Planning is underway for the construction of Cal Poly’s new Meat Processing Center. This is the third facility that the Animal Science Department is updating and relocating.

This facility will allow students to take part in all facets of the meat processing industry. Some will learn how to prepare Hazard Analysis Critical Control Points (HACCP) plans. Others will learn to develop, prepare and market new ready-to-eat products for busy consumers. And some will conduct applied food-safety research.

“Cal Poly's meat food-safety program has already established itself as a leader in providing young people for the meat processing industry,” said Department Head Andy Thulin. “When this facility becomes a reality it will allow Cal Poly to be one of the best programs in the nation.”

Beyond an ordinary classroom, students will not only learn, but they will also experience their education in a state-of-the-art facility that is as technologically advanced as the professional world they will soon enter.

“With this kind of experience, Cal Poly students will enter their professions as leaders, innovators and experienced problem-solvers,” Thulin said.

The new Meat Processing Center will be approximately 13,000 square feet, and it will include a new teaching laboratory, HACCP and food-safety labs, as well as further processing rooms and freezers. With these modern facilities, students will gain hands-on experience with poultry and red-meat harvest; fresh meat fabrication and packaging; meat curing and sausage manufacturing; processing and cooking products; and ready-to-eat packaging. Students will be prepared for employment in a USDA-inspected, commercial setting.

“Food safety is best taught, studied and learned in food plants where it is mandated and practiced,” said Robert Delmore, associate professor and meat specialist.

The Meat Processing Center also provides opportunities for industry to co-sponsor educational workshops and meat processing research projects. Retail sales of federally inspected meat products and federal inspection add credibility for program needs and future funding.

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**Lau family makes $1 million donation**

A Modesto couple has given Cal Poly $1 million toward the building of the Animal Science Department’s new Meat Processing Center.

John and Gay Lau, owners of the family-operated Yosemite Meat Company in Modesto, made the donation this month. Cal Poly will ask the California State University Board of Trustees in July to have the new plant named the Lau Family Meat Processing Center.

John Lau said the family’s gift is intended to support Cal Poly’s learn-by-doing educational approach and the quality of its meat processing program. “We want future generations to have more opportunities to learn firsthand about the meat processing business, and to understand it before they come into the work world,” Lau said.

Lau, the third generation in his family to own and operate a meats business in California, stressed his family’s ties to Cal Poly. Lau’s sister, brother, brother-in-law, and two of the Lau’s three children attended Cal Poly.

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Steven, Gay and John Lau
The planning process is complete, and construction for Cal Poly’s new Beef Center is underway.

The Beef Center is the first of three new facilities to be built for the Animal Science Department. The Animal Nutrition Center is next on the building block, with plans for the Meat Processing Center starting to actualize.

Cal Poly’s new $3-million Beef Center will allow students to take part in all facets of the beef industry. The facility will greatly enhance Cal Poly’s current Bull Test, heifer development, artificial insemination and embryo transfer programs. The new facility will catalyze the department’s efforts to teach embryo transfer technologies and genetic marker testing by incorporating more laboratory space.

Animal Science Department Head Andrew Thulin, said that there are numerous benefits for the Beef Center. ”The new facility will greatly increase learning opportunities for students,” he said. “When construction is complete, the Beef Center will allow for unparalleled practical experience with modern technologies and give students the skill-sets needed to become industry experts.”

The new facility centralizes Cal Poly’s beef program for production, teaching and research; provides optimal location for Cal Poly’s Bull Test and heifer development program; expands the artificial insemination training facility for student training and industry workshops; provides needed facilities to support embryo transfer teaching and research activities; and provides an opportunity for industry to co-sponsor educational workshops and research projects.

Located on 20 acres, the Beef Center facility will include a multipurpose building; meeting room; two laboratories; commodity barn; eight lay-up pens for health management and heifer development; 10 stalls for breeding and embryo transfer activities; seven three-acre paddocks for performance testing bulls involved in the Bull Test; and the new facility will have a student residence. The site is located at Cal Poly’s historical Escuela Ranch, which has more than 2,000 acres of range land.

“We have this great ranch at Escuela that before had no electricity or housing,” said Mike Hall, professor and senior beef cattle specialist. “Now, because of the Beef Center, we’re able to bring infrastructure into the bull test and bovine embryo transfer.”

