

PRESIDENT'S COMMISSION

on the Future of Agriculture

PRELIMINARY REPORT

MAY 9, 2014

FRESNO 
STATE Discovery
Diversity
Distinction

PRESIDENT'S COMMISSION ON THE FUTURE OF AGRICULTURE

Preliminary Report

This report is a culmination of the initial findings and recommendations
by the President's Commission on the Future of Agriculture.



"Fresno County is the epicenter for agriculture world-wide. This commission will help fulfill my vision for Fresno State to become the front-runner in providing California agriculture with its future employees, industry leaders and innovators in production agriculture and food processing."

President Joseph I. Castro



May 9, 2014

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Introduction

The San Joaquin Valley, home of California State University, Fresno, is the richest agricultural production area in the United States. The Valley produces more than 350 of California's 400 commercially grown agricultural commodities, many of which are unique to California. The value of this production exceeds that of any other state in the country.

Even more impressive is California agriculture's annual production valued at over \$47 billion at the farm. This production is essential to the local, regional and state economy where every \$1.00 produced at the farm generates another \$3.50 in economic activity. Much of this production is labor dependent with agriculture employing more than 450,000 people on the farm and tens of thousands more in related businesses. Fresno State is essential to provide graduates for this diverse, highly skilled and educated labor force on the farm and beyond.

Fresno State's [Jordan College of Agricultural Sciences and Technology](#) (JCAST) has a long history of addressing the critical issues affecting California agriculture, providing quality education and conducting applied research. Student-produced, award-winning Fresno State wines are medal recipients in state, national and international competitions. Fresno State's dairy is the No. 1 university dairy in Jersey milk production in the nation. Also, JCAST's hands-on approach to education is made possible by more than 1,000 acres of on-campus farm laboratory where students produce sweet corn, olives for olive oil, fresh fruits and vegetables, and value added products sold directly to consumers at the [Rue and Gwen Gibson Farm Market](#) located on campus.

***“We can't forget what we have and what we can do here.
We have the biggest advantage in the world – location in
the heart of the San Joaquin Valley.”***

Commission Member Lynn Williams,
JCAST Faculty Member

Since its beginning in 1919, Fresno State's agriculture program has been a tremendous resource for production agriculture and food industries. It has generated applied research and improved cultural practices in such noteworthy areas as the [Department of Viticulture and Enology](#) founded by the legendary Vincent E. Petrucci. It also has developed centers and institutes for research, grant and entrepreneurial opportunities, including the [Center for Irrigation Technology](#) which is recognized world-wide for excellence in hydraulic testing and evaluation.

While agriculture has transformed itself over the decades – born of a necessity to address endless challenges such as the current devastating drought – so must educational institutions that directly impact the future viability of the agricultural and food industries.

To ensure that JCAST remains on the cutting edge for future generations of students and industry, President Joseph I. Castro created the President's Commission on the Future of Agriculture. In December 2013, the 19 Commission members began the process to identify industry needs and recommend how Fresno State's agricultural programs — defined to include intersections with science, mathematics, engineering, business and other disciplines at the University — can be among the very best.

“We have a university president who understands the strength and value of agriculture and who wants to improve this college. We will work to get this done.”

JCAST faculty member

Commission members have toured JCAST's farm laboratory, met with faculty and staff, and discussed opportunities and challenges. Further, the Commission has (1) reviewed academic, applied research and public service programs; (2) identified opportunities to enhance agricultural programs and facilities; and (3) recommended strategies to strengthen partnerships between Fresno State, the agricultural industry, government agencies, private foundations and individual philanthropists.

The Commission, faculty and staff agree that JCAST's scope of education and services, and range of influence should far exceed the boundaries of the Valley and that

recruiting and developing highly motivated students for careers in agriculture and food industries is fundamental to its purpose.

