

COLLEGE OF AGRICULTURE, FOOD  
& ENVIRONMENTAL SCIENCES

# cultivate

ISSUE 2 SPRING 2017

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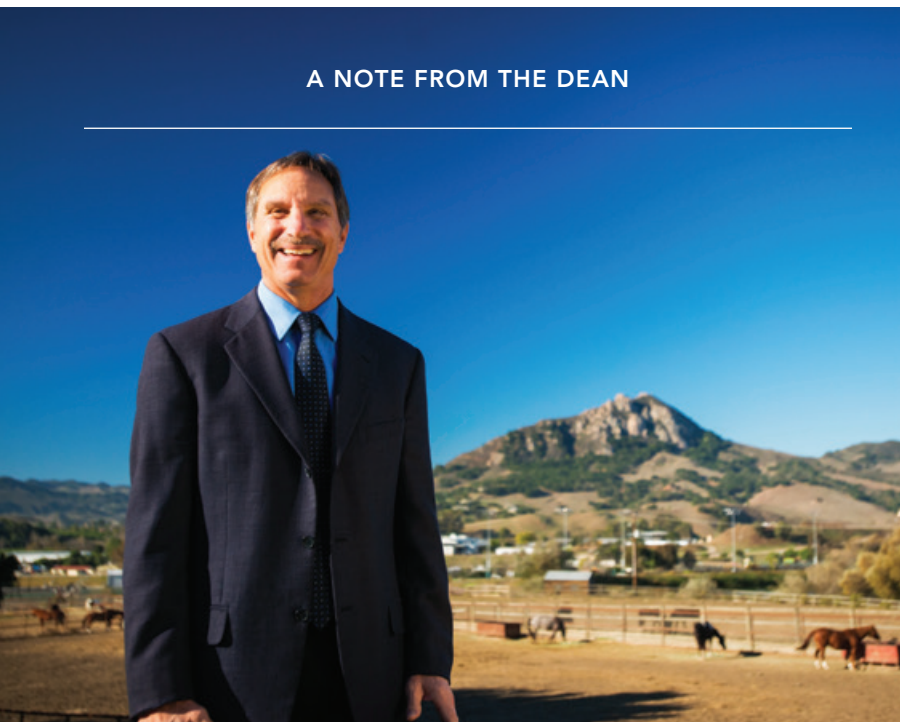
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## BUILDING THE COLLEGE OF THE FUTURE

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CAL POLY



## Looking to the Future

Dear CAFES Alumni and Friends,

Here on the Central Coast — as with much of the state of California — we are experiencing a true spring after many years. Our hillsides and fields are green, our water reservoirs refilled, and there's a great energy and sense of purpose as we look ahead.

To celebrate the season, we've included in this second issue of *Cultivate* stories that take a deep look at some of our work and the issues we grapple with throughout the year. We've also included a story with input from experts across our industries about the kind of experience and expertise they need from our graduates, both now and into the future.

**The renaissance of agriculture is here, at Cal Poly, now. We are positioned to deliver tomorrow's agricultural leaders today.**

With your help, our students graduate ready to meet these global demands. Will they in the future? The answer is yes — if we continue to partner together to provide them the best tools for success.

As always, I appreciate your ongoing support for the college and look forward to hearing from you with any ideas or questions you may have.

Warmest regards,

Andrew J. Thulin | Dean

SPRING 2017

# cultivate



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Pictured from left to right: Cal Poly President Jeffrey D. Armstrong, Cotton Rosser, his wife Karin Rosser and Dean Andrew Thulin.

## Cotton Rosser is the College's 2016 Honored Alumnus

**Cotton Rosser** (Animal Husbandry, '52) was named the 2016 College of Agriculture, Food and Environmental Sciences Honored Alumnus. Rosser was recognized at the annual Honored Alumni Banquet on Nov. 3 in the Chumash Auditorium. At Cal Poly, Rosser was the captain of the Rodeo Team and won the All-Around and National Saddle Bronc Championships. He was responsible for establishing the traditional Poly Royal Rodeo event in 1951. In 2013, he was awarded an honorary doctorate from Cal Poly.

In 1956 he purchased the Flying U Rodeo Company and since then his name has become synonymous with rodeo. Rosser is known for his innovations, introducing crowd-friendly components that are now standard in the sport. To date, Rosser has produced more than 3,000 rodeos. He is a consistent and enthusiastic supporter of the Cal Poly Rodeo Team and a key reason that the team enjoys such a prestigious reputation today. "Cotton Rosser is a true champion of Cal Poly's rodeo program," said Dean Andrew Thulin. "Each year he continues to pay it forward by supporting this treasured Poly Royal Rodeo — making sure that our students receive the recognition that they deserve."



## World Ag Expo

The World Ag Expo in Tulare, California, was held from Feb. 14-16 — celebrating the 50th anniversary of the event. The College of Agriculture, Food and Environmental Sciences hosted a booth for prospective students and an alumni reception for past graduates and industry partners.

Pictured above: These smiles look #CalPolyProud as alumni reunited and networked at our alumni reception during the World Ag Expo.

### CALENDAR OF UPCOMING EVENTS

**APRIL 6-8** Open House

**APRIL 7-8** 77th annual Poly Royal Rodeo

**APRIL 8** Tractor Pull (1 p.m.)

Ag Pavilion (9 a.m. – 3 p.m.)

Alumni Beer and Wine Garden  
at Engineering Plaza (2:30 – 5 p.m.)