In conjunction with the Beef Center construction, the Animal Science Department is now accepting nominations for its 50th annual Cal Poly Bull Test. Due to the completion the new Beef Center and the new home of the Annual Bull Test, the event will have a new look in 2006. The 2006 sale will again be scheduled for Oct. 1; however, the criteria and number of days the bulls will be on site has changed due to the construction. Bulls will not be delivered until mid-July, rather than in mid-May as in past years.

“A Century of Heritage” is available for purchase at the El Corral Bookstore for $35. Log on to www.elcorral-book-store.com or call 1-800-367-0771

For more information, call Mike Hall at 756-2685 or Joel Judge at 756-6751
Graduate fills full-time position

Animal Science graduate Casey Callaghan became the full-time Animal Nutrition Center manager in January. Callaghan started working part time at the feed mill in November 2004, when he was still an Animal Science undergraduate. After finishing his coursework in December, Callaghan was hired full-time at the feed mill.

As the Animal Nutrition Center manager, Callaghan hires and supervises student employees and is in charge of purchases, billing and day-to-day operations of the mill. He must stay current on industry regulations and safety standards.

This job provided Callaghan the opportunity to stay in the area and also the chance to work with students. “I’m getting a really great experience to manage a feed mill on a small scale, which is preparing me for work in much larger industry mills.”

Callaghan was also instrumental in helping the department finalize its plans for the new Animal Nutrition Center. He researched equipment and the efficiency of proposed layout designs. -P

Record donations for Western Bonanza

Despite the freezing cold temperatures, the 22nd annual Western Bonanza Junior Livestock Show brought in close to 500 exhibitors.

The show, put on by the livestock show management Animal Science 212 class, took over the Paso Robles Event Center from Feb. 17-19, as exhibitors ages nine to 21 filed in to show their livestock. Over 1,800 head of livestock were entered in the A and B shows combined, including cattle, meat goats, lambs and hogs.

Western Bonanza provides great opportunities for Cal Poly students to learn about event-planning, while allowing for recruitment of livestock youth. “I have several students in my class this year that have been past Western Bonanza exhibitors,” said Wendy Hall, lecturer and Western Bonanza advisor.

Students handle all phases of the show’s planning process, from fund raising to advertisement. The preparation responsibilities are primarily given to the committee chairs, the 18 students enrolled in Fall Quarter’s Animal Science Special Problems 400 class. Another 50 students are added to the class during winter quarter when the actual event takes place. “We’re way beyond just hosting a livestock show,” Hall said. “There are so many other aspects that go into putting the show on.”

This year’s students raised around $40,000 to provide awards to the exhibitors, the highest amount of donations in Western Bonanza history. Students worked with 16 corporate sponsors, as well as individual sponsors, to raise the money. The corporate sponsors included Manna Pro Corporation, Bob Erickson Equipment, Farmers Feed, Nutrena, Watts Trucking and Chopping, Associated Feed, Cattaneo Brothers, Estrella Ranch (George and Sue Hearst), King Show Feeds, Pete Johnston Chevrolet, W-W Livestock Systems, O.H. Kruse and the F.L. Emmert Companies, Red Bluff Bull and Gelding Sale, Land O’ Lakes Purina Feed and PROforma. -P

The Vision Continues

From Department Head Andrew J. Thulin

“Just because everything is different doesn’t mean everything has changed.” – Irene Peter

Last week I watched as a demolition crew tore down the Cal Poly Bull Test facilities and the old feed lot. I must say it was a bit melancholic – remembering all the hours of working bulls and feed lot cattle during classes and enterprise projects over the years. But, while we are losing our old facilities, we have much to gain with new, modern and technologically advanced equipment, laboratories and facilities at our new Beef Center that will allow for advancement into a new era of animal science.

The new construction is creating an exciting buzz within the Animal Science Department. The new Beef Center is under construction and will be completed in late June, with bulls arriving in early July. Mark your calendar for the 50th Annual Bull Test Sale on Oct. 1, as we will celebrate completion of the new facility. The Animal Nutrition Center was recently featured in Feed Management magazine, giving Cal Poly national exposure in the feed industry and stimulating many to get involved with the program. Check the Animal Science Web site, www.animalscience.calpoly.edu, for a copy of the article. Completion of the new Animal Nutrition Center is scheduled for December and a number of equipment manufacturers have stepped up to support the facility, donating over $350,000 in new equipment. Design plans for the new Meat Processing Center are being finalized. Recently, the project received a great boost as the Lau family has graciously donated $1 million. The Laus have chosen to invest in young people and are challenging the rest of the meat processing industry to follow suit.