To do this requires expansion of the current mission, which is, “To provide world-class programs through innovation and leadership in agriculture, food, family and related sciences and technology,” by refining curriculum, expanding facility and staff and fully embracing public-private partnerships.

This report is a culmination of the Commission’s initial findings and recommendations.

Recommendations

“There has to be ongoing and meaningful programs to nurture and promote industry/university partnerships.”

Commission Member Dennis Parnagian

Initially, the Commission has identified eight critical areas for attention. Many key components (some of which are in-progress or in the planning stage) are referenced in one or more recommendations, such as an expanded internship program and industry partnerships, improved communications and outreach, and the need for financial and in-kind support, grants and development. The recommendations are as follows.

- 1) **Industry Partnerships**: Strengthen and expand partnerships with the agriculture and food industries.
 - a. Build from the success of the Viticulture and Enology Research Center (VERC) as a model for improving faculty engagement with industry through existing and new centers and classroom/teaching. (See Recommendation 6.)
 - b. Strengthen centers of excellence such as the [Center for Agricultural Business](#) to benefit from international opportunities while working with stakeholders to expand curriculum.
 - c. Ensure that each department in JCAST has an active, engaged advisory committee with strong ties to industry. Examples of excellent board member composition include the Agricultural Business, Industrial
-

Technology and VERC advisory committees. (See Appendix.) Advisory committees should include the diversity of California crops and family farms, livestock production, farming methods, ethnicity and cultures, export markets and food trends. They also should foster stronger partnership between agricultural producers, grocery/food marketing and consumers.

- d. Emphasize internships with industry. (See Recommendation 2.)
- e. Develop student on-farm and packinghouse/processing tours with producers, packers and processors to provide commercial farming, ranching and processing awareness and experience.
- f. Survey agricultural employers and related industries to determine employment opportunities. This will assist in evaluating the adequacy of curriculum.
- g. Strengthen coordination/oversight and communication of ongoing industry programs on campus.
- h. Upgrade equipment and technology to state-of-the-art or current industry standards. (See Recommendation 4.)
- i. Increase efforts to engage alumni and friends to develop and support partnerships between JCAST and the agriculture and food industries. (See Recommendation 5.)

“I am a big supporter of internship programs and certifications. Students need experiences on their resumes that will make them more attractive to employers.” Commission Member Kim Ruiz Beck

- 2) Educational Programs: JCAST’s undergraduate, graduate and continuing education programs emphasize problem solving, basic sciences, up-to-date technology and business management techniques, implemented by a faculty committed to teaching students and learning.
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- a. Thoroughly review all educational programs with focus on aligning curriculum with current and future industry needs and employment trends. Seek national accreditation as appropriate.
 - b. Create new leadership structure that includes the dean and two associate deans for academic programs and operations, and for research and collaboration.
 - c. Ensure that curriculum includes leadership training with focus on critical thinking, development of emotional intelligence, effective written and verbal communication and understanding of public policy as it pertains to agriculture and food industries.
 - d. Encourage students to develop an understanding of the state's water delivery systems, policy and critical issues.
 - e. Develop interdisciplinary curriculum involving agriculture, technology, business, science and mathematics, engineering and other disciplines provided by the University.
 - f. Involve JCAST, the [College of Science and Mathematics](#), [Lyles College of Engineering](#) and [Craig School of Business](#) to utilize opportunities for research and industry partnerships that will be offered in the [Jordan Research Center](#).
 - g. Establish interdisciplinary teams to align the University cross-college programs and resources to support excellence in agricultural education and applied research.
 - h. Support internship programs that provide students with hands-on experience and enhance interface between Fresno State, the agricultural and food industries, and public.
 - i. Review internships, job shadowing, career pipeline programs and certifications as potential requirements for graduation.
 - j. Create and expand workforce specific training and certificate programs offered by industry through Fresno State. JCAST currently offers certificate/credential programs in agricultural education; child development (pre-credential); fashion merchandising; dietetics
-

advanced study; industry and technology; computer process control network administrator; networking, routing and internetworking technology; enology special study; and sustainable viticulture special study. These programs should be reviewed and assessed for student and industry demands for the programs, currency of the curriculum, adequacy of resources and program outcomes.

