



ADVANCING RURAL QUEENSLAND



AgForce School to Industry Partnership Program



USA Study Tour 2016



*Supported by the Department
of Agriculture and Fisheries QLD*

Introduction

The AgForce School to Industry Partnership Program (SIPP) is a unique primary industry education program that works across Queensland to develop and strengthen partnerships between all sectors of agriculture and engages with primary and secondary schools. The SIPP program engages with primary and secondary students to highlight the importance of agriculture in their everyday lives and assist students to understand the origins of their food and fibre and career opportunities across the agriculture sector and supply chain.

The objective of the USA Study Tour was to investigate an international perspective of agricultural education, including school programs, industry engagement and collaboration and partnerships between educators, students and industry resulting in sustainable and feasible recommendations to RJSA regarding how agricultural education and training in schools can be best positioned to meet future industry needs.

NAAE Conference and USA Study Tour

NAAE Convention

The National Association of Agricultural Educators Convention was held over five days in Las Vegas. The convention was attended by more than 700 agricultural educators. Attendees participated in committees and general sessions to hear updates on the state of agricultural education and current agricultural education initiatives. They also participated in continuing education workshops that delivered the latest innovations in agriscience education.

The SIPP team presented a paper 'Agriculture education in Australia – What can we learn from each other' in one of the concurrent professional development sessions. The paper discussed agriculture in Australia and Queensland, agriculture education in Australia and Queensland, why agriculture education is important, the Australian Agricultural Knowledge Study, SIPP, what the future looks like for agriculture and ag careers in Australia and issues for agriculture education and filling those positions.

The paper was very well received and generated a lot of discussion. The issues surrounding attracting teachers to agriculture are the same in the US as Australia. Only public schools in the US teach agriculture. This is due to membership to FFA – Future Farmers of America – being only available to public schools.

General Session

Agriculture educators prepare students for over 200 careers, to be leaders in the community and advocates for agriculture – the most important industry.

An outstanding teacher shows:

- Excellence in leadership and teaching
- Community engagement
- Real world hands on activities
- Strong relationships with local businesses
- Learning is connected to the students future
- Give students ownership over education
- Doing to learn
- Students are involved in activity outside the classroom

An outstanding post secondary/adult program includes:

- Real life production experience
- Step into production and into real life
- Community extension of high school education
- Leadership, community and citizenship skills
- Needs to be tailored to members
- Build professional network after high school

An outstanding middle/secondary program should:

- Intergrate agriculture into maths, science, english
- Involve community and industry experts
- Hands on approach and community service
- Learning is a life long journey
- Real-world experience

Dr Steve Brown – US Department of Education

- 649 000 student FFA members
- 250 000 alumni FFA members
- 1820 college scholarships FFA approved
- 64 000 students attended the FFA Convention

Teachers need to ask 'who is going to fill my shoes?' Encourage, suggest, ask students to become agriculture teachers. Who was the teacher that made a difference? You are!

FFA program – the priority is to educate and train students to be successful. Farmers are the nations most unsung heros. Legacy of hope and of promise of a future for students.

Dr Jay Jackman – NAAE Executive Director

- 700 pre-registered for conference
- Agriculture teacher was the most important person in his life (apart from parents)
- National FFA Foundation supports NAAE and helps with corporate sponsors (John Deere, Monsanto)
- \$1.7 million in assests
- \$1.6 million programs spent
- Membership increased 1.8% to 8268 members
- 'Perkins' Bill reauthorised, hopefully next year in the 115th Congress
- Don't know what the new administration (President) is going to do so never before has advocacy been more important.
- Advocacy internships available in Washington over the summer
 - o Update members of parliament on ag education
 - o Promotion of ag education
- Teacher recruitment initiative going well – 'Teach Ag'
- 'Communities in practice' – teaching resources and curriculum
- 'CASE' inititutes – caseforlearning.org
- Agriscience Ambassadors Program
- Farmer to Farmer – International experience in East Africa
- Would like convention to because a professional development conference

Professional Development Sessions

Global Learning in Agriculture

Prepare young people to work in global careers, come together with food and fibre with agriculture the common theme.

Global Competence: The capacity and disposition to understand and act on issues of global significance.

Issues of global significance related to agriculture:

- Food security
- Water quality
- Water scarcity
- Trade
- Population increase
- Energy costs
- Cultural differences

Globally competent students must be able to:

- Investigate the world: connect local to global, disposition to learn
- Weigh perspectives: people have different perspectives, work to include perspectives different from ours
- Communicate ideas: can we communicate with diverse audiences
- Take action: participate not bystanders

Models of global learning:

- Add-on: easy to implement, requires no fundamental changes in course content, eg. Add on a reading, guest lecturer or assignment
- Integrated: requires preparation and rethinking of course design, eg. Overlapping global learning goals with course goals.

