Rodeo Rock Star
Student Entrepreneur
Quincy Freeman

Swanton Pacific Ranch
An inside look at Cal Poly’s living laboratory
FROM THE DEAN

THE FUTURE IS BRIGHT

Some recent research on the high demand for graduates with degrees in agriculture caught my attention, and I thought it worthwhile to share it with you.

A Georgetown University study reveals that recent college graduates with degrees in agriculture and natural resources have some of the best employment success in the nation, surpassed only by graduates with degrees in health and education. This research suggests bright futures for our current students, who from day one roll up their sleeves and gain valuable hands-on experience in the expanding disciplines of food, agriculture and environmental sciences. A few of those future graduates are featured in these pages of Agriview. Explore how they set themselves apart from other students across the nation.

At Cal Poly, in the College of Agriculture, Food and Environmental Sciences, we are fortunate to have seen tremendous growth in applications to our programs. Rising stars across diverse disciplines come to gain knowledge and experience and build bright futures for themselves and for the industries they proudly serve.

Rest assured, Cal Poly is responding forcefully to the call from industry to produce the next generation of resourceful professionals and innovative leaders, the kind of well-trained people who will help solve society’s increasingly complex challenges of feeding the world and caring for its resources. Thank you for your continued support.

Dave Wehner

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On the cover: Agricultural Communication major Quincy Freeman sports one of her original designs. Photo by Elly Jo Photography.
FIRST IN THE NATION

Dairy Science graduate student Xiomara Elias-Argote (left) earned first place in a national Master’s Thesis Award Competition focusing on food and agricultural sciences. Her award-winning research examined the effects of food processing on nutrients in milk. The competition is sponsored by the American Association of Hispanics in Higher Education (AAHHE); the U.S. Dept. of Agriculture-National Institute of Food and Agriculture (USDA-NIFA); and Texas A&M University.

“This great program inspires Latin people to pursue higher education, and it creates connections between students and mentors,” said Elias-Argote. “I learned how to be a leader and to give back to the community by recruiting and inspiring other students to keep studying.”

For her work, Elias-Argote received a $3,000 stipend, was designated a USDA Graduate Fellow and participated in the AAHHE Career Preparation Institute in March.

POLYBUILT TO LAST

Each year, a handful of innovative BioResource and Agricultural Engineering (BRAE) students set out to design and build a quarter-scale tractor from the ground up, as part of the American Society of Agricultural and Biological Engineers (ASABE) International Quarter Scale Tractor Student Design Competition. Dubbed “PolyBuilt,” this extracurricular team epitomizes Cal Poly’s Learn by Doing philosophy through design, fabrication, event coordination and leadership.

“PolyBuilt students gain valuable hands-on, collaborative experience that puts them a step ahead of their peers when they graduate and enter the workplace,” said BRAE department head Richard Cavalleto. “And when they come home with national recognition, like in 2009 when we brought home first-place awards in the Innovation, Safety and Ergonomics categories, it’s even sweeter.”

The 2012 team is hard at work as the competition — set for May 31–June 3 in Peoria, Ill. — approaches. Your support can make a big difference. If you’d like to help this year’s PolyBuilt team build a complete tractor from the ground up, and gain practical experience in design, tractor performance, manufacturing processes and strength of materials analysis, visit www.quarterscale.calpoly.edu.
WESTERN BONANZA LEADS TO STUDENT SCHOLARSHIP

Student Malorie Bankhead, who grew up showing animals herself, exemplifies how that experience can contribute to a lifetime of leadership opportunities. Recently, she was named top scholarship winner by the National Cattlemen’s Foundation in Nashville, Tenn. “I am thankful for the support of beef industry members for young people like me who are passionate about agriculture. I hope to enter into a career in agricultural communications, specifically in the beef industry, and this scholarship will help me make that happen. It’s so inspiring to see the next generation of students at Western Bonanza following the traditions that make this industry so strong.”

