007 to 2018). A summary of this data shows that the two agricultural subjects scale poorly compared to most other subjects. (Biology is included as a comparison.)

There has been a significant drop over time, from 21.7 to 19.0 in the per unit average mark for Agriculture when scaled for the ATAR calculation. It should be noted that this strongly correlated decline ( $r^2=0.899$ ) has been consistent across both syllabi



we have used over the period for which data is available.

This is indicative of a steady decrease in the standard of candidates sitting the HSC in Agriculture 2 Unit, and should be of concern to all teachers preparing students for this subject. The poor standard of students in the course is also illustrated by the lower than average percentage of Agriculture 2 Unit students being eligible for an ATAR (71.3% compared to an HSC average of 78.6%)

Not all Primary Industry students sit the exam (59%) or apply for an ATAR. Only 62% of those sitting the

exam qualified for an ATAR making only 37% of candidates ATAR eligible, but amongst those who do, it contributes very poorly toward their ATAR calculation.

This decline in standard is supported by anecdotal evidence from HSC markers who have commented on the very poor standard displayed in many of the scripts they are marking.

### What is a way forward?

Modern agriculture is becoming a highly technical industry. This will require people with high level skills in technology, genetics, computer systems, data management and processing, management and marketing. These skills will be needed in both on farm and off farm environments. A declining subject with falling standards will not supply the type of people needed to progress through university and technical education then into agriculturally related industries.

Low standards are at the heart of all these issues. If you have better standards, more, different and better students will be retained. This has been the experience of several schools which are bucking the trend in both enrollments into all stages of agriculture subjects as well as the standard of students being attracted to the subject.

There is a feeling in many schools that no-one feels big enough to change anything about the 'type' or 'ability' of students they get. Many teachers seem resigned to just getting the 'low end kids' or the 'boarders from farms' etc. If Ag is a 'catchall' subject for the struggling bottom kids (which sometimes is what the school hierarchy want) then things are not going to improve.

There is a need to lead from the front and change your thinking to; *'Build it and they will come'*. This is the experience of successful schools. You have to set high expectations and be willing to lose the bottom kids because they think it is too hard. One school which has done this is Barker College which have kids dropping Agriculture 2 Unit because it is seen as too academically demanding.

Scott Graham (Head teacher of Agriculture at Barker) has said to me that the biggest sleeper issue (and really what he and his staff have done) is changing the reputation within the school from it being a bludge, to being academically credible. His experience from when he was at school was

students asking you 'why would you do Ag if you're not going to be a farmer?' Whereas now Barker students tend to say 'Why wouldn't you do Ag at some point?' to each other. He thinks this is the core of the number of students choosing Agriculture.

The impression I get from Agriculture teachers is that while they all say they want extra numbers, they don't actually want to do what is required to actually get the numbers.

Teachers need to change what they are doing to grow the subject, but they simply want to work out how to get more students interested in what they are already doing. As long as this attitude persists amongst Ag teachers, I don't think Ag will get the increase it needs.

## CLIMATE ASSISTANCE

After many years of teaching the Climate Challenge elective I have decided to teach Farming in the 21st Century this year.

I have found some excellent resources but I am still looking for a research project which clearly outlines the principles of experimental design namely: replication, randomisation, standardisation and control.

Cheers,

Bryon Adamson [bryon.adamson@det.nsw.edu.au](mailto:bryon.adamson@det.nsw.edu.au)

## ALSTONVILLE BEEF

Alstonville High School has developed its cattle program. From a history of two cattle shows a year (Casino Beefweek and Lismore show) with purchased steers finished onsite we have developed into a Red Angus stud and increased our cattle show profile with a school cattle show team.

The school has undergone two rounds of Red Angus embryo transfers that have resulted in 3 stud calves (1 bull, 2 heifers) born in December 2017 and 3 stud calves (1 bull 2 heifers) born in December 2018. A bull was sold early this year due to the difficulty of managing bulls on school property and the second bull is now a steer for our Lismore show program later this year (tough decisions to make).