How is agriculture in my community connected to the global agriculture system:

- Overseas workers in production horticulture exchange of skills and information
- Skilling overseas workers and provide guidance to agriculture industries in other countries
- Migrant worker attends a class/week
- Food preparation from different countries
- Indigenous knowledge application
- Farms that export to other countries

Global learning opportunities in agricultural education:

- SAE Supervised Agricultural Experience: agricultural documentary, shed hunting (elk) – global markets and entrepreneurship
- Classroom instruction: GMOs and different beliefs, 10 spices from grocery store- where do they come from
- FFA: Global nights with different cultural food, chapter visits/exchanges

AgVocates – bridging the gap from farm to table

Eroded consumer trust

- Trend: Consumers are skeptical

- consumers know farming from a distance
- lack of information leads to concern and doubt
- three generations removed from the farm
- Trend: Concern and doubt
 - Not telling the story must be hiding something
 - Transparency builds trust
 - Transparency = information
 - Details make consumers trust
- Trend: Big is bad
 - Consumer trust small family farm or 'traditional' image of farming
 - 97% family owned
 - Have to be open and tell story

Consumers don't know who to trust; consumers' desire for authenticity and transparency is increasing.

- Real facts and real people.
 - Consumers want to know more about food production
 - 67% think it is important to understand how food is produced
 - 65% want to know more about where food comes from
 - Consumers want to hear your story
- Information on demand
 - Consumers are connected 24/7
 - Meet the consumers where they are – online
 - Join the conversation or others will speak for you

What do consumers really want?

- Food safety
- Don't know about production
- Natural safe product
- Buy local
- Taste
- Authenticity and transparency
- What to know the people growing their food and share their values

Transparency

- Health and wellness
- Safety
- Social impact
- Experience
- Convenience
- Price
- Taste

Concern toward food production topics (all above 60%)

- Pesticides
- Antibiotics
- Hormones
- Treatment/welfare
- GMOs

Food purchasing considerations (in order of decreasing concern to consumers)

- Safe food
- Affordable
- Nutritious

- Less chemicals
- Humane treatment
- Conserve soil and water
- Sustainable
- Help feed the world
- Maximise productivity
- Profitable farmers

60% think farmers and ranchers are trustworthy; 54% will give them the opportunity to tell their story. They want to hear from local sources not overseas.

Local is king (in-state): 79% would buy more local food; 59% important to support local.

Guiding principles for consumer connections:

- Speak to the most interested audiences about topics they are interested in
 - o Mums
 - o Millennials
 - o Foodies
- Topics of concern are the same
- Be transparent
 - o A story has more than one side
 - o Passionate about ag and share it
 - o Information = piece of mind
- Engage in dialogue
 - o Listen first and ask questions later
 - o Connect on shared values
 - o Provide assurances rather than technical explanations
 - o Remember emotion rules
 - o Make consumers feel good about their choices
 - o Share your story
 - o Address the issue from your realm of experience
- Science and logics don't help, focus on shared values
- Meet consumers where they area:
 - o Online: social media, google, web, blogs
 - o Places where they think about food

Discover: converse rather than cite

Connect: show you care

Share: tell your story

Confirm: verify understanding

What is your story: personal and relatable



ACTE CareerTech Vision Expo

SIPP also attended ACTE's CareerTech Expo which is one of the largest and most interactive career and technical education exhibitions held in the USA. More than 200 exhibits and hundreds of industry representatives were on hand showcasing innovative tech solutions to help prepare students for success in their hands-on learning.



USA Study Tour – school visits through Texas and California

SIPP visited four schools in each of Texas and California to develop an understanding of how agriculture is taught in the USA, what works at these schools and what doesn't. We also met with Jack Havens who is an Agriculture Education Regional Supervisor in California (there are 6 regions).

Texas

Tilden – McMullen County School

McMullen County School is a small K-12 school to the south of San Antonio. There were 64 secondary students with two agriculture teachers. They teach Ag Leadership – communication, policy and advocacy and Ag Mechanics – shop (building a cattle crush for a local rancher). This school has no livestock and their goal is to send students to college with scholarships. Last year the 22 graduating students had \$500 000 in scholarships. It is an oil area but that is not the focus.



Jourdanton – Independent School District Junior High and High School

This school is currently building new \$4.1 million sheds with an indoor show arena. There are 600 students in the high school with agriculture offered in Year 9 (Ag 1), Year 10 (Ag 2), Year 11 (elective Ag Communication) and Year 12 (elective Ag Mechanics) with three agriculture teachers. Agriculture is not a regulated subject by the state – meaning there are no end of year exams, students just need enough credits to pass the subject.

Students can have 'show' animals as their SAE (supervised agricultural experience) including pigs, lambs, goats, cattle and broiler chickens. These animals can be kept at school or home. Goats can cost up to \$1000 and parents pay for SAEs. Students can also do SAEs at home, e.g. strawberry patch at grandparent's farm, building a trailer at home. Students have to keep record books for their SAE which show time and finances of the project but no technical information.