**JUNE 18** Spring Commencement



## Unified Wine and Grape Symposium

The Cal Poly Wine and Viticulture Department hosted a reception for alumni and friends at the Unified Wine and Grape Symposium in Sacramento on Jan. 27. More than three dozen students, faculty and staff attended the two-day trade show, exposing them to the latest developments in the wine and viticulture industry, as well giving them the opportunity to network with industry professionals. Recent Cal Poly graduate Paul Mawdsley poured wines that he made in conjunction with the college's inaugural summer undergraduate research program with Professors Federico Casassa and Jean Dodson Peterson. Student attendance was funded by proceeds from the annual winemaker dinner and auction held each year by the Wine and Viticulture Department.





Photos taken by  
Jean Paul Molyneux

Students picking  
strawberries from the  
Cal Poly Strawberry  
Center's first research  
related organic crop.

# Cal Poly Strawberry Center

The Cal Poly Strawberry Center, established in the summer of 2014, has become one of the most respected authorities in strawberry research and pest management.

It is the only organization of its kind, devoted solely to applied research in strawberries, incorporating both teaching and learning experiences for Cal Poly students, faculty and California strawberry farmers.

Strawberries remain one of the top three valued crops in California, estimated at \$2.4 billion annually. The Cal Poly Strawberry Center, in partnership with the California Strawberry Commission, is researching alternative methods to control disease and pests.





The California Strawberry Commission began its partnership with Cal Poly with a three-year, \$1 million pledge of support. An additional two years have now been guaranteed, with the recent approval of funding for a fifth year.

Students and staff are immersed in studying many aspects of strawberry production: pest control, cultivar development, disease management, and so on. At any given time, more than a dozen ongoing research projects, many pertaining to soil borne disease, are underway.

"I couldn't feel better about what we are doing," said Gerald Holmes, director of the Cal Poly Strawberry Center and an experienced plant pathologist.

The Center, which started with a 1.5-acre strawberry planting on university farmland adjacent to Highway 1 in San Luis Obispo, now has fields totaling about 3 acres, all planted on campus and dedicated to various research projects. An additional 7 acres have been identified as practical locations for field research.

There are 16 undergraduate students working and doing research in the center and two graduate students working on master's degrees; each project addresses a real need in the strawberry industry.

The students come from a variety of majors, including horticulture and crop science, biology, agricultural communication, and bioresource and agricultural engineering.

"Students are eager to get involved once they learn of the research we are conducting," said Holmes. "It is a fantastic Learn by Doing opportunity for them and paves the way to internships and jobs in the industry."

## Ongoing Research

In the 2015-16 fiscal year alone, the Cal Poly Strawberry Center was awarded more than \$500,000 in grant funds. To date, the center has brought in more than \$1.4 million in external funding from a variety of sources, collaborating with people across the country.

"The Cal Poly Strawberry Center has established itself as a vigorous and respected organization within the California strawberry industry and the research community," said Holmes.

Kelly Ivors, associate professor of plant pathology, was the first to diagnose the anthracnose epidemic in 2015; anthracnose is a fungal disease that attacks all parts of the plant, causing poor plant establishment and often death. Ivors and a group of students screened more than 3,000 strawberry transplants for the disease as a service to the strawberry industry in an effort to gauge the risk posed statewide to 2016 plantings. The results of the study were disseminated throughout the state's strawberry industry and helped prevent future losses.

"I really enjoy working with an industry that acknowledges the importance of applied research and is willing to support it," said Ivors. "Offering routine diagnostic services to strawberry growers allows us to keep an eye on the industry by identifying the current threats to fruit production."

This research led to a collaboration with Professor Jim Adaskaveg, a plant pathologist at UC Riverside, to investigate new treatments for the control of anthracnose. The team was able to identify a new natural product that is effective against the disease; it is being registered for use and expected to be available to strawberry farmers next year.

"This is an excellent example of the collaboration between our center, other researchers



**Students are eager to get involved once they learn of the research we are conducting. It is a fantastic Learn by Doing opportunity for them and paves the way to internships and jobs in the industry.**

*Gerald Holmes,  
director*



and the industry,” said Holmes. “Students were trained and intimately involved every step of the way — giving them real world and industry experience.”

The Center is also seeking a \$4.8 million grant from the U.S. Department of Agriculture to collaborate on a project with UC Davis, UC Riverside, UC Santa Cruz and the University of Florida, that will focus on breeding strawberries for disease resistance and would build a long-term strategy for disease management in the strawberry industry.

## Organic Research

In July 2016, the Cal Poly Strawberry Center began conducting its first experiment with organic strawberries. More than 14,000 plants were planted in July at the university’s organic farm on about half an acre.

By the time the strawberries were planted in the field, the experiment was months in the making, with cover crops of wheat and barley planted in the same location six months prior.

A team of undergraduate and graduate student researchers were predominantly focused on a disease called *Verticillium* wilt — a widespread, soil borne disease of strawberry plants that is a challenge industry wide. Until recently, strawberry farmers controlled the disease using soil fumigation with methyl bromide. However, use of that fumigant is now banned.

“The objective is to evaluate the effects cover cropping may have on disease suppression,” said Holmes. “There was evidence that wheat planted as a cover crop would suppress certain diseases and we wanted to test



that hypothesis by using it to suppress one of the most common threats to strawberry plants.”

The organic strawberry research included one additional step: using rice bran, plastic mulch and water to deprive the soil of oxygen, a process called anaerobic soil disinfestation, in planned segments of the strawberry field. The plants will be studied through the summer.