SENIOR PROJECT HITS THE JACKPOT

It began humbly enough, as Animal Science major Mark Reichle’s (ASCI, ’85) senior project. Today, Cal Poly’s Western Bonanza Junior Livestock Show is in its 28th year and has become the largest student-run jackpot show in the United States. The 2012 show, held at the Paso Robles Event Center in Paso Robles, Calif., boasted more than 490 exhibitors aged 9 to 18, nearly 2,000 animal entries and a total payout of $45,000. “It’s great to see how the show has evolved. It really had a humble — but very enjoyable — beginning,” recalled Reichle.

This year’s five-ring junior livestock show attracted exhibitors and sponsors from all over the Western United States. Each ring was equipped with a camera to live-stream the show to enthusiasts as far away as Kansas and Hawaii.

“This team of 30 student managers and more than 90 committee members who plan, host and promote this huge event should be proud of the impressive annual show that Western Bonanza has become,” said advisor and Animal Science Department Lecturer Wendy Hall. Hall has overseen Western Bonanza since 1997.

Among those student managers is Malorie Bankhead, a Communications major from Livermore, Calif. Bankhead, who as media manager is charged with telling the world about Western Bonanza, can’t stop beaming about the experience. “We arranged promotions on local radio stations; the traditional TV and newspaper outlets were there; and our social media outreach was bigger than ever, with live-stream broadcasts, the blog site and nearly 3,000 Facebook followers,” she said.

Like many involved in the show, Bankhead was raised with an agricultural background. “I was born on a cattle ranch and I’ve had a passion for agriculture my whole life. I was involved in FFA and 4-H. Showing animals taught me a greater responsibility and that working hard for something really does pay off in the end. It shaped my work ethic.”
CAL POLY STUDENT ATTENDS USDA 2012 AGRICULTURAL OUTLOOK FORUM

Agricultural Science major Jose Ruiz was one of only two California university students and 24 students from universities across the United States to attend the USDA 2012 Agricultural Outlook Forum in Arlington, Va. Ruiz, a third-year student from Oxnard, was selected on the basis of his essay, “Agriculture as a Career,” and by the recommendation of Dean David Wehner.

Participation at the forum enabled Ruiz to hear from former secretaries of agriculture and to explore career opportunities in the industry. “Being selected was a great chance to learn more about the future of agriculture,” said Ruiz. “Agriculture is an industry where I can work both with my hands and my mind. I like to say that I did not choose agriculture as a career path. Agriculture chose me.”

THAT’S A WRAP!

Recently, Cal Poly Chocolates student managers teamed up with a group of Graphic Communication (GRC) students to create a new package and logo for the student-made fair trade sweets. Anna Nakayama and Simon Zhao, two Nutrition majors who oversee the production and promotion of Cal Poly Chocolates, needed a faster way to wrap the chocolates and approached Cal Poly’s GRC department with the challenge. The result is a new, eye-catching package that was born out of the Phoenix Challenge, an annual product design and printing competition.

“The new package saves 25 percent in labor time and won first place at the Phoenix Challenge,” noted Nakayama. “You can’t beat that!”

BOUND FOR WASHINGTON

Agriculture Future of America (AFA) and college administrators selected three outstanding Cal Poly students among a group of 40 collegiate men and women to travel to Washington, D.C., for National Ag Day on March 8. Kevin Esau (AGB), Christine Woodman (AGED) and Becca Fisher (AGB) participated in training sessions, attended a luncheon on Capitol Hill and networked with policymakers and others who are passionate about agriculture and the legislative process. “It was an opportunity of a lifetime,” commented Woodman. “I’m appreciative of the chance to interact with the industry and government agencies who help shape the future of agriculture in America.”
It’s the rodeo lifestyle and my passion for art and fashion that got me noticed and has given me a start, but it’s my Cal Poly degree that’s going to get me to the finish line.
When Quincy Freeman saddles up one of her three horses and hits the competitive rodeo circuit, it’s hard to take your eyes off the 21-year-old Cal Poly student. And that’s not just because the women’s rodeo team captain has impressive roping and riding skills. Freeman typically competes in vividly decorated, highly personalized clothing and boots of her own design, bringing a playful, feminine touch to the often staid styles of traditional Western wear.