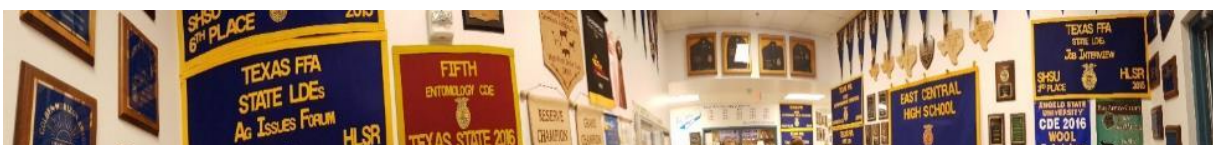




East Central High School

East Central High School is located on the outskirts of San Antonio with the school population of 3400, which includes 500 agriculture students. 75% of students come from a low socio economic background and there is a large catchment and transient population. They have a \$4.2-million-dollar agriculture facility and offer Ag Mechanics (metal and wood), Ag Science (horticulture and animals) and floristry. Their facilities include a greenhouse, indoor show arena, turf, animal pens and workshops and classrooms. Most students keep their animals for their SAE projects at home.

Science comes first with animals/projects second. Students have to write a line in their journal everyday and 20 minutes writing one day a week. They have been national FFA champions on eight occasions and won \$300 000 in scholarships last year.





Madison High School

Madison High School is located in San Antonio with a school population of 3700 students including 1000 agriculture students. They have a \$42 million agriculture facility and are a magnet school for agriculture. If students from surrounding school districts want to undertake agriculture studies at high school, they apply to attend Maddison High School.

Their facilities include:

- Meat science lab with mini chain and smoker where students learn butchery skills
- Ag mechanics labs including metal, wood and mechanical (students restore old tractors)
- Livestock sheds
 - o Cattle
 - o Pigs
 - o Sheep (walking machines for sheep)
 - o Goats
 - o Rabbits
 - o Chickens
- Aquaculture ponds (catfish and tilapia)
- Indoor aquaculture tanks
- Greenhouse including aquaponics
- Floristry lab
- Vet tech lab (mini vet surgery)
- Indoor show arena
- Shop
- Café
- Science labs

They also train guide dogs and have 18 dogs in training currently.



California

Jack Havens, Regional Supervisor

California has 6 regions and they are State Department employees. They run a greenhand competition (32/year) and advanced leadership (7/year). They visit 1/3 of the programs a year and provide reviews and comments. Schools are locally controlled but the State tell them what they have to include in the curriculum. Until 1978 local taxes paid for educations, now 80% of money comes from the State. Money is handed out with no strings attached. There are Ag Incentive Grants that are not to pay salary and the county must match the State donation.

The Ag Teachers Association in California has 700-800 members and an Executive Director who decides on the requirements of programs, grade FFA leadership and SAEs.

Buena Park High School

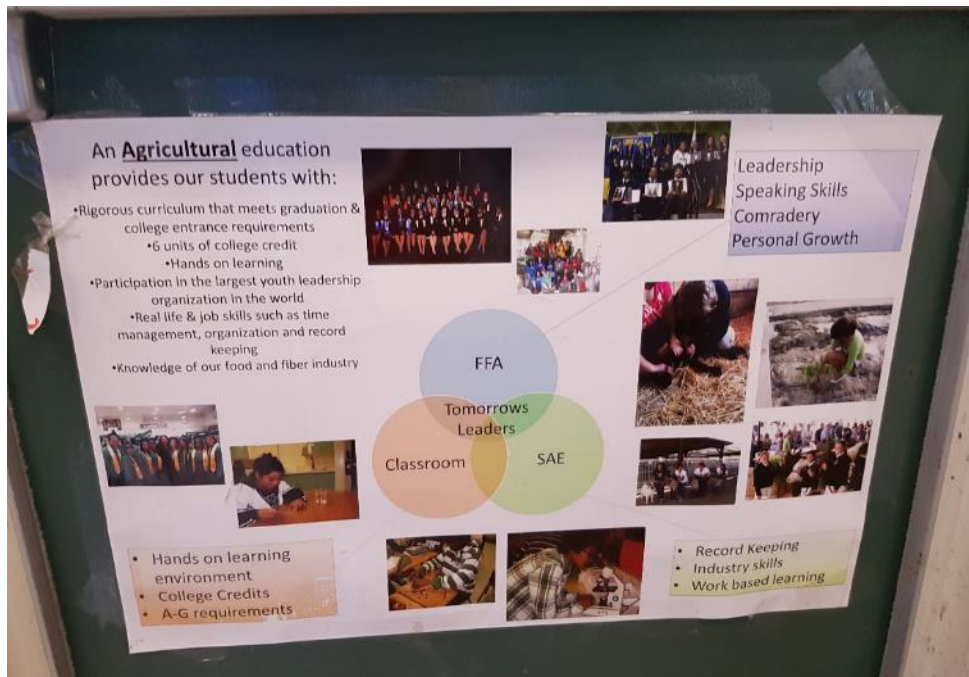
Buena Park High School is situated in Orange County, California and it is a low socio economic area. The school is in the middle of redeveloping their facilities including the agriculture department. There are 3 teachers and 500 students in the agriculture department. The agriculture department run a co-op model for the SAEs. The school buys the animals and the students pay them back at a weekly rate. Some students are sponsored, the sponsor pays for the animal and gets the meat at the end of the project. They also have a co-op cleaning system with a monthly roster and students will do a particular job for a week.