A funding shortfall was acknowledged last year so



sponsorship has been accessed and a range of cattle work shirts for a school cattle show team have been developed.

We presented our stud heifer “Alstonville Jan” (AHSN2) at Bonalbo show in April with too much finish and she placed poorly in comparison with the other entrants. The judge thought she was pregnant but she has a remarkable foraging drive that we recognise as an efficient, productive future breeder (i had discussed my fear that she may be pregnant at 6.5 months with other colleagues during a P.I. immersion program last year). She was provided a reduced ration and entered the Casino beefweek winning the class 3 heifer division and the champion heifer of the show.



We now look towards A.I. to breed our own bloodlines within the school and i am researching Breedplan and discussing options with the Red Angus society.

The evolution of the school cattle show team has resulted in increased individual student outcomes and opportunities but has been difficult to manage time constraints.

Looking forward to the future of cattle production in our school.

<https://www.theland.com.au/story/6181977/stud-cattle-and-led-steers-a-highlight-of-casino-beef-week/#slide=8>

## PICASSO COWS

Dairy Australia has revamped its Picasso Cows program for Primary School F - 6 to make it even easier to join and teach! Expressions of interest are now being taken for Term 3. Get in quick as the program fills up fast!!



The FREE\* unit of work fills a whole term and links directly with the Science, Health and Physical Education and Arts curricula through a variety of purposeful, student-led experiences!

What is the Picasso Cows program?

- Schools learn about the dairy industry and dairy products through relevant and meaningful experiences, decorating their cow with what they have learnt and submitting their photos and learning journal for judging.
- Participating schools will receive a life size fibreglass cow for students to decorate... and keep!
- Students use the unit of inquiry to develop real life learning skills such as collaboration, decision making and use of digital technology.

How do I sign up?

- Click on the '[Express your interest](#)' button to register your interest.
- Receive a confirmation email from Dairy Australia.
- You will be offered a spot in the program based on your school's location.

For more information <https://www.dairy.edu.au/information/picasso-cows-program>



# CLOTHING & FOOD

Where clothing and food comes from  
Contributed by education consultant Angela Colliver,  
FutureGen Education

Every day we eat and dress to survive and thrive – yet in this era of fast food and fast fashion we don't always think much about where our food and clothing actually comes from.

Now that globalization has brought us fast fashion and affordable clothing in small, medium or large to suit our consuming pleasures – and many young people have little idea of the time, skills and resources that go into making it. At the recent TEA conference, conversations with teachers suggested that seven out of 10 students do not know how to sew on a button.

If we want to live sustainably into the future, we need to become more conscious of our clothing in the same way we are now more aware of our food.

We know that quality food is essential to health. Fast and processed food may be easy and cheap, but it has had a dramatic impact on health through growing obesity rates across the population in recent years. We understand the need to teach students where food comes from, to garden and cook easy yet healthy meals. That's why people are now back in the kitchen, cooking their own food from scratch when possible and using fresh ingredients – some of which might have been grown in their own garden.

Clothes do for us on the outside what food does inside – nourish, warm, and engage body and soul. That's why we at Future Gen Education have developed a suite of new resources to support teachers in schools teaching about food and fibre production.

Teachers can find the following resources at [www.futuregened.com.au](http://www.futuregened.com.au)

## Developing a more sustainable clothing culture

In this learning sequence, students investigate how fibres are produced. With textiles being one of the fastest growing domestic waste streams, they are challenged to envision, generate and design a pitch about how they can grow a more sustainable clothing culture. Students then sell their 'pitch' as part of a 'Sustainability with Style' pitch competition.

## Pitch Your Food Idea

In this learning sequence, students investigate one of the trendiest things on earth – food - and develop flavors to be enjoyed. They are challenged to envision, design and cook a sample of sustainable food selections, and they then sell their 'pitch' as part of a food technologies and sustainability 'Pitch' competition.