When Freeman was still in high school, her distinctive look caught the eye of representatives from Ariat, a leading manufacturer of Western riding boots. They saw Freeman make a splash at the 2009 National High School Rodeo Finals and promptly invited her to design a line of boots, belts and clothing. Called the Quincy Collection, the colorful pieces reflect many of Freeman’s interests: Mexican art, tattoos, rose motifs and vintage cowgirl themes.

“I wanted to bring boots to the rodeo world that I’d want to wear myself, something youthful and fun — dual-purpose boots you could wear riding or to a Willie Nelson concert,” said Freeman. “I have always been very creative, so it was natural for me to combine my love of art with my love of rodeo. I started out making things for myself, like belts that I hand painted, decorated with rhinestones and whipstitched. It got a lot of attention, and now Ariat has given me a once-in-a-lifetime opportunity to work with them.”
This experience has opened my eyes to a fascinating industry that is constantly striving to provide the best Western wear to American traditions that are close to my heart — ranching, cowboys and rodeo.

Having grown up the youngest of five kids on a ranch in Reedley, Calif., Freeman clearly has rodeo in her DNA. Her father, Bill Freeman, a cattle rancher, started the first online cattle trading company, and one of her uncles, Joe Marvel, is a world champion bronco rider. But it is the women in Freeman’s family — riders all — who are Freeman’s greatest inspirations. “My heroes have always been cowgirls,” said Freeman. “My grandma, Rosita, would dress up, put on lipstick, and go out roping and riding. She’d always look beautiful, like those amazing vintage cowgirl pinups.” To honor her family, Freeman named the boots in her first Ariat collection after relatives.

Cal Poly is also something of a family affair for Freeman, whose father, uncle and sister are all alumni. “Growing up, I always had my eyes on Cal Poly,” Freeman said. “And the school has a great rodeo team, which is another reason I wanted to be here. My dad competed on the men’s team in the late ’60s.” Freeman joined the rodeo team in her freshman year. Now a junior, she is proud to be captain of the four-woman team.

Freeman is majoring in Agricultural Communication and credits her studies with helping her succeed as an entrepreneur. “My communication classes have given me a big confidence boost with my public speaking,” she said. “And my business classes have been invaluable. Cal Poly has also expanded my love of agriculture. Even though I grew up on a ranch and compete in rodeos, I was not exposed to all aspects of the industry. I have really come to understand how important it is to respect and preserve our country’s agricultural heritage.”

Freeman’s eye-catching look caught the attention of Ariat.

Quincy’s dad, Bill Freeman (second from left), was captain of Cal Poly’s national title-winning team in 1970.
CAL POLY RODEO: A WINNING LEGACY

Rodeo has been a Cal Poly tradition for more than 70 years. Steeped in Cal Poly’s Learn by Doing ideals, Cal Poly rodeo has produced more world champions, collegiate champions and Rodeo Hall of Fame inductees than any other college team. Cal Poly rodeo has inspired generations of young students to attend college and has been instrumental in helping young athletes obtain a first-class education.

During the late 1940s and early 1950s, Animal Science alumnus Cotton Rosser led the Cal Poly rodeo team as captain, and as the team’s leader earned multiple national championships. “I probably wouldn’t have gone to college if it weren’t for Cal Poly rodeo,” he said. “Thanks to the Learn by Doing educational approach, I worked hard, and I was successful. Everything that I have I owe to Cal Poly.”

Fast-forward 60 years: Quincy Freeman — this year’s women’s team captain — exemplifies that same hardworking attitude. “She has such a huge and positive energy about her in everything she takes on,” said coach Tony Branquinho. “From practicing to competing and the effort she puts into school and her design work, it’s amazing to see this small young woman have such a big aura about her. She sets a great example to young people in the arena — and beyond.”