Facilities include:

- Orchard
- Aquaponics
- Floristry
- Pigs
- Cattle
- Rabbits
- Chickens
- Turf management
- Greenhouse.

All of the students must have an SAE and it must be a real project that is tangible (e.g. one student does farm tours for primary school students). They sell produce to the school and have a farm gate stall but no value adding. The agriculture department has had over \$2 million dollars in grants and \$15 000 a year in Ag Incentive Grants from the government.





Norco High School

Norco High School has a student population of 2200 students from years 9 – 12 and is in an area tagged 'horsetown USA'. They have four agriculture teachers teaching landscape, horticulture, cooking, livestock, agriculture science, floristry and ag mechanics. All student's animals for SAEs are onsite at the school. The majority of students have pigs and they also have broiler and layer chickens.

They have a nursery trained horticulture teacher and sell potted colour and other plants to the local community. They have vegetable gardens, blueberries and a farm shop where they sell eggs. Ag Mechanics is metal work (no woodwork) and students sell products they make. Science is embedded in Ag Mechanics (eg. Science behind how cement is made). The floristry department has commercial clients through word of mouth. A student started her own florist business while still in high school.



Fallbrook High School

Fallbrook is a predominately middle class area with a lot of horticulture nurseries employing parents. There are three teachers in the agriculture department with a strong focus on horticulture (because of the area). They also have cattle, sheep, goats, pigs, broilers (processed on-site) for student SAEs. Ag Mechanics includes woodwork and metal work and an introduction into electrical, plumbing and cement.

Two school students are paid to work at the agriculture department by the district. They help with watering, cleaning and feeding of animals and plants before and after school and on the weekends. All students basically will go to college after school with parents trying to discourage students from following them into the nursery industry.



El Capitan High School

El Capitan High School has a student population of 1700 with approx. 300 in the agriculture department. They have four agriculture teachers and facilities include:

- Floristry department
- Greenhouse (hydroponics)
- Pigs (breeding stock – farrowing crates, students will show progeny)
- Goats (breeding stock, students will show progeny)
- Cattle
- Layers and broilers
- Ag Mechanics (metal, wood, electrical and plumbing)
- Meat processing
- Oaten hay
 - o On privately owned land
 - o Tax break for use of land as education
 - o Students drive tractors and bailer
- BBQ pit
- Computer lab (chrome books to replace this year)

There is an onsite caretaker (used to be a sheriff) who owns his house but not the land. The ag department is a \$6-million-dollar facility plus local land owners lend the school their land. The school is situated in an urban area and the animals are very noisy but doesn't seem to be an issue.

We also visited two students SAEs. One student's family owns a layer farm which we visited. He also keeps his projects at the farm. He breeds goats, pigs and sheep, and plants his back field with oaten hay. He has a donkey as a guard animal because of issues with coyotes. The second student was the FFA Chapter President, Blake. He has pigs, a steer and chickens. He raises chicks to point of lay for produce stores. He is going to university next year – Cornell or Kentucky.



