

# NSW Association of Agriculture Teachers



## AUTUMN 2019

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### PRESIDENTS MESSAGE

Hello Members,

Welcome to the first edition of BAAT for 2019! This year is shaping up to be an active one. There will be changes, and of course many challenges for Agriculture and Agricultural education.

The first big change - a new NSWAAAT executive! I would like to thank the executive of 2018 for their efforts in continuing to develop the association and assisting our members throughout the year. I would especially like to thank Luciano Mesiti for his work as President of NSWAAAT. Luciano is a true champion of Agriculture. He does an astronomical amount of work behind the scenes, and I believe the strength of the association and its development professionally has been largely due to his efforts. You have left very large shoes for future executive to fill. Thankyou for your passion, dedication and support!

We do have several new executive members:

Vice President - Ken Horley  
Secretary - Liz Ruis  
Treasurer - Graham Quintal  
Communications - Scott Graham  
BAAT Editor - Greg Mills  
General Committee - Angela Colliver,  
Belinda Haigh and Meg Dunford

Their contact details will be published in this edition and will be available on our website. We have lots of big plans and ideas for the association.

But our strength as an association relies on you - our members. We are here to represent and support your needs. So please get in contact, share your ideas, reveal your struggles. We are here to help.

A major challenge for all of us has been Drought. The effects on NSW has been devastating and despite some recent relief in parts of the state, the road to recovery

will be a long one. It has deeply saddened me to hear many schools are having to destock and reduce their commitments to local and state shows. Although these decisions are a necessity in this climate for survival, they are not easy to make and have long lasting effects within our communities. We have contacted several organisations for assistance and have managed to source some possible relief options for those schools and communities who are doing it tough. A special thankyou to Belinda Haigh who has been instrumental in sourcing support and making our plight known. We will continue to look into any and all offers of assistance.

In 2020, NSW will be the hosting state for the biennial National Association of Agricultural Educators Conference at Yanco Agriculture High School from the 12th-16th of January. If you haven't already please save the date and for those that have social media, follow the conference page "2020 NAAE Conference" - Just Add Water. The conference team have been working incredibly hard to deliver what promises to be an outstanding event.

For those schools travelling and competing over the holiday break, I wish you all the very best of luck. I look forward to seeing and hearing of your adventures.

Wishing you all a happy, safe and restful Easter break.

Brianna Callum

## #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 GIVIT. Register in the name of the P&C or the Ag teacher on behalf of the school at <http://www.givit.or.au> . GIVIT 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/droughthub> .

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)

## 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=L39m3XxJIT0>

## 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)

## VEGETABLE PROTECTED CROPPING CENTRE

The National Vegetable Protected Cropping Centre at Western Sydney University is a joint venture between the university and Horticulture Innovation Australia. The facility has two purposes; one is research, to find solutions to uniquely Australian issues in this high technology food production systems. The second function is for education, and one of the opportunities in this area is for you to bring your class for a visit.



Over the past few months many schools have taken the opportunity to visit the facility. These visits have included agricultural high schools and also groups from private and comprehensive schools, the age range has been from years 7 to 12. We have even hosted a virtual visit from Aurora College year 6!

### What can students see when they visit?

- The glasshouse has the highest technology level currently available in Australia, and students get to see how crops are grown in this system.
- We have also targeted visits to understanding the computer control of the glasshouse, and the automation in our system, this is useful for students in Stage 6 agriculture who are going to study the technology elective (Farming in the 21st century).
- Integrated Pest Management (IPM) is another feature of the way crops are grown in this facility, and several groups have concentrated on this aspect, and have had the opportunity to release predators and learn about the control of one key pest.
- Sustainability of food production is another challenge facing us, especially with the pressures climate change is throwing up. This method of food production has some sustainability plusses and this is discussed with visiting students.
- The glasshouse is also a research facility, and it's good for students to engage with the practices and purposes of agricultural research. Current research projects in our greenhouse relate to the reduction of heat load in the Australian climate, and also novel pollinators for this type of production.



### What else have we done?

We have been busy over the past couple of months producing some videos for the NSW Department of Education. These videos will be hosted on the NSW Dept. of Education's YouTube channel and should be available by the time you read this.

We have produced 6 videos each focussing on an aspect of STEM education. Our high tech glasshouse is the unifying part of all of these. The videos are;

- **Crop production.** This video features Nicky Mann the chair of Protected Cropping Australia. She is the manager of a large enterprise growing cucumbers in



a high technology glasshouse. This video is useful for stage 4 technology mandatory, stage 5 and 6 agriculture and also stage 5 and 6 food technology.

- **Automated Control Systems.** This video is hosted by Marcus Van Heijst from Priva Oceania. Priva is a company based in the Netherlands which is the world leader in automation in greenhouses. This video explores the way we can control climate in a greenhouse, and the future developments in this area. This is suitable for use in stage 6 ag – elective 2 and IPT stages 5 and 6.
- **Integrated Pest Management.** In this video Jake Byrne from Biological Services (one of the leading biological control producers in the country), outlines the principles of an integrated pest management program in a high technology greenhouse. The principles are relevant to any cropping enterprise, and



this will be very useful in stages 5 and 6 agriculture.