The Strawberry Center collaborated with Professor Ashraf Tubeileh of the Horticulture and Crop Science Department for the project. Tubeileh oversees the organic farm for the College of Agriculture, Food and Environmental Sciences.

Ryan Gilmour, a senior agricultural and environmental plant sciences major, is using the experiment as his senior project. “The best part about being involved in a project of this magnitude is that what I am doing will make a big impact on the industry I will be working in,” Gilmour said.

## Collaboration Grows

As the Cal Poly Strawberry Center continues to grow, so does cross-campus collaboration.

Amy Lammert, associate professor of food science,

partnered with the center to use strawberries as the main ingredient in her students’ product development course. Products included strawberry salsa, barbecue sauce, a sweet and savory strawberry spread, strawberry tzatziki, chutney, sushi and strawberry marinara. Plans include a focus on strawberry varieties for a course in sensory evaluation.

The Cal Poly Dairy Innovation Institute also worked with the center to make strawberry chunk ice cream. The new flavor was sold on campus and used at various campus events to promote Cal Poly programs.

In addition, Professor Bo Liu in the Bioresource and Agricultural Engineering Department works closely with the Cal Poly Strawberry Center to provide support such as aerial mapping using drones and other technical assistance.

Other proposed projects include Tim Delbridge (agricultural economist in Agribusiness), Jay Singh (director of the packaging program) and Wyatt Brown, (postharvest expert in Horticulture and Crop Science).

“One of the beauties of strawberry farming is that it touches almost all disciplines in some way,” said Holmes.



Cal Poly's future distilling and brewing production systems will be housed in the planned Fermentation Sciences Institute.



# Craft Beer Boom

Cal Poly alumna **Karen Tate** (Psychology and Human Development, '91) and her husband, **Brett**, owners of the Dust Bowl Brewing Co. in Turlock, California, have tapped into a growing micro brewing industry, fueled by a passion for craft beer and a longstanding dream.

Last July, the couple, along with business partners and Cal Poly alumni **Brett Honoré** (Industrial Technology, '04) and his wife **Camy** (Agricultural Business, '03), expanded their business to open Dust Bowl Brewing's Brewery Taproom, featuring a full-service taproom and restaurant. They distribute beer from Eureka to Visalia and throughout the state of Nevada, and have plans to expand their distribution to Southern California, the Central Coast and the state of Washington.

The micro brewing industry continues to flourish in the United States, with craft brewers reporting a 13 percent increase in volume in 2015, the eighth consecutive year of double-digit growth, according to a report in Forbes magazine.

The College of Agriculture, Food and Environmental Sciences is expanding its current wine and viticulture program to include curriculum and research into the burgeoning fermentation sciences field, all housed within the Fermentation Sciences Institute. The Institute will be comprised of three buildings: a Center for Wine and Viticulture, a Grange Hall, and a third building — still to be designed — that will house distilling and brewing production systems supporting teaching and research to better understand the influence of such factors as yeast, malting and hop varieties on these processes.

"As we move forward in the design of Cal Poly's own fermentation sciences teaching and research program and related building, we look to people like the Tates and Honorés who are industry leaders — as well as alumni — to help shape our vision," said Dean Andrew Thulin. "The science of fermentation is a booming field, with job opportunities for graduates in brewing, distilling and pharmaceuticals."

Dust Bowl Brewing Company's new Brewery Taproom is located directly off Highway 99 in Turlock. The expanded brewery, a 30,000 square foot facility, will allow the business to produce up to 20,000 barrels a year, compared to the 4,800 barrels they were limited to at their smaller location. The new taproom boasts two 20-tap towers, featuring 18 different style Dust Bowl brews and two local ciders.

If you are planning on visiting, reservations are recommended and can be made by visiting [dustbowlbrewing.com](http://dustbowlbrewing.com).



**Dust Bowl Brewing owners Brett and Karen Tate and Camy and Brett Honoré.**

Brett Tate said that making sure a qualified workforce is available to meet industry demands is integral. "We have invested in our infrastructure and are on the way to becoming a regional microbrewery," he said. "Jobs will continue to be abundant in the craft beer industry. Specifically, I believe there will always be room for beer that is high in quality and consistently brewed with high standards."

Trained people, he said, are at the forefront of any established brewery. Job opportunities exist in sales, marketing and public relations, event coordination, business, social media, culinary, quality control, manufacturing process and brewing expertise.

"The Learn by Doing philosophy that Cal Poly students are exposed to could not be more

appropriate and critical to a successful future in the craft beer and spirits industry," said Brett Tate.

Karen Tate said that her own love of beer began in San Luis Obispo. "I loved my time at Cal Poly and the education I received," she said. "San Luis Obispo also offered me my love of beer. My roommates and I earned our personalized steins at Spikes drinking their beer from 'Around the World' over and over again."

She grew up on a dairy in a small town, but planned to pursue a different path by studying psychology at Cal Poly. "Little did I realize how time and opportunities would change my plans," she said. "Fast forward and my life has been blessed. It has brought me a wonderful husband and three boys, the ability to work with my sisters and my parents in our family dairy business and most recently the opportunity to start a brewery with my husband in 2009."

Their son, Brock, is now a freshman at Cal Poly studying agricultural business. "It has brought me joy to learn of how many students he has already met whose parents I met when I was at Cal Poly more than 25 years ago."