## Discover Game Changing Food Ideas

This learning sequence uses the following scenario...  
Discover how farmers, producers and processors are working with new ideas, technologies and entrepreneurs to re-imagine how food can be produced, processed and delivered to customers.

Investigate how remote sensors, satellites, artificial intelligence (AI), robotics and the Internet-of-Things (IoT) are now part of producing food.

Then, as part of a Design Team, re-imagine a production method or system and produce a folio of ideas to explain your entrepreneurial thinking.

Your Design Team is also tasked with then selling your pitch as part of a food and agriculture pitch competition.

Check us out at [www.futuregen.ed.com.au](http://www.futuregen.ed.com.au) and follow us on Facebook and Instagram

## Instagram

<https://www.instagram.com/futuregened>



## Facebook

<https://www.facebook.com/FutureGenEd>



# HSC EXAM DEVELOPMENT

Are you interested in developing the NSW Higher School Certificate exams? Each year we accept applications from teachers and academics with appropriate experience and qualifications.

Setting or assessing HSC exams is a rewarding and challenging experience. It is an opportunity to:

- develop further understanding of assessment techniques
- enhance skills in setting exams
- contribute towards your professional development.

Hear from teachers who have set or assessed exams (3 minute video): <https://www.youtube.com/watch?v=UbTTpE9V24g>

For More info <http://educationstandards.nsw.edu.au/wps/portal/nesa/about/who-we-are/jobs/hsc-exam-development?fbclid=IwAR2OKuPPAsnUrDgU2yJrRtxB5nh9EFnyohedO9mtJoH25Sk3ZTgEfdEqUEo>



## PIEFA MEMBERSHIP

PIEFA SCHOOL MEMBERSHIPS ARE NOW FREE!

Show you care about teaching your schools' students about from where their food and fibre come from! Help be part of the solution.

Your school can qualify for membership at three levels; Bronze, Silver or Gold.

How? Encourage your staff to sign up to the PIEFA newsletter AND Primezone website.

Bronze- 2 or more teachers signed up to newsletter and Primezone.

Silver- 5 or more teachers

Gold- 10 or more teachers

(NOTE: Schools with less than 10 teachers please contact PIEFA office)

Each school will receive a membership certificate, a digital badge to display on email signature block and website and acknowledgement on the PIEFA website.

Show the world your school supports food and fibre education today!

## School Memberships Now FREE!

Membership is now dependent on how many teachers per school are signed up to Primezone and the PIEFA newsletter: Bronze (2+), Silver (5+) or Gold (10+).

(Schools with less than 10 teachers please contact PIEFA office)

Show the world your school supports food and fibre education today!

Email [office@piefa.edu.au](mailto:office@piefa.edu.au) for an application form



Primary Industries Education  
Foundation Australia



[www.primezone.edu.au](http://www.primezone.edu.au)  
**primezone**  
The place for all your food and fibre answers

## Technology Mandatory Years 7-8 'Paddock to Plate' and 'Food Solutions'

# NESA Accredited Teacher Professional Development Dubbo

Including a site visit to the Fletcher International Exports

## Monday 26 August

Register at [www.colliver.com.au/training](http://www.colliver.com.au/training)

## VIRTUAL VICKEY

As part of Poultry Hub Australia's training initiative, we have developed a virtual chicken with the assistance of TAFE Digital in Armidale. 'Vicky' the virtual chicken allows users to experience all parts of the chicken from inside out, even down to the different cuts of meat from chicken.

There is also a testing function that enables the user to select a specified part of the chicken with tweezers and place on the tray. This interactive tool has applications across all levels of education and we look forward to integrating it into our training packages and also education sessions. If you would like to experience the virtual chicken you can take a peek at the clip <https://www.youtube.com/watch?v=77-aIa5s2r8> or contact us to discuss at [poultryhub@une.edu.au](mailto:poultryhub@une.edu.au).