COWGIRL CHIC

When she set out to design her introductory line of boots for Ariat in 2011, Quincy Freeman was given free rein, and the results turn heads. The company produced silk screens from Freeman’s original freehand drawings, which were reproduced using boldly colored embroidery threads and Swarovski crystals. “We discovered Quincy’s custom-painted tack on the competitive rodeo circuit and recognized that she had a unique look that our customers would love,” said Shane Johnston, director of Western footwear for Ariat and a Cal Poly alumna (AGB ’06). “Quincy brings a unique combination of skills to the process. She offers fresh creative talent and Western tradition along with a strong ability to roll up her sleeves and tackle a challenge. That really sets her apart among young artists.”

“I would love to continue in the Western fashion industry after graduation,” Freeman said. “This experience has opened my eyes to a fascinating industry that is constantly striving to provide the best Western wear to American traditions that are close to my heart — ranching, cowboys and rodeo.”
LIVE and LEARN

Cal Poly students can spend days, weeks or years studying in a unique setting at Swanton Pacific Ranch.

Al Smith (above), whose family founded Orchard Supply Hardware, donated the Swanton Pacific Ranch to Cal Poly, his alma mater, in 1993.
A unique part of the Cal Poly experience occurs in a “classroom” 180 miles north of San Luis Obispo. It is a place where textbooks and lectures provide only a slice of the education. Otherwise, students learn their lessons from 1,600-pound cattle or 100-year-old redwoods. They learn that being able to safely retrieve water samples during a storm is as important as being able to analyze the water back in the lab.

At Swanton Pacific Ranch, 3,200 acres of multipurpose land on the coast 15 miles north of Santa Cruz, Cal Poly students get a chance to live the university’s Learn by Doing philosophy, supplementing their education by doing research and gaining invaluable practical experience in a distinctive environment. Most of the 500-plus students who visit the Ranch annually come for weekend field trips, but others stay for three-to-five-week summer programs or internships that last months.

“What makes this truly unique is the setting we have here,” said Dr. Brian Dietterick, professor of hydrology and watershed management and the Ranch Director. “We are right on the coast. We have a diverse landscape and diverse land activities, all within one watershed that is renowned for its overall beauty.”

Swanton Pacific Ranch was owned by Cal Poly alumnus Al Smith, who grew the Orchard Supply Hardware chain to what it is today. Out of appreciation for the value of the Learn by Doing education he received at Cal Poly, Smith decided to donate the land to his alma mater in 1993, shortly before he died. Smith’s goal was for Swanton to be “kept intact and natural, a lab and a classroom for Learn by Doing forever.” Dietterick and the entire staff at Swanton Pacific are committed to fulfilling that goal.

Dietterick lives in a converted one-room schoolhouse on the Ranch during the summer and spends the rest of the year making about 30 trips from his campus office in San Luis Obispo. At least a dozen people — staff, graduate students, undergraduate students and interns — are at the Ranch at all times. At its peak in the summer, about 30 to 40 students are living and studying at
Swanton. Although the Ranch is used by Cal Poly students in such varied fields as biology, engineering and even English — “They came up and did Shakespeare in the woods,” Dietterick said — it is primarily divided among three disciplines: forest management, livestock and crops.

The Ranch includes 1,100 acres of forest thick with majestic redwoods; 1,600 acres of lush grazing land that feeds up to 700 cattle at peak times; and 80 acres of fertile farmland that supports dozens of herbs, 12 varieties of apples and oat hay. The products are sold via partnerships with outside companies or direct to the public, and the proceeds help fund the Ranch.

From timber to cattle to crops, the land yields valuable resources — more than 30 million tons worth since 2004 — and Cal Poly faculty and students are exploring the most efficient and environmentally sound ways to harvest them. “It’s a public trust,” said Steve Auten (FNR ’98), who specializes in forestry as the Ranch’s Resource Manager. “On my first day as a student intern I was told, ‘This is your ranch.’ That really had an impact on a kid from the suburbs. It’s a lot of responsibility.”