# Rooted in Our History

BY LAURA SORVETTI | University Archives

In the spring of 1933, Cal Poly students organized an open house they named "Poly Royal: The First Annual Agricultural Show." The one-day event was organized by the school's chapter of the Future Farmers of America (FFA), established that year.

The goal for Poly Royal was to prepare FFA students for the Interstate Junior Livestock Show in South San Francisco. Campus administrators also hoped that the event would bring the school's unique educational opportunities to the attention of the public and help to gain the support of the state legislature, which was poised to abolish the school as the result of a critical 1932 statewide report on higher education.

The afternoon's program included a stock parade, farm project exhibits, a barbecue, dairy and beef

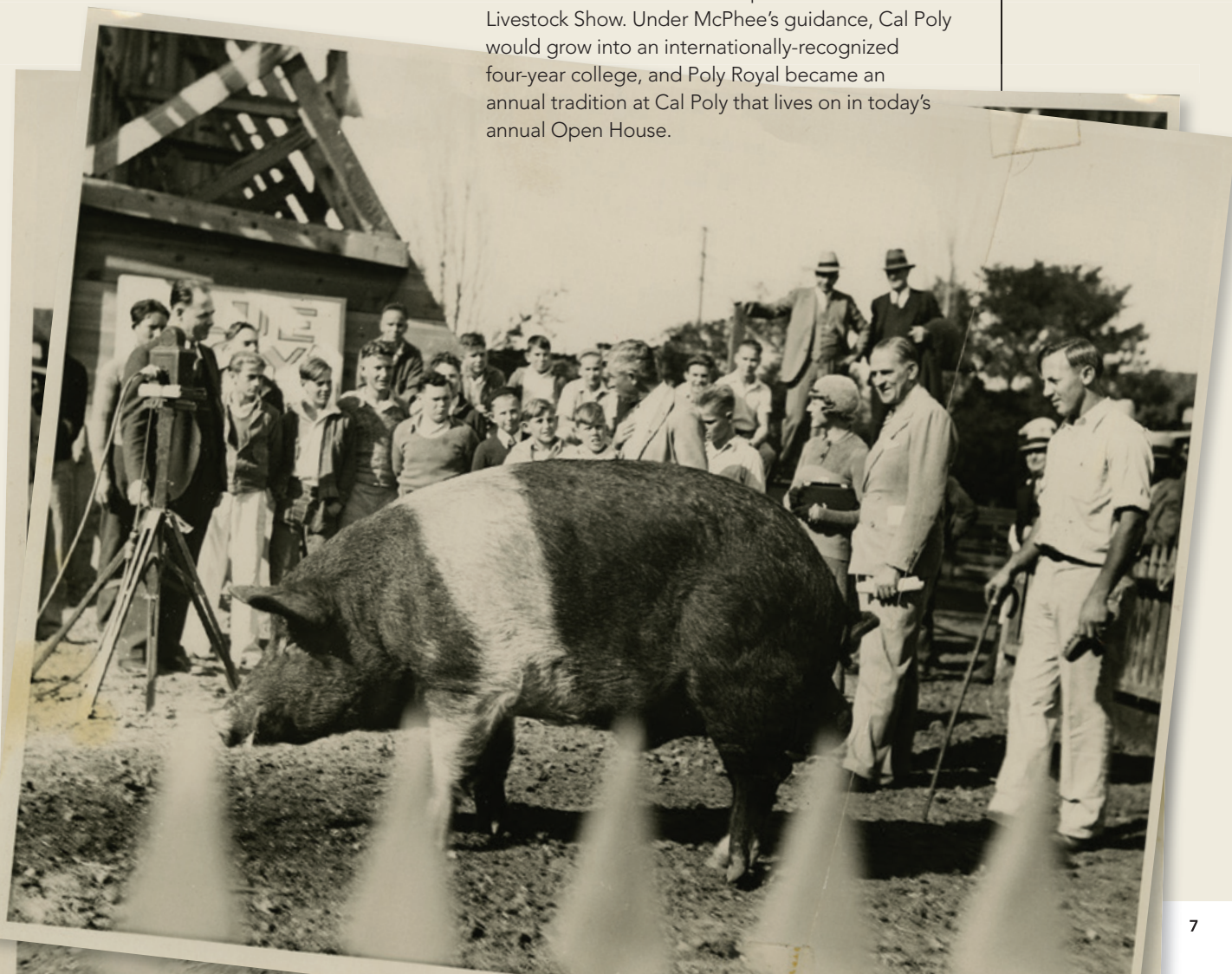
cattle judging, agricultural mechanics demonstration, tours of the industrial shops, and a baseball game. The evening concluded with a dance at the Crandall Gymnasium.

Featured guests were the stars of the 1933 film *State Fair*. Actor and humorist Will Rogers presented "Blue Boy," the 1932 Iowa State Fair Grand Champion Hampshire boar, as a gift from the Fox Films Corporation.

Also in attendance was Julian A. McPhee, chief of the Bureau of Agricultural Education. McPhee, a supporter of the university since 1931, would in two months be appointed president of Cal Poly, after the resignation of President Benjamin Crandall.

By all accounts the day's events were a success. FFA students went on to compete at the Junior Livestock Show. Under McPhee's guidance, Cal Poly would grow into an internationally-recognized four-year college, and Poly Royal became an annual tradition at Cal Poly that lives on in today's annual Open House.

**From left to right:** Julian A. McPhee, Roy Rogers, Grand Champion boar "Blue Boy," State Fair actor Sally Eilers, and State Fair director Henry King, with students looking on. Photo courtesy of University Archives.