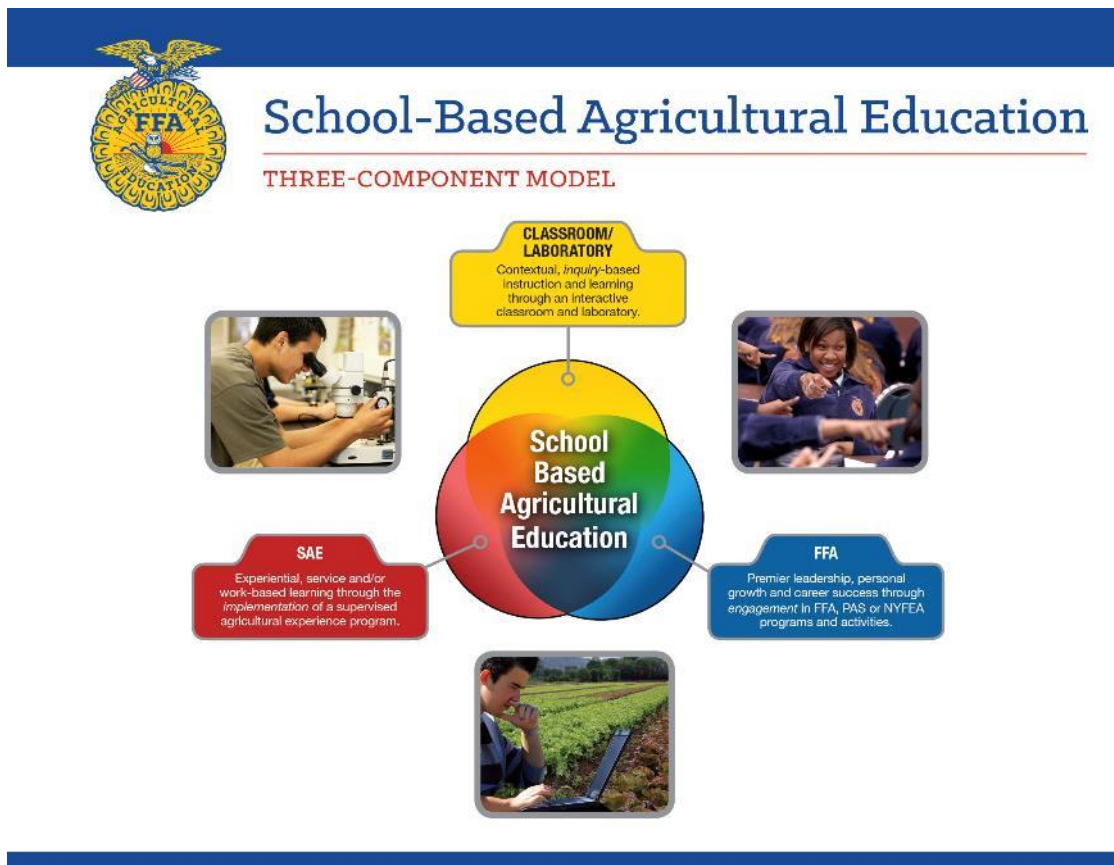


School based agricultural education

Agricultural education is taught in every state of the United States of America with approximately 1000 000 students taught by 12 000 secondary and two-year postsecondary teachers. School based agricultural education consists of three closely related components including:

- Classroom/laboratory instruction (contextual learning)
- Experimental learning/education (SAE)
- Leadership development (National FFA Organisation)

The interaction of these three components helps to ensure students' career success or continuation with higher education related to agriscience/agribusiness following high school graduation.



Classroom instruction

Organised instruction may be carried out in the classroom, laboratory, greenhouse or outdoor setting and includes units based on natural and social sciences such as environmental science, agribusiness, natural resources, aquaculture, food science and safety, animal and plant sciences, entrepreneurship and many others.

See **appendix 1** for example of Ag Biol course from one school.

Experimental learning (SAE)

Supervised Agricultural Experience (SAE) projects allow students to gain the application of their knowledge and learning outside the classroom. An SAE is under the supervision of the agriculture teacher, employer or parents. There are various categories of SAE's such as owning and operating their own business, working at a business, farm or organisation to learn employability and industry skills, or engaging in independent research projects that enhance their learning.

See **appendix 2** for example from one school.

Leadership development (FFA)

At the high school level leadership development is provided through the FFA (Future Farmers of America). Student organisation activities provide students opportunities for leadership, personal growth and career success. Through the FFA students have the opportunity to develop leadership and personal development skills and are encouraged to participate in activities that highlight the success of their classroom and SAE experiences. These may include public speaking contests, agriculture sales and marketing, agricultural issues, food science, meat science, livestock judging and proficiency contests. Many members also have the opportunity to give back through service learning and development projects.

See **appendix 3** for example from one school on gaining points for FFA component of course.

FFA

FFA is an intracurricular student organization for those interested in agriculture and leadership. It is one of the three components of agricultural education.

The National FFA Organisation has 649 355 student members with 7859 Local FFA Chapters. It is an integral part of agricultural education by helping make classroom instruction come to life through realistic, hands on applications.

The National FFA Foundation builds partnerships with individuals, industries, education, government, foundations and nongovernmental organisations to secure resources for the future of agricultural education and student leader development. FFA provides many conferences/workshops and convention (attended by 64 000 FFA members in 2016) for students to attend and develop leadership skills.



The FFA mission: FFA makes a positive difference in the lives of students by developing their potential from premier leadership, personal growth and career success through agricultural education.

The FFA Creed:

I believe in the future of agriculture, with a faith born not of words but of deeds - achievements won by the present and past generations of agriculturists; in the promise of better days through better ways, even as the better things we now enjoy have come to us from the struggles of former years.

I believe that to live and work on a good farm, or to be engaged in other agricultural pursuits, is pleasant as well as challenging; for I know the joys and discomforts of agricultural life and hold an inborn fondness for those associations which, even in hours of discouragement, I cannot deny.

I believe in leadership from ourselves and respect from others. I believe in my own ability to work efficiently and think clearly, with such knowledge and skill as I can secure, and in the ability of progressive agriculturists to serve our own and the public interest in producing and marketing the product of our toil.