With the generous donations the department has received, the project costs remaining are down to about $2.5 million. To raise this money we are asking for your help. The continued support of alumni, friends, and industry will ensure that Cal Poly’s history of excellence and leadership in education will continue for generations to come.

For more information on how you can help, please e-mail me at athulin@calpoly.edu or call (805) 756-2419. Updates regarding the relocation of the different facilities can be found at www.animalscience.calpoly.edu.
Embryo transfer program provides hands-on experience

Using embryo transfer technology can help purebred producers make more genetic progress than traditional breeding methods. Maximizing reproductive function is key to profitability for producers. Cal Poly offers embryo transfer services to California producers to help minimize their costs and to offer educational experience for students. The Animal Science Department now has both equine and bovine embryo transfer programs in place.

The bovine embryo transfer program began four years ago, starting with two cows per month. The program now superovulates an average of 10 cows per month. The operation did scale back a bit in recent months due to the facility relocation projects currently under construction.

In the embryo transfer process, cows are superovulated to increase the number of eggs released from the ovary for fertilization. The average cow only has one calf per year, but with embryo transfer technology, that number can greatly increase.

Superovulation requires a strict protocol of hormone injections to stimulate the ovary into releasing several eggs, allowing the cow to produce up to 10 eggs during a single estrus. The animal is then inseminated, and seven or eight days after estrus, students flush the uterus with a special medium to collect the embryos, which are about 100 to 120 micrometers in diameter (10 times smaller than the head of a pin). The embryos are then transferred to recipient cows that are also on strict hormone and diet regiments.

Student-managers are in charge of feeding the cows, administering hormones and extracting the embryos. The students involved in the program are upper-level juniors and seniors.

“It is a selective enterprise,” said Joel Judge, lecturer and beef specialist. “The students have to show serious interest and commitment to beef reproduction.”

Participating in the embryo transfer program benefits students by giving them hands-on experiences with state-of-the-art technology, preparing them for careers in any reproductive management field, Judge said. “It teaches them time-management, discipline, problem-solving and decision-making skills.”

Cal Poly is an ideal location for embryo transferring because of the mild Central Coast climate. In other parts of the state, cows get heat stress during the summer and do not produce as many eggs during superovulation.

With construction of the new Beef Center underway, there is great potential for future growth of the embryo transfer program. The facility will include labs specifically designed for artificial insemination and embryo transfer.

Equine embryo transfer is quickly catching up to its bovine counterpart. This year marks the first foal successfully produced by embryo transfer at Cal Poly. Students are in charge of all aspects of the operation. “I’m just the pretty face,” said Matthew Burd, equine reproduction specialist. “I supervise, but the students do everything.”

To begin the process, students use summer-like lighting to send the mares into early estrus. Then the mares are artificially inseminated and the embryos that will go through transfer are flushed out.

Burd said equine embryo transfer’s greatest advantage is having “more than one foal during the breeding season because we can collect more than one embryo during the breeding season.” Embryo transfer also allows donor mares to continue their show career while their embryo is implanted in a recipient mare. -P

Top: A hereford embryo calf with its crossbred recipient mother. Center: A bovine uterus is drained and the embryos undergoing transfer are submerged in a saline solution. The solution is then drained in order to isolate the embryos. Bottom: Breeding enterprise member Kristen Conover pictured with mare, Docs Jo Lena, the night the foal was born.
Graduate wins poultry award, plans for future

At the 2005 annual meeting of the Poultry Science Association, Animal Science graduate Melissa Torres received a Certificate of Excellence in the Genetics/Pathology/Immunology section for her paper “Effect of broiler strain and sex on macrophage inflammatory responses in cell culture.”

Torres graduated from the Animal Science Department in 2003. She is currently preparing to defend her thesis for her master’s degree in agricultural science with an emphasis in animal science. Elizabeth Koutsos, assistant professor and poultry specialist, co-authored the paper and advised Torres throughout the project. Koutsos also funded the research through an Agricultural Research Initiative grant she received.

Torres was one of 16 students to earn a Certificate of Excellence at the conference. The awards recognize high quality research papers and posters.

Torres said she didn’t expect to receive an award because it was her first presentation at a national meeting. “There were people at the conference who were pursuing their doctorate degrees and the quality of research was very high,” she said.