## The Cal Poly rodeo program continues to make history.

Cal Poly Rodeo Coach Ben Londo shares plans for this year's Poly Royal Rodeo.



### **Q: Why move the Poly Royal Rodeo to Alex G. Spanos Stadium?**

**A:** Simply put, we outgrew our venue. The Cal Poly rodeo program offers a world class rodeo experience and we continue to improve it. We care about our fans and decided it was time to find a venue to best feature the sport and give everyone in attendance an experience they will never forget. Last year more than 6,000 spectators attended the rodeo. This year, we plan to double that.

### **Q: What event categories will be included in the rodeo?**

**A:** The Poly Royal Rodeo has been held on the rodeo grounds for more than 70 years and is a mainstay event deeply rooted in Cal Poly's history. All of the college rodeo events will be included: bareback, saddle bronc, bull riding, team roping, tie down roping, breakaway roping, and barrel racing.

### **Q: What changes should spectators expect to see in the new arena?**

**A:** As we only have one chance at a first impression, we are going big. This year we are featuring the extreme motocross stuntmen the Flying Cowboys, a

premiere country music concert featuring the Chancey Williams and the Younger Brothers Band, and many other family attractions to add to the already incredible action.

### **Q: When you joined the Cal Poly Rodeo program in 2013, did you ever envision that the program would expand this much?**

**A:** I knew we had all the potential in the world to grow significantly, but this much this fast? Maybe not. It's been a great ride so far and I'm excited to see where we can go over the next few years.

### **Q: What is your crowning achievement so far as coach?**

**A:** As a Cal Poly alumnus, and a member of Cal Poly's Rodeo Team while a student, getting to give back to this program and to this university means a lot to me. It is rewarding to see how much this opportunity means to students. We can reach more students with the scholarships we now offer and the overall positive impact this program has on its students is pretty amazing. It's an honor to be a part of it.



The College of Agriculture, Food and Environmental Sciences is investing now in state-of-the-art buildings, technology and programming to meet the global demands graduates will encounter in their chosen professions.

# college of the future

**The challenges posed in the 21st century are many: feeding a growing population with less labor; meeting the demands for more efficient, sustainable production methods; navigating a global marketplace; and fulfilling expectations of a new high-tech generation.**

The college's programs are continuously reviewed for relevancy both now and into the future, with the constant goal of remaining one of the most forward-thinking educational institutions in the areas of agriculture innovation, food production and life sciences.

"Our students across all curriculums are not only learning how to meet today's demands, but are also being prepared to meet the global challenges forecasted in the next 10 to 20 years," said Dean Andrew Thulin. "We are investing today, to meet tomorrow's needs."

The college works in close collaboration with industry leaders to ensure that programs are on target to achieve its strategic vision, including that graduates are job-ready from day one. Major plans are also underway at the college to build several new facilities that ensure students learn in environments similar to industry, and that foster the college's role in serving as an incubator of critical thinking and discovery, including the J.G. Boswell Agricultural Technology Center: A Place for Applied Sciences and Innovation; the Center for Wine and Viticulture; and the Plant Sciences Complex.

Looking forward, we spoke with a handful of veterans in their fields to better understand where they foresee future demands and the role that Cal Poly graduates will play in meeting them.



### **Steve Barnard on International Production Trends**

*President and CEO of Mission Produce Inc.*

Given the demands on agriculture, including food production, it is often no longer feasible to not consider a global market when making business decisions. "It really depends on what product or crop you are growing," said alumnus Barnard (Agricultural Business, '75).

"Looking to where the future markets are, or will be, for us means China, Eastern Europe, South America, and Southeast Asia."

Mission Avocado started in California 34 years ago primarily

shipping avocados in the state. The company's operations now include Peru, Chile, Canada, Mexico and Europe, with plans to build a distribution center in China underway.

"We are all over the place now," said Barnard, adding that he expects his company's reach to become more and more diverse. "It's critical to have multiple sources of supply because of weather, or labor strikes, or pest issues."

California avocado growers alone cannot meet existing consumer demands and currently represent about 8 percent of the market. Mexico holds the largest share of production at about 72 percent, he said. "California is the only place avocados grow in the United States and growers face limitations such as land, water, and labor costs and regulations."

In order to meet continued and growing consumer demand for avocados, five years ago Mission Avocado expanded to Peru and Chile, planting more than 10,000 acres.





Barnard said that in the past the California avocado market included multiple varieties. Today, demand is for one variety, Haas, because it ships better, tastes better and has a thicker skin and higher oil content than other varieties.

"In order to supply the world with avocados, we have to have alternate supplies from our various growing regions," Barnard said.

College graduates will enter a fast-paced industry, that's constantly in motion, he said. "It is a changing world, and they are going to have to think fast with their heads up and their ears open," said Barnard, who serves on the college's Dean's Advisory Council. "The technical skills needed are changing every day but communication skills remain critical. Whatever area they choose to excel in, they need to have a passion for it."



## Dave Murray on Automation

*Partner in Andrew and Williamson  
Fresh Produce*

Technology is revolutionizing the way that food production industries do business, as companies sprint forward to meet growing market demands as efficiently and sustainably as possible.

Cal Poly alumnus Dave Murray (Agricultural Business, '95), a native of Salinas, California, has worked on the Central Coast in berry farming for the past 22 years. Today he is a partner of the large multi-national grower shipper company Andrew and Williamson Fresh Produce.