- **Nutrient Solutions.** In this video we explore the nutrients needed for plant production, and also some of the chemistry of producing a hydroponic nutrient solution. This is informative for agriculture and chemistry students.
- **The purpose of research.** It's my experience that students have difficulty grasping the why and how of



research in agriculture. This video outlines one unique problem in protected cropping and how researchers at Western Sydney University funded and carried out this research. Chelsea Mayer, a young researcher at WSU, shares some of her story as she fills the viewers in on the WHY and HOW of research. Students in stage 6 agriculture will find this informative, and hopefully inspire some to look at research as a career option.

- **The NVPCC.** Prof. David Tissue is a world renowned scientist and the lead researcher for the facility. In this short video he gives viewers an outline of the facility. This is a good introduction to any of the other more focussed videos.



- **Teacher visits.**

We have had visits from 2 teacher groups, The Sydney branch of NSWAAAT visited last May, and a group of PI teachers paid a brief visit in December last year.

**How can you visit us?**

Email: [david.randall@westernsydney.edu.au](mailto:david.randall@westernsydney.edu.au)

Looking forward to meeting your classes

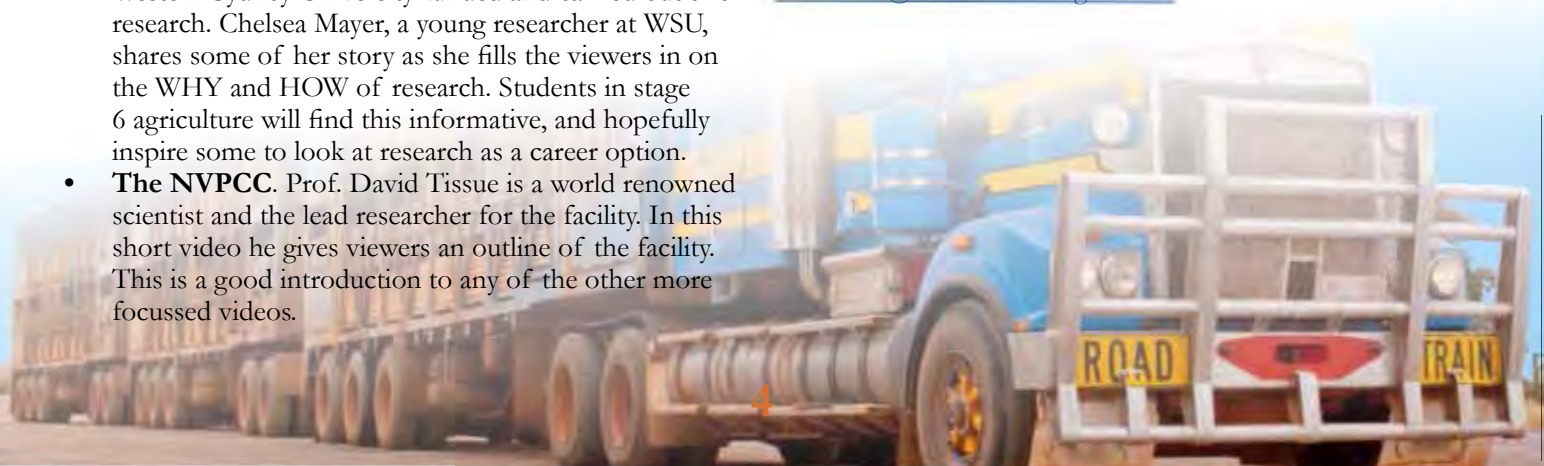
Dave Randall.

## AG CAREER POSTERS

RuralBiz Training have posters promoting careers in Ag which are available to all the schools. The posters are A2 sized. RuralBiz also have some A4 of the double sided flyers.



Contact Melanie Moeller (Marketing Manager) RuralBiz Training, P: 02 6884 8812  
[mmoeller@ruralbiztraining.com.au](mailto:mmoeller@ruralbiztraining.com.au)





# COTTON EDUCATION

## Exciting Cotton Education On The Way For Nsw Students, Thanks To New Curriculum

More New South Wales students will learn about the Australian cotton industry thanks to the implementation of a new curriculum module.

A professional development workshop for agriculture and food-tech teachers was held in Sydney on Thursday 21<sup>st</sup> and Griffith on Friday 29<sup>th</sup> March

As part of a new requirement that agriculture be a mandatory component of the technology curriculum in NSW, a specific module on cotton was developed by Cotton Australia to boost school education around the fibre.