Although she received two job offers in the animal science industry, Torres decided to serve her country as a preventive medicine specialist in the United States Army. Torres plans on being a career officer, eventually specializing in developing medical protocol for soldiers stationed abroad. -p

Student gains experience with endangered species

Animal Science senior Annika Hoffman spent six months working for the California Condor Recovery Program with the U.S. Fish and Wildlife Service.

While living at Hopper Mountain and Bitter Creek National Wildlife Refuges as a wildlife field biologist intern from June to December, Hoffman watched nests, observed behavior, tracked condors by radio telemetry, observed feeding at feeding sites, cared for birds in flight pens, trapped and handled condors during tag and transmitter replacements and drew blood for testing on lead and West Nile Virus. She also attended California Condor Recovery Team meetings and field meetings.

“I was very fortunate to intern during the 25-year anniversary of the California Condor Recovery Program, where I helped host a reception and attended the American Ornithologists’ Union Meeting forum for the California Condor,” Hoffman said.

Hoffman said she hopes her experience with the California Condors will help her achieve her future goals.

Hoffman was recently accepted to the College of Veterinary Medicine at Western University of Health Sciences to study avian medicine. She will start studies there in the fall of 2006.

The California condor is the largest bird in North America, with a wingspan of 9 feet 6 inches to 10 feet 6 inches, weighing approximately 20 to 25 pounds.

As of November, there were only 274 California Condors in existence – 145 are captive and 129 live in the wild. There are 56 wild birds in California, 60 in Arizona and 13 in Baja, California. The main factors attributed to the California Condors near-extinction are lead poisoning and loss of habitat, Hoffman said.

California Condors have come back from near extinction to establish a self-sustaining population with the help of the U.S. Fish and Wildlife Service. -p
Horses & Competition

Equestrian and Dressage teams improve rankings

The student-run Cal Poly Equestrian Team truly exemplifies Cal Poly’s “Learn-By-Doing” philosophy: They manage four horses, hold riding practice five times a week, and host two shows per year.

Cal Poly competes in Zone 8, Region 1 of the Intercollegiate Horse Show Association. With over 300 colleges and more than 6,200 riders, the IHSA is the world’s largest Intercollegiate Equestrian organization. CPET competes against eight other schools including UC Davis, Stanford, CSU Fresno, University of Nevada, Reno, UC Santa Cruz and other community colleges. Riders advance through levels by accumulating points; with 35 points, a rider is eligible to advance to the next level and compete at the regional show. After regionals, a rider may compete at the zone and then national shows, given they qualify.

The team is in the middle of competition season, and sent several riders to the regional competition at Stanford on March 25. Zones were April 7 to 9, and nationals are May 3 to 7.

Team president and political science junior Leah Roady said being part of the team is demanding, especially as a full-time student, but it teaches her horse management skills and riding efficiency.

“We all have limited time, but we work together and share the work load to make sure our horses are in the best condition and shape, raise funds, host shows, and do all the other work that goes into the team,” Roady said. “Also, being a part of CPET really gives you an opportunity to network with people in the horse world and meet fellow competitors at other schools.”

In October, Cal Poly hosted an English and Western Intercollegiate Horse Show. At the show, Cal Poly’s Western riders won the team championship over eight other colleges. In January, the team met Bob Cacchione, the man who founded the IHSA.

Although CPET does not have a coach, lecturer Pete Agalos advises the team, helping with paperwork and legal issues. “He’s always available to answer questions and has been very helpful to make sure we stay on campus,” Roady said.

The Cal Poly Equestrian Team has four team horses; these horses are the team’s best asset. “Team horses are generously donated by former alumni and community members,” Roady said. “This year, we moved into the new barn and raised enough money to put in rubber stall mats. Our next major goal is to find a Western horse to join the team.”

The Cal Poly Dressage Team took first place in regional competition after collecting the most points in a series of four shows, two of which were hosted by Cal Poly. The team beat UC Davis, UC Santa Cruz and UCLA to advance to the Intercollegiate Dressage Association National Competition on April 29 and 30. The national competition will be held at St. Andrews Presbyterian College in Laurinburg, NC.

The Cal Poly Dressage Team is a member of the Intercollegiate Dressage Association, and 2003-04 was the team’s first year of official competition. The team has attended nationals every year since the region was formed. In its first year, the team traveled to IDA’s National Championships held at Cazenovia College in upstate New York. The team finished ninth in the nation.