"Until very recently, the industry had done things in a very similar

way for not only the last 20 years, but for 30 to 40 years prior to that," said Murray. "In the past, there was an abundant supply of laborers seeking the tasks required of field production. That is no longer the case."

Murray said that younger generations are now seeking more skilled jobs, and that more options and global education levels are driving a shortage in the labor needed to harvest fruit in the field.

"We are not trying to create an industry that is labor free, that is not realistic," said Murray, who serves on the Cal Poly Strawberry Center's advisory board. "This is about trying to create systems that allow humans to be more efficient to enjoy higher skilled jobs and earn more money."

Automation is helping to balance the need for increased production to meet increased consumer demands in an industry that relies heavily on a large labor market, when fewer workers are now available, he said.

**The 75,567-square-foot J.G. Boswell Agricultural Technology Center, expected to be complete in 2021, is designed to foster an environment of collaboration that is paramount across all industries. The 11 Applied Sciences Innovation Labs within the building will connect all parts of the agriculture, food and environmental science industries and give students access to the tools and techniques they will need to meet future demands.**

"With any challenge comes opportunity," said Murray. "It requires taking a good hard look at production activities, and looking for ways to use technology and innovative thinking to reinvent the system."

One example, he said, is how beneficial insects (long used in production methods) are now applied in strawberry fields. In the past, the insects were released by hand using something similar to a salt shaker. The industry is in the process of developing a mechanized way of dispersing the insects, using a tractor and calibrating the process to achieve exacting results.

"We never thought it necessary when there were plenty of people working in a field, but now that is not the case, we have to reassess," he said.

Other challenges, such as picking fruit only when it's red in color and knowing which to discard because of imperfections, are not so easy to remedy with mechanization.

"The ability to see and decipher what is good and what is not, but also the sensitivity of human touch, is hard to mimic with automation tools," said Murray. "When picking very soft fruits, that human touch is invaluable. To try to mimic that is very difficult to do — not impossible, but it will take time. I don't know if we will ever be in a place where we can say we have something fool-proof. But I do believe that we will continue to get better at mechanizing what we can mechanize."

The opportunities are endless for future graduates, he said. "College students in fields of math, science, engineering and technology can now find opportunities to get involved because as the challenges evolve, so do the opportunities," Murray said. "I have long believed that the real solutions are going to come from those just graduating or maybe still in college."



## Rick Antle on Labor

*CEO Tanimura & Antle*

Investing directly into employees, paying competitive wages, and providing affordable workforce housing has proven to be an effective strategy for Rick Antle, who has led Tanimura & Antle since 1982, both as president and now CEO.

With farming operations from Salinas, California, to Yuma, Arizona, the company grows produce such as lettuce, artisan greens, celery, broccoli, cauliflower and specialty red onions on the 18,000 acres it owns and in partnership with growers on an additional 36,000 acres.

A continuous evolution of technology has led to efficiencies in many areas, said Antle, enabling the industry to use half the amount of water as it did in the past and streamlining land preparation and transplanting.

"There will always be a need for agricultural workers," said Antle, a Cal Poly alumnus (Crop Science, '79). "But automation has allowed us to become more efficient. Today, for example with our PlantTape automated transplanting system, three people can do what 32 people were doing in the past. But we still need people. A knowledgeable person driving a tractor increases output by 10 percent each day."

In 2015, the company found itself in a labor shortage. "We were facing a shortage equivalent of 250 people for our Salinas

production," he said, adding that he experienced a similar problem in Arizona. "Because of the high cost of living, workers could no longer afford to stay in the area. I knew we needed to provide housing," said Antle.

The company invested in agricultural employee housing, building apartments in Monterey County to house much of its labor force, allowing employees to work full-time, year-around.

"As word got out, I was approached by Yuma-based workers who hadn't been coming to Salinas to work because they couldn't afford housing there," said Antle. "So, we began actively recruiting, adjusting pay scales and making housing available. We were able to meet all of our employee needs for 2016, using domestic workers."

The investment paid off for the communities as well, he said, by adding to the local economy. "These people are now a part of the community, investing back into it. That is why we support immigration reform that has a pathway to citizenship."

In February, the company became the largest agricultural company in Monterey County to offer shared ownership with its employees. The Employee Stock Ownership Plan is a way, said Antle, of allowing employees to share in the value of the company and encourages them to see the roles that their jobs play in that growth.

When hiring employees, Antle said that critical thinking and problem-solving skills are crucial. "More importantly, we need people who have the ability to teach and mentor those people who haven't had the same level of education. That will become increasingly important as technology continues to evolve," he said.



**Our students across all curriculums are not only learning how to meet today's demands, but are also being prepared to meet the global challenges forecasted in the next 10 to 20 years. We are investing today, to meet tomorrow's needs.**

*Dean Andrew Thulin*







## Chris Meyer on Experiential Marketing

*CEO of George P. Johnson*

Creating immersive experiences has become an integral part of event management. Traditional trade shows are no longer a viable introduction of products or services as people attending events have higher expectations and a strong desire to be engaged. Today, an infusion of technology, data-driven marketing and creativity is necessary to personally connect consumers to brands through the events, forums and experiences they attend.

Cal Poly's Recreation, Parks and Tourism Administration Department, within the College of Agriculture, Food and Environmental Sciences, changed its name in 2016 to the Experience Industry Management Department — making it the first of its kind in California.