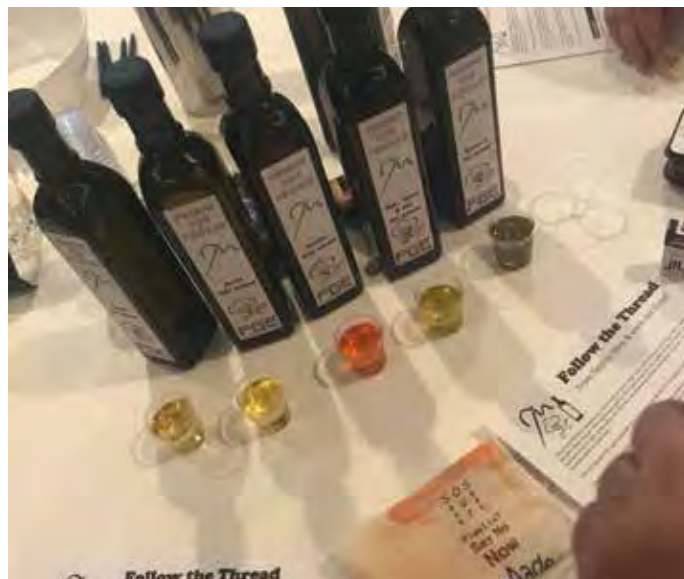


The first professional development workshop for agriculture and food-tech teachers was held at Hurlstone Agricultural High School in Sydney's west.

The workshop helped the attending teachers understand the wide array of uses of cotton fibre, but also the use of

crop's seed oil in food and soap products.

"This new curriculum is an exciting opportunity for the Australian cotton industry to share our story with the leaders of tomorrow," said Cotton Australia's education coordinator, Ali Briggs.



"In developing this curriculum module we've put our fibre's diverse uses on show, which will broaden the understanding of teachers and students that Australian cotton has many important and beneficial uses."

Further workshops educating teachers about our crop and the new curriculum module will be held in Narrabri on the 5<sup>th</sup> June. Registry at <https://www.colliver.com.au/training>

The first 15 registrations receive a credit of \$200 courtesy of the Australian Cotton Industry making the course fee only \$125.00 plus GST.

### Teaching Technology Mandatory in Years 7-8 using Project Based Learning

## Cotton as Food & Fibre in the Classroom

A one day event designed especially for those who are new to project based learning using an Australian Cotton Industry focus. Teachers will develop knowledge and understandings about PBL, and they will use and take away easy practical curriculum examples to use in the classroom aligned to the new NSW Syllabus for the Australian Curriculum Technology Mandatory.

Investment: \$125.00 +GST (after cotton industry credit).

The first 40 registrations receive a credit of \$200 courtesy of the Australian Cotton Industry. This reduces the investment from \$325 to \$125 plus GST per participant.

ACRI - Narrabri  
5<sup>th</sup> June 2019

'Cotton and Cotton Seed oil' focus

Course includes a tour of Cotton Gin

Register at <https://www.colliver.com.au/training>

# SINGLETON CATTLE EDUCATIONAL DAY



The Singleton Beef and Land Management Association Incorporated wish to advise that the Singleton Cattle Education Day will be held on Friday 14th June, 2019, at the Singleton Showground commencing at 9.00am.

The Sponsor for this event is GLENCORE Australia.

This event is designed to educate students on different aspects of the beef industry. Aiming to provide avenues for students to practice and apply knowledge acquired from their agricultural studies in the selection of beef cattle.

Students from 6 – 18 years of age and attending school are eligible to attend.

On this day there will be workshops for the students to attend that relate to the beef industry.

A wonderful donation of two stud Angus Heifers have been kindly gifted to us for your School to have the chance to win one of these Heifers for your Agricultural programs.

The Singleton Beef and Land Management Association would like to have expressions of interest from Schools that are wishing to win one of these Heifers. A written submission is required for this as to why you would like to win an Angus Heifer for your School.

Three students from each school entering will be interviewed by a panel of three Judges to deem which School will win an Angus Heifer.

Conditions of entry:

- Each School entering the Competition to win an Angus Heifer will need to nominate 3 students participating at the Cattle Educational Day. Students will be interviewed on this day at a time allocated by the committee.

and

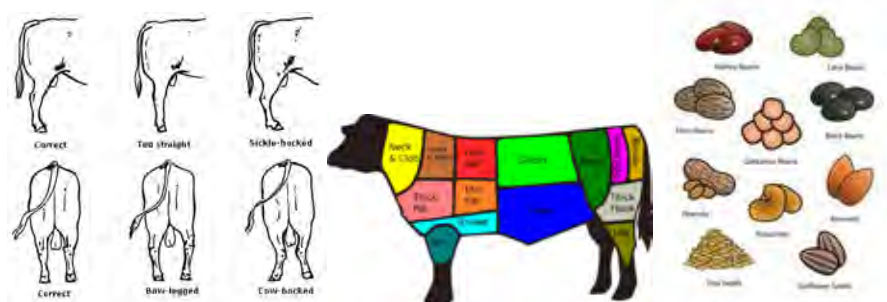
## GLENCORE

Present

## 2019 Cattle Educational Day

**Friday 14<sup>th</sup> June 2019**

**SINGLETON SHOWGROUND 9.00am - 3.00pm**



**OPEN TO ALL STUDENTS ATTENDING SCHOOL**

*Presentations by Guest Speakers on the topics relating to the Beef Industry:*

- **Junior Cattle Judging Tips and Guidelines – How to do and what to look for**
  - **Selection of Bulls, Heifers and steers**
    - **Cuts of Beef – Different**
- **Scanning of Beef Cattle – what to look for and where**
  - **Seed Identification**
- **Win a Heifer for your School**
  - **Plus more**

**COST: ONLY \$5 PER ADULT/ STUDENT. RSVP 12/6/19**  
**Canteen available**

- Be able to care for the animal and have good knowledge of animal husbandry.
- Entries for Win a Heifer competition will strictly close on Friday 7th June, 2019.