The same is true a few miles away, where Livestock Manager Gordon Claassen teaches students to achieve the delicate balance of producing beef economically and naturally. “Here we have a high enough concentration of animals that you can experience every facet of beef production,” Claassen said. “It’s not just theoretical, not just abstract. It’s living, breathing, growing. That’s what makes the Swanton Pacific experience unique.”

Another unique element of the Ranch is that students from various disciplines live and work together. This creates a synergy that expands their education even more, said Jena Casey, M.S., who works in research and education support at the Ranch. “At the Ranch, we have livestock and ranchland students interacting with forestry students. You get these people together, and it builds this whole concept about relationships,” she said. “With the watershed, the water is going to go through the forest and pass through the cropland and go by the cattle. How do we prioritize these systems? It’s all about the big picture.”

The students have a chance to learn their industry’s best management practices, but also to help advance technology in various disciplines. “We want this to be a world-class research facility,” said Dietterick. Livestock students, for example, have recently been studying how ground temperatures affect the quality of grazing land. In the nearby creeks, students have been researching the spawning area for coho salmon and steelhead trout to gain a better understanding of whether land management practices are affecting those species. Another project has involved collecting more than a decade’s worth of samples from Little Creek to determine the impact of timber harvesting and other natural events on the water quality.
Christopher Marquis, a senior from Glendora, Calif., spent 10 weeks this fall at the Ranch as an intern working under Dietterick on the Little Creek project. “It’s been great,” Marquis said. “I’ve gained a lot of hands-on experience that students in my field wouldn’t be able to have unless they came to Swanton.”

Those experiences go beyond the science, though. The students who study at Swanton must learn plenty of real-world lessons. For example, in the forest you need to always park your truck “fire ready” (read: ready to make a quick escape). Students learn to be prepared for the unexpected when working outdoors. A fallen tree could block a road, or your partner could slip and break a leg. “You get out in the woods and something is going to happen, and you are going to have to be the one to respond,” Auten said. “There is so much more to this field-based education that you don’t really get until you get out and start living it.”

The appeal of the Ranch education is personified by Shane Larson, who had an internship at Swanton as an undergrad. After completing the Sustainable Forestry and Environmental Practices summer course, he moved into a temporary two-year position following the Lockheed Fire. “I really don’t feel like I’m waking up to go to work when I’m here,” Larson said, “which is nice.”

Wi-Fi in the Woods
Technology and Modern Conveniences Improve the Opportunities for Education and Research at the Ranch

In recent years, Swanton Pacific Ranch has undergone $1 million worth of improvements, including a $250,000 communications system, according to Brian Dietterick, the Ranch Director. The upgrades are apparent in several high-tech classrooms, which have high-speed wireless Internet and the capability to connect to lectures back at campus. In addition, two buildings have been renovated to include comfortable quarters for visiting faculty, with most of the amenities they’d have at a hotel.

Further improvements, with the planned $4 million Swanton Pacific Field Camp, are on the drawing board. Today, most students who visit spend the night in two large yurts, but the expansion would include 12 cabins, each of which could sleep up to four people.

The continued expansion is intended to make Swanton an even more accessible destination for Cal Poly faculty and students. “More and more,” Dietterick said, “we’re not only going to have animal science and natural resources management students here, but students from throughout the university.”


Cal Poly team places second in prestigious national landcare competition

A team of 14 Cal Poly students recently brought home a second-place finish in the Professional Landcare Network (PLANET) Student Career Days. The annual three-day competitive event brings students enrolled in horticulture programs from universities across the country to compete in events that prepare them for a career in the green industry. More than 60 colleges and universities participated in this year’s event.

Each year, Cal Poly’s Horticulture and Crop Science Department sends a team to compete, and over the past 20-plus years, Cal Poly has regularly placed in the top 10 overall. Adviser Dr. Jason Lewis said, “Finishing second in the nation was a great reward for the hard work the team put in. It shows the high caliber of Cal Poly students and the results of our Learn by Doing approach to instruction.”