The new department name encompasses the national shift that blends tourism, travel, experiences, social media, travel platforms, sustainability, food, wine, culinary arts, culture, sports, outdoor recreation, conventions and meetings, and events.

"Experiential marketing now transcends the concept of events, whereas in the past it was looked at as more of a tactical function than the strategic function it is seen for today," said Chris Meyer, CEO of global marketing agency George P. Johnson.



Increased ways of collecting data to measure not just the execution of an event but the outcomes that result from the event — increased consumer engagement, sales or attendance, for example — and the onset of the digital revolution are driving the value of face-to-face experiences, said Meyer.

"It is human nature to want face-to-face experiences," said Meyer, who serves on Cal Poly's Experience Industry Management Department's advisory council. "The question is, how do we reinvent these things and make them more impactful to the user?"

Increased technologies play a large role in creating valuable experiences, but the creative and strategic thinking on the front-end of a project is what makes it succeed, he said.

"Younger generations expect a fully integrated physical and digital experience," Meyer said.

The value of sculpting experiences is seen in all industries, such as sports, retail, hospitality and

healthcare. "College graduates will have expansive opportunities in this arena," said Meyer.

"Experiential marketing is now understood to have broader impacts for business and government — and that comes from an awareness at the academic level and in the industry."

Engineers, artists and technologists and designers will all now be involved in developing experiences. "The future will be about multi-disciplinary teams that are applying all sorts of different experiences and thinking to events," Meyer said. "If you are the type of person that likes a constant challenge, working on a multi-disciplinary team and are comfortable in a hospitality type of environment, then this is the place for you."

Cal Poly's Experience Industry Management Department is embracing that role, he said, by preparing graduates who will be prepared to contribute to an industry that is an economic driver.

**The Center for Wine and Viticulture, planned to open in 2020, will feature a bonded, 5,000 case production, teaching and research winery, as well as classroom and laboratory space providing students with a learning environment similar to what they will experience in the wine industry. The new facilities will provide students with access to state-of-the-art equipment and learning opportunities critical to preparing them for the industry's future challenges. It will also provide a Grange Hall to provide space for academia, industry and the community to come together to learn, connect and celebrate. Cross-department collaboration is essential as experience industry management will be a key component of this program.**

# Definition of success

**1 a:** degree or measure of succeeding  
**b:** satisfactory completion of something  
**c:** the gaining of wealth, respect or fame **2:** a person or thing that succeeds



1

## Victory

Dairy science sophomore Jillian Tietje, pictured fifth from the left, was selected to play on the 2017 International Intercollegiate Polo Team. In January, she helped bring the team to victory against England during the International Intercollegiate Challenge Cup held at the WestWorld Equidome in Scottsdale, Arizona. "Getting to play with other players from different universities and diverse backgrounds will definitely add to Jillian's Cal Poly experience," said Megan Judge, coach of the Cal Poly Polo Team.

2

## Ag Ambassador Conference

Cal Poly Ag Ambassadors hosted the 2017 State Ag Ambassador Conference Jan. 27-29. More than 75 Ag Ambassadors participated in the three-day conference including students from Fresno State, Cal Poly Pomona, Modesto Junior College, College of the Sequoias, Consumes River College, and Reedley College. The conference began at Cal Poly in 1995 under the leadership of retired Professor Joe Sabol. The conference had not been hosted at Cal Poly since 2010. Agricultural communication major and Ag Ambassador President Mary Allen led the charge of bringing it back, using the event as her senior project. Bringing this annual tradition back to Cal Poly strengthens California agriculture and encourages student leadership.

3

## Future Leaders

Three students from the College of Agriculture, Food and Environmental Sciences were among 20 Cal Poly students recognized for their awards and other accomplishments by state lawmakers on the floors of the state Assembly and Senate in Sacramento on Feb. 13. The students selected to attend because of their achievements were Jose Alvarez, an agribusiness major; Dawn Mones, an agricultural and environmental plant sciences major; and Matt Ruby, a dairy science major. "These fine young men and women from all six of our colleges will be future leaders in their respective fields," said university President Jeffrey D. Armstrong. While in Sacramento, students met with the Office of Gov. Jerry Brown and with representatives from each student's respective Senate and Assembly districts.

4

## Western Bonanza

Cal Poly's annual Western Bonanza Junior Livestock Show — the largest student-run exhibition of its kind on the West Coast — was held Feb. 17-19, at the Paso Robles Event Center. The student-led Western Bonanza began as a senior project in 1985 and has grown to be one of the largest and most successful student-run jackpot shows with 640 exhibitors and 3,800 entries.

More than six months of student planning leads up to the event. A management team of 30 students began initial preparations for the event in September, with an additional 104 students coming on board during winter quarter. "It is extremely rewarding to see it all come together," program adviser Hailey Rose Switzer said. "These students are intuitive, hardworking and able to think outside of the box to improve the program. This year, we maxed out the fairgrounds' capacity."

5

## International Embryo Technology Society

Animal science undergraduates Kaitlyn Krautkramer and Ashley Higginbotham were selected as finalists and awarded second and third place in the poster competition at the International Embryo Technology Society conference in Austin, Texas, in January. Each student was awarded a \$1,000 travel grant from the society, and given a \$200 cash prize for their achievements. Krautkramer and Higginbotham both began their projects during the college's inaugural Summer Undergraduate Research Program. In addition, graduate student Corie Owen was one of six students whose abstracts were selected to be presented at the conference. She was awarded a \$1,000 professional development grant by the college. "Student research in the field of embryo transfer and its associated technologies and students' participation in events such as this, work toward the overall objectives of improving the reproductive efficiency of domestic and feral animals in order to improve the nutrition of the world," Professor Fernando Campos said.