Join us on this educational day and who knows your school may be lucky to take home one of the 2 animals that are up for grabs.

For nominations contact Leonie Ball  
[gregleonie@harcoursat.com.au](mailto:gregleonie@harcoursat.com.au)





a student I liked the diversity the subject had to offer. I finished my Animal Science degree at WSU Hawkesbury and started working in Marketing and Advertising. I quickly realised I couldn't work in an office environment 9 to 5 and wanted to work with young people. I started my Graduate Diploma of Education at UNE and never looked back!

**Who are your agricultural heroes and why have you found them inspiring?**

I have a few!

My high school Agriculture teachers - I was lucky that all of them were amazing! Each teacher I had taught me a different set of valuable skills. There are so many lessons and activities I did as a student that I use now as a teacher. Almost all of them are still teaching the subject which I believe says something! Each teacher nurtured and guided me in the right directions, so if they are reading this, I could never thank all you wonderful people enough for your dedication!

Temple Grandin - my past students would giggle at this statement. But do I really need to explain why? As an animal scientist, her work in the industry is beyond inspiring. She is and will forever be an icon in the livestock industry and has changed it for the better.

And last but definitely not least my family, especially my Grandpa Frank. They fostered my passion even before I started school and encouraged me to keep going when I doubted myself. They definitely helped fuel my interest in the area and have never stopped supporting me.

**What do you see as the biggest challenge facing agriculture education in NSW?**

The growing demand for food and fibre - can we keep up in terms of education?

Our job as Agricultural Educators has never been more important than right now. We need to prepare the next generation for what lies ahead. And it's no small task! Agriculture I believe has been taken for granted in this country and we need LOTS of bright young minds to be ready for the challenges of the future. My hope is that it becomes a major focus and that our youth become invested in its protection and development.

**Angela Colliver**

Executive Member

**What first sparked your interest in agricultural education?**

My first interest was sparked way back on the 1980's when I began farming earthworms. I wrote an educational resource for schools called 'Kids for Landcare - Wormwatch' and began breeding them. They are truly fascinating creatures. This led to a passion for agricultural education.

## MEET THE COMMITTEE

Each addition of the newsletter we will introduce you to some of the committee members.

**Brianna Callum**

Vice president of the NSWAAAT!

Education Officer in the Honey Bee Unit at Tocal College



For the last four years I was living in Sydney and teaching at Barker College. My husband and I moved to Paterson which is located in the lower hunter at the beginning of 2018 and I started a new role working as an Education Officer in the Honey Bee Unit at Tocal College in January 2018.

I am currently completing my Certificate III in Beekeeping and assisting the DPI in developing new units and training programs. I also assist in the management of their Apiary sites at Tocal. I'm also tinkering with developing Agricultural resources in my spare time.

**What first sparked your interest in agricultural education?**

I started Agriculture in year 8 and just never stopped. As

### **Who are your agricultural heroes and why have you found them inspiring?**

In recent years the heroes I really am inspired by are the young farmers who are realising their dreams and managing farms and stations and those who are starting new business ideas in the agriculture space.

### **What do you see as the biggest challenge facing agriculture education in NSW?**

Filling school vacancies and enticing young teachers to become agriculture teachers!

## **Belinda Haigh**

Executive Member

Ag teacher at Dubbo School of Distance Education

### **What first sparked your interest in agricultural education?**

Believe it or not the Ag teacher at my old school first sparked my interest in studying Ag Science at UNE. After working as an ag consultant and in natural resources management in government bodies, I did my Dip Ed when our four girls were small, after realising what an important job teaching was. Now I travel to teach in Dubbo from an hour west, on a property alongside the Macquarie River producing first cross lambs (Merino ewes x Border Leicester rams) and some cropping when it rains; our Shorthorn breeding cows were all sold last year when #thebigdry really hit hard.

### **Who are your agricultural heroes and why have you found them inspiring?**

Farmers young and old are an inspiration, especially those embracing innovations and facing on-farm challenges on a daily basis to produce quality food and fibre.

### **What do you see as the biggest challenge facing agriculture education in NSW?**

Effective communication of the value of agriculture and of studying agricultural and horticultural production in schools to the wider community is a huge challenge. Informed and fact-based discussions about agriculture should be more possible throughout the community, and we need our students have a significant role in presenting practical and science-based facts.

## **Meg Dunford**

Executive Member

Project Officer, Schools Program. NSW DPI, Orange.

### **What first sparked your interest in agricultural education?**

Ever since I could walk I was into agriculture and animals, which was lucky coming from a family beef and wool

production background. I was so focused that from the age of 12, I worked part-time jobs to save for a stud Charolais heifer and to complete an AI course. I was the kid that used to read Dynamic Ag textbooks for pleasure on weekends.