I believe in less dependence on begging and more power in bargaining; in the life abundant and enough honest wealth to help make it so--for others as well as myself; in less need for charity and more of it when needed; in being happy myself and playing square with those whose happiness depends upon me.

I believe that American agriculture can and will hold true to the best traditions of our national life and that I can exert an influence in my home and community which will stand solid for my part in that inspiring task.

Discussion

Agriculture education in high schools in the USA is based on a three-component model. The Classroom/Laboratory component relates directly to how we teach agriculture in Queensland. As agriculture is not regulated by the state in the USA there are no end of year exams with students needing to gain enough credit points to pass and gain college entrance. There did seem to be a disparity between what some schools expected from the students e.g. students build a fence to gain all the credits they need to pass, students spend 20 minutes writing one day a week, students need to complete assignments and tests (much like Queensland).

Floristry was included and a big part of the agriculture department of a lot of the schools we visited. There had been a big uptake of floristry as it counts towards a fine art credit. The schools and students are also able to make some money selling floral arrangements.

The second and third components of the three component model – SAE and FFA – are the big differences in the way agriculture is taught in the USA. The SAE component is completed in the student's own time, whether before or after school, during free periods, breaks and on the weekends. Supervision is from the teacher or parents or employer and students are required to fill in a record book. This book records time spent working and financial aspects of the SAE. No scientific recording is required. These projects are very wide ranging from livestock to ag mechanics to research project to an after school job.

As the parents of students wear all costs associated with SAEs there seems to be a 'have/have nots' gap with students not able to afford to purchase animals having no opportunity to work with livestock. Some projects are done at home which leads to the possibility of outside help when completing SAE as it is basically self-regulated. Because a lot of scholarship money can be won at shows from SAEs there is a lot of pressure on students to be the best whatever the cost (e.g. one student's dad had spent \$25 000 on

steers for SAE and the student was paying someone else to care for the animals as he was more interested in football – missing the point of SAE completely). One teacher did say he thought that the amount of money spent on animals was becoming ridiculous as students try to out compete each other. There is no limit on the amount of money spent on animals. There are a large range of shows that the students in the USA can compete in to win scholarship money and prizes which would go some way to offsetting the cost.

Two of the schools had breeding stock which allowed students to purchase progeny for SAEs at a set cost, with one school even allowing for weekly instalments of payment. If SAEs are undertaken in the manner they are meant to allowing students to apply their learning from inside the classroom outside of the classroom, then there is merit in SAEs. There are a number of issues such as cost to parents, time (full curriculum and extracurricular activities), divide between haves/have nots, self-regulation, no scientific aspect to recording book, and parent/teacher/employer supervision. The lack of the need for animal ethics approval, no biosecurity measures and limited to no workplace health and safety measures during SAEs and classroom instruction were also major issues noted.

The leadership aspect of agriculture education is run through the FFA at the high school level and aims for premier leadership, personal growth and career success. This aspect is designed to enrich the classroom/laboratory and SAE instructional components. FFA is, to use a phrase we heard many times in the USA 'like a cult'. Students are very dedicated to FFA and wear their blue jackets with pride. They are all well-spoken and are easily able to engage with visitors and be advocates for agriculture.

Leadership, personal growth and learning to be an advocate for agriculture is something we don't have as part of the agriculture curriculum in Queensland. There are competitions such as 'Lions Youth of the Year' and 'Rotary Youth Leadership Award' that aim to encourage, foster and develop leadership in conjunction with other citizenship qualities in our youth. The qualities sought, apart from academic attainments are those of leadership, personality, sportsmanship, public speaking and good citizenship. These leadership programs are not specifically designed for the field of agriculture and unfortunately Rural Youth is not operating at this time. Junior judging competitions that some students enter in Queensland do offer students the opportunity to refine their ability to make decisions, to demonstrate their capacity to present arguments or a reason behind a decision and a great way to improve their confidence as a public speaker.

The extent to which FFA is integrated into the curriculum in the USA would be very hard to replicate here given our already packed curriculum however the leadership skills, personal growth and community service that they espouse would not go amiss here. We need students to be advocating on behalf of agriculture and the skills in leadership, public speaking and good citizenship will lead them to career success.