At competitions, the host school provides the horses used. A drawing at the beginning of the competition assigns horses and riders, and the riders are then given ten minutes to warm up the horses before entering the ring.

The team is advised by animal science professor and veterinarian Jaymie Noland.
Professor updates Scouting merit badge manual

The Boy Scouts of America and the Cal Poly Animal Science Department teamed up to revise the Animal Science Merit Badge manual.

The advancement committee for the Boys Scouts of America contacted the department during the summer to see if any faculty were interested in modernizing the merit badge manual. Since Assistant Professor Dan Peterson was involved in Boy Scouts during his childhood, he saw it as an opportunity to give back to the Scouting community.

"Boy Scouts was one of the best influences in my youth," Peterson said. "It taught me about diversity, community service and how to be self-sufficient."

The Boy Scout’s merit badge program provides opportunities for youth to explore more than 120 fields of skill and knowledge including animal science, public speaking and fly fishing. Fulfilling the organization’s commitment to education, boys participating in Scouting learn self-confidence as well as career, physical and interpersonal skills, according to the Boy Scouts of America Web site.

Peterson said the manual needed to be revised to include information about animal breeding and genetics. Also, Peterson expanded the section on animal science careers to include more technology-based jobs.

Peterson also found a way to make the process a benefit to the department: He provided students with a senior project opportunity. Students were in charge of collecting new photos to include in the manual. The updated version will feature photos of Cal Poly facilities, animals and students as well as local Boy Scouts.

The manual was previously reviewed by Texas A&M and Iowa State University.

A local Boy Scout observes a Cal Poly student milk a cow. This will be one of the pictures included in the updated merit badge manual.

Cal Poly helps host CGFA conference

Cal Poly helped host the January conference of the California Grain and Feed Association. The California Grain and Feed Association is a non-profit agricultural trade association which has served the grain and feed industry since 1924.

During the second day of the conference, CGFA members were given a tour of the Animal Science Department’s old feed mill.

“It was fun for people to see it because it is so small compared to the big industry mills that these people are used to seeing,” Animal Nutrition Center manager Casey Callaghan said.

Many of the members in attendance included Cal Poly alumni who once worked in the feed mill when they were students.

“I’m sure it brought back some great memories for some of the alumni,” Callaghan said.

The department hopes to host the conference again in two years when the new Animal Nutrition Center construction is complete.

Judging team places second in national competition

The Cal Poly Equine Judging Team placed second at the National Reining Horse Association’s Dec. 2 Intercollegiate Judging Contest in Oklahoma City, Okla. This is the team’s highest placing at a national competition. Animal Science senior Erin Simmermaker placed fourth high in the individual competition.

Animal Science senior Heather Lovett said the students gained a great deal of knowledge and experience, learning what it takes to perform with the best judging teams in the country.

“It was an amazing opportunity to meet the best trainers and best riders, especially because I want to pursue this as a career,” Lovett said.

CFGA members tour Cal Poly’s old feed mill.
## Equipment Auction!

**Saturday, April 29th at 10 a.m.**

*Location: Next to the Feed Mill*

**For Sale:**

**Previews:**
- April 28th: 9 a.m. - 5 p.m.
- April 29th: 8:30 a.m. -

Please check the Animal Science Web site, www.animalscience.calpoly.edu for an updated sale catalog. For more information contact Casey Callaghan at (805) 756-1120, or ccallagh@calpoly.edu.

## Spring to Fall 2006 Calendar of Events

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### April
- 21: College of Ag Admitted Students’ Day
- 21-23: Cal Poly Open House and Poly Royal

### May
- 6: California State FFA Finals - Cal Poly
- 10-11: CANC Conference — Fresno

### June
- 3: Animal Science Department Banquet — Santa Margarita Ranch
- 10: Spring Commencement

### September
- 25: Fall Quarter Begins

### October
- 1: Bull Test and Quarter Horse Sale

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**Animal Science Stock Report Spring 2006**

Published by Cal Poly's Animal Science Department as a link among the nation’s premier animal science program, alumni and friends. The department's doors are open and questions and comments are welcome.

[www.animalscience.calpoly.edu](http://www.animalscience.calpoly.edu) • (805) 756-2419 • animalscience@calpoly.edu

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