Going to uni to study agriculture through CSU, to pursue a career in animal genetics and breeding technologies, was my dream from an early age. After uni, I went straight to Victoria as a breeding technician and semen sales rep. Family reasons brought me back home to the Central West, so with hardly a dairy cow in site, I found myself heavily involved in stud beef production for a number of years.

After doing a lot of work with juniors through the stud and showing, I decided to turn my hand to teaching for a new challenge. I ended up teaching for many years in various schools around the Central Tablelands, until joining the NSW DPI last year in my current position in the Schools Program.

### **Who are your agricultural heroes and why have you found them inspiring?**

I'm honestly in awe and see a hero in every producer and person involved in industry I have ever come across. I'd like to think we are all trailblazers, cutting out paths to better promote, service, educate, protect or increase production of Australian agriculture.

An early inspiration, however, would have to be the scientists at the Roslin Institute who back in 1996 cloned Dolly the sheep – I remember being fascinated by the technology, the applications for Ag and saw it as inspiration for possibilities in my future career, way back then.

### **What do you see as the biggest challenge facing agriculture education in NSW?**

Challenging and changing what we are doing right now as educators.

Every one of us is aware of societies lack of engagement with agriculture; negative media; the industry career shortages; the shortages of ag trained teachers and also, the current and amazing future opportunities for careers and production. Right now, we, unfortunately, cannot change some of these things.

We cannot do anything right now to impact the views and post-school career paths the 2018 cohort of students are pursuing. We can't make 100 odd ag trained teachers to appear across the state. And, we can't change the family's choice of buying an imported product over a homegrown one as you read this.

But, as educators, we can make a future difference. I see it as our inherent mission to inspire our students of tomorrow, right now. We must do this through challenging or changing our approach and making sure we tackle every lesson, interaction and conversation with the aim to inspire and assist our students and communities to understand and embrace primary industries and better yet for our students to choose agriculture as a career path tomorrow. We have to challenge ourselves to be phenomenal ag promoters



# 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**

## LAMB PADDOCK TO PLATE

The Meat and Livestock Australia Lamb Paddock to Plate story roadshow is making its way across the state, bringing 360-degree virtual reality content to schools and community events in and around Sydney, Newcastle, and surrounding areas until 17 May.

Apply for the Good Meat Coach to come to you at [www.goodmeat.com.au](http://www.goodmeat.com.au)



## PD STAGE 4 & 5

Knowing Growing is a joint initiative of the NSW Department of Primary Industries, the Primary Industries Education Foundation of Australia (PIEFA) and the Royal Agricultural Society of NSW. The aim of the program is to facilitate teaching about our primary industries in schools by providing quality professional development for all teachers.

During Terms 2 and 3, the group will deliver professional development workshops in multiple regional locations to Stage 4 and 5 Agriculture and Technology Mandatory teachers to support the implementation of the new Technology Mandatory syllabus.

**Where:** Sydney Showground, Belgenny Farm, Tocal College, Armidale, Tamworth, Wagga Wagga, Yanco, Wollongbar, Grafton, Kempsey, Orange. More locations TBC – Narrabri, Dubbo, Ulladulla, Tumut.

**When:** 4-7pm on a range of dates from June - September 2019.

**Cost:** \$50 per person.

**More information:** <http://knowingandgrowing.edu.au/> or

**Email:** [office@piefa.edu.au](mailto:office@piefa.edu.au)

**Register:** <https://www.stickytickets.com.au/knowinggrowing>

## 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.woolmarklearningcentre.com/](http://intro.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



## AWARD WINNING INITIATIVE

On Wednesday 27th March, Angela Colliver and Greg Mills were awarded the MINTRAC training Initiative Award for 2019. It was presented to Angela at the MINTRAC Conference held on the Gold Coast.

Angela and Greg were recognition for their innovative approaches in designed and facilitating a suite of Technology Mandatory teacher professional development training days in meat processing plants and schools across NSW.

Each training day was accredited by the NSW Education Standards Authority (NESA) and attending teachers were accredited with six hours of professional learning

Typically, the training day was facilitated at a meat processing plant and utilised the plant's training room.

Additionally, plant tours were facilitated within each training day. These tours introduced teachers to trimming, grading, chilling, boning, and packing processes, bio-security risks, ethical handling of livestock, sustainable resource management, maintaining clean and healthy flooring and equipment surfaces, maintaining quality assurance standards throughout carcass processing, using automated meat processing systems to enhance labour efficiency and eliminating many physically demanding tasks from the production line, using robotic sensing and cutting to enable highly accurate cutting, using x-ray systems and scanners to create 3D maps of bones in the carcass, and then teachers (where possible) were introduced to cutting robots that cut with an amazing cutting accuracy, utilising robots to vacuum any bone dust from band saws, using automated packaging and labelling systems through to driverless forklifts that can lift and carry pallets of boxed red meat products and managing the business.

At TEYS Australia in Wagga Wagga, teachers also explored the 'food solutions' area of the plant.