Hosted during spring break at the Kansas State University campus in Manhattan, Kan., the competitions and workshops included Hardscape Installation, Exterior Landscape Design, Landscape Maintenance Operations, Compact Excavator Operation, Business Management, Sales Presentation and Irrigation Troubleshooting. In all, the students competed in 28 different events relating to the horticulture and landscape industries.

The team also attended a career fair sponsored by Caterpillar, Hunter Industries, ValleyCrest, Stihl, Davey Tree Expert Company, John Deere and Brickman Group, among other companies. “As a past participant of the PLANET Student Career Days while I was at Cal Poly, I recognize the importance of industry partnership with educational institutions,” said Warren Gorowitz, vice president of sustainability and conservation for Ewing Irrigation and Cal Poly Environmental Horticultural Science alumnus. “We’re proud to provide sponsorship because we can help students move their careers forward and we see the value in networking with the future leaders in our industry.”

Students and advisers met weekly to study, practice and participate in fundraising activities. They sold succulents at the Poly Plant Shop to raise funds and sought donations from industry and alumni to fund the trip.

“It’s a great feeling to represent Cal Poly and do well,” added Jeff Hillman, an Environmental Horticultural Science student. “It shows that the skills we are learning in classes and labs are applicable in the real world and that Cal Poly students are talented and competitive on a national level.”

Jeff Hillman, pictured on left with teammate Mike Magnani, earned first place in the Plant Problem Diagnosis competition.
GOT SCIENCE?
In honor of 25 years of dairy products research excellence, Cal Poly’s Dairy Products Technology Center (DPTC) is hosting a three-day celebration, highlighted by a special reception and public lecture by the Food Network’s Good Eats and Iron Chef America star Alton Brown. From October 25 through 27, the DPTC will host dairy products industry supporters, educators, students and friends of the Cal Poly Dairy Science program as it celebrates the scientific accomplishments and history of the internationally known research center.

Mark your calendar to celebrate on campus. To register for tickets and learn more about the 25th anniversary weekend’s special events, visit www.dptc.calpoly.edu.

Does your company match?
Blair Hackney’s does. His daughter studies nutrition at Cal Poly, so Blair enrolled in PG&E’s paperless payroll deduction matching gift program to support her department. “I like the fact that I can direct my contribution to the program where I feel it is needed the most,” Hackney said.

More than 13,000 employers participate in matching gifts programs, so you can double or sometimes triple the value of your gift. Check to see if your company matches by visiting www.giving.calpoly.edu/matching or call 805-756-2713.

It’s a smart, simple way to boost your support of Learn by Doing.
Learn by Cooking

Food Science and Nutrition students are taught to plan meals and calculate nutrition facts with an emphasis on cultural influences on food. This is Food Science major Cami Glosz’s answer to the call for a vegan snack. It would be delicious using dairy yogurt.

Confetti Smoothie
Prep time: 5 minutes / Cost per serving: $1.67 / Yield: 3 servings

**Ingredients:**
- ½ medium avocado
- ½ kiwi
- ½ pear
- 1 cup orange juice
- ½ cup strawberry soy yogurt
- ¼ cup fresh spinach, packed
- 2 medium bananas
- 8 ounces frozen strawberries

**Preparation:**
Cut up the kiwi, pear, spinach, bananas and avocado, and place into blender.
Add the orange juice, soy yogurt and frozen strawberries. Add more or less orange juice to reach desired consistency, and blend until smooth. Pour into glasses and enjoy!

This vegan smoothie is packed with a delicious combination of fruits and vegetables. To make a dairy version, substitute low-fat milk yogurt. All the fruit and vegetables in this smoothie make it an incredible source of vitamin C and fiber. Depending on the size of your blender, the ingredients may need to be split into two rounds to prevent the blender from overflowing — and spilling into your kitchen! This smoothie is great for breakfast, or just as a snack throughout the day.