# Ag Showcase

**Molly Gilmartin**, a third-year agribusiness major, attended the 28th annual Ag Showcase prepared to network with industry professionals. "With more than 100 companies in attendance, there was a variety of company representatives to talk to, as well as a diverse range of jobs and internships available to students," said Gilmartin. "I hope the connections I made at Ag Showcase will help me further my career, and ultimately lead to future employment opportunities." Gilmartin hopes to work in sales or marketing after graduation. She is the treasurer of Cal Poly's Agribusiness Management Club and a member of the National Agri-Marketing Association. She served as a committee chair for the student-run Ag Showcase, which allows students to partner with companies for internships and potential industry jobs.



# The J.G. Boswell Agricultural Technology Center Receives a \$1.5 Million Pledge of Support



**When students graduate, they will be prepared to handle the industry challenges happening now and in the future.**

*Jim Marderosian*



Jim and Michelle Marderosian, longtime supporters of Cal Poly's College of Agriculture, Food and Environmental Sciences and key leaders in the citrus industry, have pledged \$1.5 million to the college's new J.G. Boswell Agricultural Technology Center.

The gift will fund a new plant pathology lab that will be used to diagnose and explore plant diseases and disease control strategies.

Jim Marderosian said that he and his wife Michelle hope the gift will inspire others to invest in the Learn by Doing education Cal Poly is known for.

"The plant pathology lab in the J.G. Boswell Agricultural Technology Center will give Cal Poly students the ability to research different environmental effects, diseases and agricultural pest issues to compete with the ever-changing world conditions," Jim Marderosian said. "When students graduate, they will be prepared to handle the industry challenges happening now and in the future."

Centrally located in the heart of campus and at the intersection of Via Carta and North Poly Vue Drive — the main campus thoroughfare — the J.G. Boswell Agricultural Technology Center and its Applied

Sciences Innovation Labs will serve as the new focal point for the College of Agriculture, Food and Environmental Sciences, as well as a highly visible and tangible example of applied interdisciplinary research in action.

Architecturally engaging and modern in design, the building will become a hub of activity on campus, where communities of students, faculty and industry can gather, share and work together on the most challenging — and most promising — issues facing the agriculture and food industries.

The 75,567-square foot J.G. Boswell Agricultural Technology Center is expected to be complete in 2021.

This is not the first time that the Marderosians, who both attended Cal Poly in the 1970's, have pledged their support to future generations of Cal Poly students. In 2015, the couple donated more than \$100,000 to the college, funding new automation equipment in the BioResource and Agricultural Engineering Department's electronics lab; enabling continued enhancement of the Trestle Vineyard by the Wine and Viticulture Department; and purchasing a flatbed/field truck for use in picking and producing citrus on campus.

Jim Marderosian founded Bee Sweet Citrus in 1987 in Fowler, California, as an independent packer and shipper of California oranges. In the last 30 years the company has expanded and grown to be a leader in the industry, and now ships citrus products including Navel and Valencia oranges, lemons, grapefruit and mandarins throughout the United States and overseas through export.

The Marderosians have a daughter and three sons: Chelsey, Thomas, Marcus and Steven. The two youngest sons are enrolled at Cal Poly studying agricultural systems management. Their oldest son, Thomas, graduated from Cal Poly in 2013 and now works for the family business running the technical department. Chelsey, a CPA, also works for the family businesses.



Eleven applied research labs, each dedicated to an important, emerging issue in agriculture and the food production industry.

Plant Pathology

Physiology and Genomics

Soil, Water and Air Quality

Food Safety Teaching and Research

Food, Nutrition and Metabolism Analytics

Culinary

Sensory Analysis

Product Development

Food and Beverage Analytics

Health and Performance

Animal Physiology

# J.G. BOSWELL AGRICULTURAL TECHNOLOGY CENTER

## A Place for Applied Sciences and Innovation



The College's continual pursuit of excellence and focus on applied research in agriculture, food and environmental sciences requires it to provide its students with the most dynamic Learn by Doing experiences.

That is why the College will soon be breaking ground on one of the most advanced educational and experiential facilities on campus: J.G. Boswell Agricultural Technology Center: A Place for Applied Sciences and Innovation.

Students will work together in a cluster of state-of-the-art labs, where they will be able to explore, discover and find new solutions in an energizing, stimulating environment.

The building will be a part of the larger Science and Agriculture Teaching and Research Complex, a 74,517-square-foot building featuring research labs and technology space to benefit Cal Poly's colleges of Agriculture, Food and Environmental Sciences; Science and Mathematics; and Liberal Arts.

To make a gift or learn more, contact:

Russ Kabaker, Assistant Dean of Advancement and External Relations

[rkabaker@calpoly.edu](mailto:rkabaker@calpoly.edu) or 805-756-6601

# CAL POLY

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Pictured left to right are dairy science junior Amber LaSalle, environmental management freshman Mark Borges, agribusiness junior Blair Brookes, and first runner-up winner, dairy science junior Tony Lopes.

## First Runner-Up

Cal Poly dairy science junior Tony Lopes was named the first runner-up at the Young Farmers and Ranchers State Collegiate Discussion Meet on Feb. 25 in Modesto. Lopes, from Gustine, California, serves on the ASI board of directors and is president of the Los Lecheros Dairy Club.