In the venues at Canley Vale High School and James Ruse Agricultural High School, training rooms and videos were used to engage the teachers in actual meat processing plants and their activities, and videos and podcasts were used to share the methods and technologies used in the plants and



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://woolmarklearningcentre.com)





**SAVE THE DATE**

**Tuesday 25th June**

**Online careers expo exploring career options and education pathways in Agriculture.**

**Speakers from some of Australia's leading Ag companies will answer your questions about working in the industry**

**Email [support@ruralbiztraining.com.au](mailto:support@ruralbiztraining.com.au) to register your interest**

**2019 Agricultural Careers Expo**



the career opportunities within the industry. These are all on the AMPC website and were developed as part of the AMPC School Resources work in 2016.

The training initiative attracted and educated in total 173 teachers who taught Technology Mandatory, Food Studies or Agricultural Studies in Years 7-8 in schools.



Feedback from the training days included the following comments;

*"I will be encouraging teachers that I know to implement plant tours and these educational resources into their programs as our schools need to provide educational learning that is relevant to the employment opportunities for this region in the future". "I have learned so much about the industry and can't wait to utilise the AMPC education resources back at school".*

*"Site visit was the best outcome"*

*"As I was taken through the abattoirs this experience will improve the*

*way in which I explain the processing in the Beef Product Study."*

*"This was the most wonderful PD I've ever attended. I was able to bring resources home and implement them immediately into comprehensive programs provided by the course presenter on the day."*

*"The resources and ideas are excellent for covering the content effectively but they will also allow me to teach the course in a relevant and interesting way and more student orientated with lots of student activities."*

*"Great ideas and inspiration for the new syllabus."*

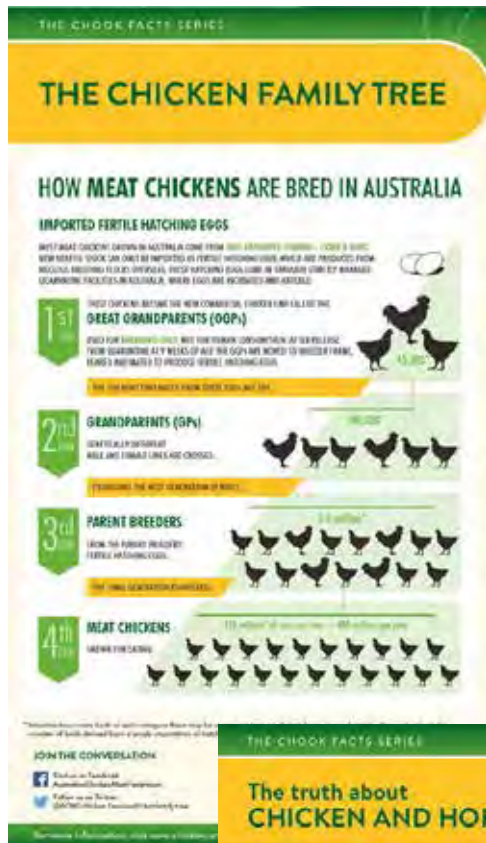
The training initiative has been re-registered with NESA in 2019 and we look forward to supporting as many NSWAAAT Members wherever possible. For information please contact Angela or Greg!



## CHICKEN MEAT

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

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



## 2019 FIELD DAYS

### National Diesel Dirt and Turf Expo

<https://www.dieseldirtandturf.com.au/>

Dates: May 3-5, 2019

Location: Penrith Panther's Club, Penrith, NSW

Admission: Free

### Total Field Days

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

Dates: May 3-5, 2019

Location: Paterson, NSW

Admission: Adult - \$18, senior - \$15 (Friday),

\$18 (Saturday and Sunday),

children (aged 5 to 16) - \$2, children under 5 - Free

### Pooncarie Field Day -

#### Bugger the drought, have a day out!

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

Date: Saturday 4th May 2019

### Riverina Field Days

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

Dates: May 10-11, 2019

Location: Griffith Showgrounds, Griffith, NSW

Admission: Adult - \$10, pensioner - \$5,

students (over 12) - \$5, children (under 12) - Free

### Primex Field Days

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

Dates: May 16-18, 2019

Location: Casino, NSW

Admission: Adult - \$10, children (aged 12 to 17)

\$5, children (under 12) - Free

### Casino Beef Week

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

Dates: May 18-28 2019

### Mildura Field Days

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

Dates: May 17-18, 2019

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

### AgQuip

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

Dates: August 20-22, 2019

Location: Gunnedah, NSW

Admission: Free

### 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://hmfed.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

### Australian National Field Days

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

Dates: October 24–26, 2019

Location: Boremore, NSW

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

## Sydney Royal

Please send through any result from Sydney Royal that you would like to share in the next edition of BAAT.



## Ag HSC Seminars 2019

North Seminar – 6 May

South Seminar – 6 June



A day of revision on key concepts in HSC Agriculture Course and learn about current research you can use in the extended response questions in exams.

Hear directly from agricultural, environmental and veterinary researchers and industry professionals in a series of lectures and demonstrations.

Guest lecturers from agricultural industries will present on their real-world processes and farming technology. University of Sydney academics will be discussing animal welfare, current dairy genetics and practices, and demonstrations of cutting-edge agriculture technology such as drones, IR and remote monitoring viewing.