## FIELD DAYS

### Tocal Field Days

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

Location: Paterson, NSW

1-3 May 2020

30 April - 2 May 2021

### Riverina Field Days

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

Location: Griffith Showgrounds, Griffith, NSW

14-15 May 2021

13 -14 May 2022

### Primex Field Days

<https://www.primex.net.au/>

Location: Casino, NSW

21-23 May 2020

20-22 May 2021

19-21 May 2022

### Casino Beef Week

<https://casinobeefweek.com.au/>

Dates: 23 May to 2 June 2020

### Mildura Field Days

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

Dates: May 15-16, 2020

Location: Mildura, VIC

Admission: Adult - \$10, concession - \$5, children (under 18) – Free

### Mudgee Small Farm Field Days

<https://mudgeefielddays.com.au/>

Dates: July 12–13, 2019

Location: Mudgee, NSW

Admission: Adult - \$20, children (aged 5 to 16) - \$5, children under 5 – Free

### Sheepvention Rural Expo

Hamilton, VIC

4-6 August 2019

2-4 August 2020

### AgQuip

<https://fairfaxruralevents.com.au/agquip/home/>

Dates: August 20–22, 2019

Location: Gunnedah, NSW

Admission: Free

18-20 August 2020

17-19 August 2021

16-18 August 2022

### Berry Small Farm Field Days

<https://www.berryrotary.org.au/small-farm-field-day>

Dates: September 6-7, 2019

Location: Berry Showground, Berry, NSW

Admission: Adult - \$10, children (aged 15 and under) – Free

### Henty Machinery Field Days

<http://hmfd.com.au/>

Dates: September 17–19, 2019

Location: Henty, NSW

Admission: Adult - \$22, students (aged 12 to 16) - \$5, children (under 12) – Free (discounted tickets available online)

### Murrumbateman Field Days

<https://www.mfddays.com/>

Dates: October 19–20, 2019

Location: Murrumbateman, NSW

Admission: Adults - \$16, concession - \$10, children (aged 12 to 16) - \$5, children aged 12 and under – Free

17-18 October 2020

16-17 October 2021

### Australian National Field Days

<https://anfd.com.au/>

Dates: October 24–26, 2019

Location: Boreenore, NSW

Admission: Adults - \$15, children (school age) - \$5



22-24 October 2020

### **Tocal Field Days**

3-5 May 2019  
1-3 May 2020  
30 April - 2 May 2021

### **Riverina Field Days**

[https://www.griffith.nsw.gov.au/cp\\_themes/visit/listing-detail.asp?org=CSD-HEY-81-75-56](https://www.griffith.nsw.gov.au/cp_themes/visit/listing-detail.asp?org=CSD-HEY-81-75-56)  
8 - 9 May 2020  
14-15 May 2021  
13 -14 May 2022

### **Primex Field Days**

<https://www.primex.net.au/>  
21-23 May 2020  
20-22 May 2021  
19-21 May 2022

### **BEEF AUSTRALIA 2021**

May 2-8, 2021  
Rockhampton  
<http://beefaustralia.com.au>

### **SECRETARY**

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## **NSWAAT SUGGESTIONS**

Your executive is always looking to get feedback and suggestions from our members. If you would like to reach out to us please use the following contact details to share your ideas and feedback.

## **NSWAAT EXECUTIVE**

### **PRESIDENT**

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NSWDPI  
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### **VICE PRESIDENT**

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## **FROM THE EDITOR**

In 2019 NSWAAT would like to publish articles that promote professional discussions among our members.

This may include such things as opinion pieces, case studies and the sharing of new information that you feel may be of benefit to your fellow members of NSWAAT

Content can be submitted to the BAAT editor. The next deadline for content is **16<sup>th</sup> September**.

All the Best

Greg