Recommendations

- Investigate options for including leadership as part of the curriculum or,
- As a stand-alone workshop/course for agriculture students
 - o Could be an extension of show teams although this limits it to schools with show teams and students on those teams.
 - o Could be an 'Ag Inspirations' type event – 'Ag Vocates' run over 3 days
 - o Approach QCAS Next Generation to see if there are options for running competitions for Ag Public Speaking at local shows/EKKA
- Investigate further the FFA and the various workshops/courses/conventions they undertake to inspire their students
- Student and/or teacher exchange to FFA Convention to inspire – leadership skills, educational tours, workshops with 64 000 students and teachers also studying agriculture

USA Media Coverage

AUSTRALIAN AGRICULTURE

Wed, 12/14/2016 - 8:00am Pleasanton1

Robbie Hamby | Pleasanton Express

The Jourdanton ISD ag department got a visit last week from Queensland Australia when two Agforce school to industry Liaison officers from stopped by the ag building. They were there to discuss how agriculture is taught in the United States, specifically Texas. The pair work for AgForce Queensland which is an organization representing Queensland's rural producers. Texas and Australia have a similar terrain and climate, but Australia struggles with securing enough interest in the agriculture industry as a potential career in youth. The two also traveled to Las Vegas with the School to Industry Partnership Program. Pictured, left to right, Jeff Kennedy, Poteet ag teacher, Tanya Nagle, John Lanier, Jourdanton ag teacher and Ali Briggs.



Section:

FARM & RANCH

KASQ FM 102.3

December 15, 2016 · 🌐

Aussies come to Texas to learn Texas ways. Last week Tanya Nagle and Ali Briggs from AgForce, a lobby group in Australia, visited Texas to observe the way we teach agriculture in our schools. They visited Tilden ISD, the King Ranch, two schools in San Antonio, Texas A & M, and Jourdanton ISD. They were very impressed with our schools and said that the Australian teachers would be amazed at the scope and range of the programs here in Texas, as there was nothing like this in Australia.

They also said that although Queensland, the state they are from in Australia, is 2.5 times bigger than Texas, that is the only thing bigger. "The meals are bigger and the pickup trucks are huge! No one in Australia has a truck that big, and the salads are the size of babies".

John Lanier, Ag teacher in Jourdanton, welcomes Australian visitors Tanya Nagle, left and Ali Brown, right

Loma Foster reporting



Agricultural Biology Syllabus

Course Information

Course Instructor:	Ms. Kerr
Contact Information:	mkerr@fjuhsd.net (714) 626-4375
Course Length:	One Year
Prerequisites:	Completion of Algebra 1 or by Instructor Approval

Course Description

Welcome to Agriculture Biology! This is a laboratory science course designed for the college bound student with a career interest in agriculture. It meets the life science portion of the science laboratory requirement for high school graduation and for the California State (CSU) and the University of California (UC) systems. Using agriculture as a learning vehicle, this course emphasizes the principles, concepts and relationships among living organisms. The course is centered on an extensive laboratory component in order to connect big ideas of life science with agricultural applications as well as written and oral reports, a bug collection, lectures, homework, quizzes and tests, dissections and agriscience projects.

Course Goals

- Use agriculture applications as a relevant vehicle to teach biological principles and improve the scientific literacy of students.
- Integrate core academic areas into agriculture (i.e. math and language arts).
- Improve agriculture literacy of students.
- Meet the laboratory science requirement for admission to the University of California and the California State University system.
- To motivate students to study and pursue careers in agriculture.

Text

Biology: Principles Explorations
Holt, Rinehart and Winston
Copyright 2001

Supplemental Text

Agriscience: Fundamentals &
Applications
Cooper
Copyright 1997

Course Outline

- Introduction to Agriculture Biology
 - Themes of Biology
 - Scientific Method

- Chemistry of Life
- Cell Structures and Function
- Diffusion and Osmosis
- Photosynthesis & Cellular Respiration
- Chromosomes and Cell Reproduction
- Meiosis and Sexual Reproduction
- Mendel and Heredity
- DNA: The Genetic Material
- History of Life on Earth
- The Theory of Evolution
- Populations
- Ecosystems
- Biological Communities
- Kingdoms of Life
- Exploring Plants Physiology
- Exploring Animal Anatomy and Physiology

Class Guidelines

Student Responsibilities

1. Bring to class daily:
 - Homework from the previous class period (if assigned)
 - Binder
 - Pen/Pencil
 - Lined Notebook Paper
 - Lab Book
2. General expectations to follow:
 - **Arrive to class on time** (this means that you are in your seat when 5 minutes after the tardy bell rings). You must sit in your assigned seat unless otherwise instructed by Ms. Kerr. Remain in your seat until the end of the period.
 - **Show respect at all times** to the teacher, other staff members, your peers, and school property.
 - **Be responsible for your own learning.** If you are absent, it is your responsibility to ask Ms. Kerr for missing work and turn it in within the allotted time for make-up work (usually twice the time missed). Note: If your absence is unexcused, NO make-up work will be accepted.
3. Study Habits
 - Take legible notes!

- Maintain an organized binder.
- Prepare for quizzes and test in advanced! (“Cramming” the night before is not the best way to ensure success.)

Assignments

On each assignment, you must list the following information to receive credit:

- Your first and last name
- Period #
- Date
- Assignment Title

All assigned work will be given a due date for completion. Late work may be turned in one class period after the due date for an automatic 20% deduction in the student’s grade. Work turned in later than one class period will not be accepted for a grade.