*Teachers must stay with their students for the entire program. Risk assessments will be provided upon registration.*

### Ag HSC Seminar (North)

**Date:** Monday 6 May 2019

**Time:** 8.45am-2.30pm

**Location:** Barker College

**Address:** 91 Pacific Highway, Hornsby NSW

**Cost:** \$8 (inc GST), BBQ lunch provided

### Ag HSC Seminar (South)

**Date:** Thursday 6 June 2019

**Time:** 8.45am-2.30pm

**Location:** University of Sydney, Camden Campus

**Address:** 410 Werombi Road, Camden NSW

**Cost:** \$8 (inc GST), BBQ lunch provided

### Registration

<http://sydney.nicheit.com.au/web/registration/start/361>

### Contact

School Programs Officer  
Partner Engagement and Outreach  
Faculty of Science  
**E:** [science.alliance@sydney.edu.au](mailto:science.alliance@sydney.edu.au)  
**P:** 9114 0826



# Tocal College

NSWDPI's registered training organisation, Tocal College, offers specialised training to rural industries through its full-time residential courses, traineeships, short courses, skills training, and a range of online courses. Tocal College, in partnership with the University of New England at Armidale, also offers a pathway of study for those aspiring to a career in agricultural management.



## To find out more about Tocal College:

Open Days: held on Friday's in the Winter and Spring school holidays. Prospective students and parents / carers are invited to visit the College for presentation on course information, inspection of campus and tour of farm property. Also attended by some school groups.

Tocal College [website](#) or [Facebook](#)

Careers Markets: Tocal attends many regional careers markets for secondary school students. If we are missing yours, let us know!

Visits to your school: if your school can't attend a Careers Market but has a significant number of students interested in Tocal or an agricultural career then a visit and presentation by College staff may be possible.

School visits to Tocal: schools can visit Tocal as part of their local excursions and regional tours.

2019 AgVision (Sydney): Tocal College staff and students will again be conducting careers workshops at this year's event.

Contact the College for an information pack: Email: [info@tocal.com](mailto:info@tocal.com) Phone: 02 4939 8888 or 1800 025 520

## Financial assistance to study at Tocal



Approximately 65% of Tocal students are normally eligible for Youth Allowance or other government assistance through Centrelink. In addition, a large number of scholarships are available. In 2019, fifty-four full-time students were successful in sharing approximately \$160,000 in scholarships with further mid-year allocations still to occur. Each scholarship is held in the students account and directly used for course costs and some approved extra-curricular training activities such as Bison Horse Training clinics, Working Dogs or Trials Motorbike courses.

## Don't forget VET

Having trouble convincing students, parents and fellow teachers that a VET pathway can lead to a rewarding career? Read [Perceptions Are Not Reality: myths, realities & the critical role of vocational education & training in Australia, 2017](#) by the Skilling Australia Foundation and see how the data is dispelling some common myths on income, employability, future prospects and contribution to the nation.

## Updated Farming for the 21st Century-HSC elective document



The NSW DPI Schools program team are excited to release the Edition 2, [Farming for the 21st Century](#) elective resource document. This resource has been updated with new links current and emerging technologies, new example research studies and past HSC questions matched to each dot point topic.

## DroughtHub

The [DroughtHub](#) website contains information for primary producers preparing for and managing drought conditions and includes sections on drought relief, animal welfare, finance, management information, wellbeing, skills and training, research and development, case studies and the latest NSW drought maps.

Investigate the 'Available drought assistance' tab on the website, to find out if you or your school are eligible for assistance.

## Managing & preparing for drought guide 2018

The [Managing and preparing for drought guide](#) has been a widely used and popular reference for primary producers since it was first published more than 10 years ago. DPI has released an updated edition of the drought guide which includes information that primary producers can consider as they deal with drought, as well as practical tips on feeding livestock, farm management, sustainable practices and personal and financial wellbeing.

## 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

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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 member of NSWAAT

Content can be submitted to the BAAT editor.

All Best

Greg

## WHY STUDY AG?



This addition's article comes from Head of Agriculture, Mr Scott Graham, Barker College (Source: [Barker Bulletin](#))

### Why Study Ag? Are you going to be a Farmer?

This was the question I received almost daily when I studied Agriculture at my local suburban Sydney high school (not too long ago!). It is a question that is occasionally asked at Barker.

People generally see Agriculture as limited to stereotypical roles which are almost all country based, perceived by some as requiring little or no higher education. The reality though, is this is FAR from the truth in the modern age. I'm happy to say there is a much improved understanding of the scope of Agriculture careers amongst the Barker community. I think the misunderstanding still persists in many areas of society though.

The reality is (as anyone who has come to a Curriculum Night presentation for Agriculture would know) that 80% of jobs in Agriculture are based OFF farms, with 60% of jobs in the sector based in CITIES. Given this, including that 90% of consumers of Agricultural products live in urban areas in Australia, I would even dare say that Agriculture is more about the city than it is about the country (a dangerous idea, I know!).

*"Agriculture is among our most technologically advanced industries, yet most Australians are largely unaware of the revolution that is occurring on our farms."*

*Many would be both surprised and fascinated to know just how sophisticated agricultural science has become and the role it plays in delivering the strong and prosperous Australia of the future."*

*Prof. Peter Langridge, Australian Centre for Plant Genomics*

The world needs to double its crop production over the next 30 years to feed an extra 2 billion people, and we need to do this despite having less land to cultivate due to the effects of climate change, land degradation and urbanisation.

To do this will require all of the STEM skills (Science, Technology, Engineering, Maths), which society is now realising we need to teach in a holistic way rather than only compartmentalising them as individual subjects. Some people in the Agriculture world say (not without merit) that Agriculture is the original STEM sector. Indeed at Barker, since we refer to our STEM program using the acronym STEAM (which adds 'Arts'), we often say that the 'A' stands for Agriculture.

The students who are going to go on and change the world of Agriculture will need multiple of these STEM areas as strengths. Each student will have their own unique combinations and abilities of the various STEM skills and hence will show a distinctive ability to solve agricultural problems which will help secure the food supply for



the projected 9 billion humans on earth by 2050. These students with a passion in STEM and Agriculture at Barker frequently go on to study Agricultural Science, Agricultural Biotechnology, Animal Science and Agronomy degrees or similar at university.

In addition to the STEM side of Agriculture, there is also the business side. Many students come to Agriculture at Barker with a passion and interest in Business & Economics. These students see different perspectives in the subject to the STEM students and many go on to do Agribusiness and Food Security, Agricultural Economics degrees or similar at University. Naturally, the business side of Agriculture is equally as important as the STEM side in helping to feed the world into the future through more efficient markets and distribution systems to ensure we are more capable in these areas in terms of feeding and clothing people.

Traditionally, Agriculture in schools across the country has been seen as a waste of time for a majority of students and even parents. This is especially so in senior years when students begin to knuckle down and things become more 'academically-focused'. The fact that there are approximately 4,500 students across NSW studying Agriculture in Year 11, with only about 1,300 of these going on to finish the HSC each year shows this to be so. Indeed Agriculture at Barker was almost shut down about 12 years ago when we had 50 students in the subject from Years 9-12 inclusive. As an elective subject, it needs to compete against others in the marketplace of inspiration and future pathway options (and particularly towards the end of school, to compete for 'Academic rigour').

I am pleased to say we now have 350 students studying Agriculture from Years 9-12 as an elective, including the largest Year 12 cohort in Australia with 73 students, and 130 students (37%) of the Year 10 cohort taking the subject. Around 30% of our Year 12 graduates each year go on to Agriculture related degrees at University, which was around 18 students from our 2018 HSC cohort.

These are the students who will go on and play their part in helping solve the present and future problems around food security in the world through a variety of different degrees such as Agricultural Science, Food Security, Animal Science, Agronomy, Agricultural Engineering & Robotics, Agribusiness and Agricultural Economics, in both Sydney and beyond, to name just a few.

Given the increasing interest in Agriculture, we have spent some time over the past few years clarifying what has worked well and what we seek to achieve with students who take the subject.

We can broadly categorise our goals in two main areas:

### 1. Inspire & Engage

We seek to ignite an interest and passion for the subject in students. We do this by making it fun and relevant in early years by giving students 'Paddock to Plate' experiences in products they will likely consume throughout their lives. We want students to

be informed about the things they eat and wear and to make principled decisions on complex issues related to production, even if they don't choose a career in Agriculture. (After all, even if they choose to have nothing to do with Ag in the future career-wise, Ag will still have something to do with them a minimum of 4 times per day!)

We do this also through excursions each year to Sydney Fruit & Vegetable Markets in Year 9, then Bathurst Excursions in Years 10-12 where we look at a large array of Plant and Animal enterprises, technologies and marketing aspects.

### 2. Focus on Academic Excellence & Rigour

We want all students to achieve excellent results, particularly in senior years. Any student of Agriculture will tell you that it got 'much harder' in Year 11 and particularly Year 12. This is very intentional on our part. Results beget results, and when students see those ahead of them excel in a subject, this spurs on those below them that they, too, can do well. We try to make the HSC syllabus as accessible and understandable as possible to ensure all students get to the point of the content with a thorough understanding.

We offer after school Academic Access sessions for students to improve, HSC Revision days and weekends, as well as a focus on being able to understand thoroughly and convey understanding clearly through writing.

Pleasingly in 2018, 92% of our 57 HSC graduates achieved Band 5 or 6, including a 2nd in NSW and 3 students in the top 25 in the state.

Our cities, urban areas, our prosperity and indeed our way of life is only possible due to highly successful and efficient agriculture. These things would not be possible without it. At present there are approximately 6 jobs per graduate out of Agriculture Degrees at University level due to a lack of people inspired to see a future in the area. For the sake of our country and our world, we need the best and brightest going into Agriculture to ensure the future of the world's food supply. It is indeed important for the future of humanity (no less!) that we inspire many, including the highest achieving students, to have a career in Agriculture.

*"Investments in agriculture are the best weapons against hunger and poverty, and they have made life better for billions of people"*

*Bill & Melinda Gates*