If you have an excused absence, it is your responsibility to ask Ms. Kerr for missed work. Make-up work for excused absences will be allowed 2 days for each day missed. There will be no make-up work allowed for unexcused absences.

Grading Procedures

Your grade in this class will be based on the following components:

1. Assignments/Homework/Projects/Labs	40%
2. Quizzes and Tests	20%
3. FFA Participation*	20%
4. SAE & Record Books**	20%

* Note: You must participate in approved FFA activities each semester and earn 40 FFA credits to earn full credit for this portion of your grade. These points can be earned during class, after class, in the evenings and weekends. (Field days, contest practices, chapter events, farm improvements, county fair, etc.) Upcoming events will be listed on the board in class.

** Note: All students enrolled in an agriculture class must conduct an approved SAE project each semester and keep accurate, up-to-date record books under the guidance of an advisor. All Ag Biology students will complete an approved agriscience project during the first semester that will fulfill this requirement. During the second semester, students will select a SAE to complete with advisors approval. To earn full credit in this part of a student’s grade, they must complete 40 hours of work for the year.

Grading Scale

Final Grade	Percent
A	90%-100%
B	80%-89%

C	70%-79%
D	60%-69%
F	Less than 60%

Agriculture Class Agreement

Please read the following documents carefully:

- Course Syllabus
- Class Agreement and Grading Policies
- Lab Safety Contract

Once you have reviewed the documents listed above, please complete this form and return it to Ms. Kerr by Friday, **September 11th**. If you have any concerns or questions, please don't hesitate to ask.

Student Agreement

I, (print your name) _____, have read and understand all of the documents listed above. I understand the requirements of the class and the expectations of me, and I agree to fulfill these. I have reviewed the grading policies of this class and understand that participation in FFA activities and maintaining an SAE/Record Book will have an effect on my grade. If I have any questions, I will ask Ms. Kerr for further explanations.

Student Signature: _____ Date: _____

Parent/Guardian Agreement

I have read the documents listed above and understand that my student is to keep a section of his/her binder containing all work h/she does for this course. I understand that my student will be responsible for abiding by the general rules and class guidelines. I have also read and understand the grading policies for this class (including the percentages of the student's grade that will be devoted to FFA and SAE/Record Books). If I have any questions or would like to discuss my student's performance in the class, I will contact Ms. Kerr by email (mkerr@fjuhsd.com).

Parent/Guardian Printed Name: _____

Parent/Guardian Signature: _____ Date: _____

Appendix 2.

Supervised Agriculture Experience Project (SAE)

- This is a mandatory **20%** of every student's grade. A grade will drop two letter grades if this component is not met.
- A project can be anything student chosen, instructor approved, and ag related.
- 50 hours per semester is required to get an "A" in this category of the student's grade.
- Projects can cost money or make money – neither is a requirement of the project.
- All information about the project is to be recorded in the students record book (**at school**)
- **All hours** worked for this project will be **OUTSIDE** of school.

Suggested Projects available at home/school or both:

Home

- Mowing lawns
- Gardening
- Watching & Walking **dogs** (for others goats)
- Bird Aviary
- Reptiles / small animals
- Home Improvement Orchards *
- Ag Job (PetSmart, vet clinic, etc)
- You choose!

School

- Mowing Lawns *
- Vegetable Gardens
- Animals (pigs, sheep, chickens, steers,
- Floral Sales *
- Farm Store Sales *
- Avocado, Citrus & Deciduous
- Farm Improvement & Clean - up *
- Website Design *

* Denotes student projects at the school that are entirely free to the student to participate they only require time after school, before school or on the weekends. It is the student's choice when they will work the hours.

Record Book List of to Do's

- Cover
- Calendar
- Agreements
- Budgets
- Journal through December 31st
- FFA Activity pages
- Community Service/ School Activities
- Financial pages 8a-12
- Complete Proficiency App
- State Degree App (if you are eligible)

Appendix 3.

Monthly FFA Classroom Focus Activities = 2 FFA points to know your focus

Ag Earth



August – Get Your Grade Night
September – FFA Motto, Committees, O/C
October – To practice brotherhood....& Timeline
November – Creed P1 & P2, & Colors
December – FFA Creed P3, P4 & P5
January – Symbols & Officers @ all levels
February – FFA Emblem & Degrees
March – FFA Jacket & Official Dress
April – FFA Mission Statement & Membership

Ag Biology, Vet Science, Floral Design, Soil Chem & AP Environmental



August – Get Your Grade Night
September – Chapter degree
October – CDE's
November – Proficiencies
December – Impromptu & Extemporaneous Speaking
January – Prepared & Job Interview Speaking
February – Agriscience Projects
March – State Degree
April – American Degree

Ag Economics & Government



August – Get Your Grade Night
September – What is parliamentary procedure?
October – Classification of motions.
November – Subsidiary motions
December – Incidental motions
January – Privileged motions
February – Unclassified motions
March – How to structure a GOOD debate
April – Parliamentary Procedure Presentation