- 3) Create a Food and Agriculture Institute to serve JCAST and the agriculture and food industries in programming, research, educational outreach and coordination.

“By creating a Food and Agriculture Institute, many issues and topics can be addressed, as well as creating a flexible organization that can respond to the needs of the family farmer and agricultural community. I envision a new type of organization, a perfect interface between the university and the public.” Commission Member
David Mas Masumoto

- a. Nurture and promote farm/food/university partnerships, which serve to develop internships, sponsorships, conferences, communications and future initiatives for JCAST.
 - b. Serve as a clearinghouse for internships and apprentice programs.
 - c. Establish communications between JCAST and the agricultural and food community to align academic programs, applied research and development.
 - d. Coordinate use of Fresno State generated intellectual property by the farming, animal science and food processing communities.
 - e. With the involvement of JCAST faculty and staff, coordinate farm and food field days and conferences.
 - f. Disseminate information about issues such as food safety, labor, trade, water, sustainable agriculture and the environment.
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- g. Interact with school districts and community colleges to articulate JCAST programs and encourage interest in agriculture and food related careers.
 - h. Develop and communicate JCAST's excellence in subject areas such as enology and water technology. (See Recommendation 7.)
 - i. Engage alumni and friends to support JCAST goals and objectives. (See Recommendation 5.)
 - j. Sponsor food events. The outreach should include the urban community. Existing food science, Culinology and nutrition programs should broaden their scope where possible. Food is the common thread that bridges family farms and ranches, agribusinesses and food production with consumers and conveys relevancy.
 - k. Explore developing a facility to celebrate food, incorporating galleries showcasing the science of food, the history of Valley agriculture and the significant role the Valley plays in meeting societal needs. Similar to a concept developed by students from the Lyles College of Engineering, this facility could include interactive spaces, workshop areas and a food theater/demonstration area.
- 4) Resources: Infrastructure improvements, new facilities, faculty and staff. As part of the successful Campaign for Fresno State fundraising effort in 2013, JCAST raised more than \$51 million for students, faculty, staff and facilities. Recent new facilities include:
- The popular Rue and Gwen Gibson Farm Market that showcases student products.
 - The upcoming Jordan Research Center, which will become the first-of-its-kind research center on a California State University campus.

“Our strengths are right in this room. You are here because you care and will help carry out the long-term vision for JCAST.” Commission Member Pat Ricchuiti to faculty and staff at a joint meeting.

The Commission, with input from faculty and staff, identified improvements for JCAST to reach its potential.

- a. Find ways and means to increase the number of faculty and staff. Insufficient faculty and staff limit the opportunity to serve students and to conduct research driven by industry partnerships.
 - b. Recruit well-qualified faculty that understand the value of industry interaction. Every faculty member should be a recruiter for JCAST.
 - c. Develop resources to address aging facilities and equipment, and to expand infrastructure.
 - d. Create a state-of-the-art dairy processing facility and a modernized meat processing center.
 - e. Improve demonstration units using the Gibson Farm Market transformation as a model.
 - f. Improve classroom quality, interactive technology, size, student comfort and safety. Improve laboratory facilities. Renovate JCAST facilities located in the Grosse Industrial Technology Building.
 - g. Preserve and improve the existing University Agricultural Laboratory exclusively for agricultural purposes.
 - h. Embrace planned improvements to Barstow Avenue, with input from JCAST on areas that touch JCAST sites.
 - i. Support JCAST strategic development initiatives to increase endowments, student support, facilities and programs.
- 5) Students and alumni: A successful college educational program is not possible without engaged faculty, students and alumni. JCAST should be commended for producing graduates and future employees/industry leaders who “hit the ground running.” The rapidly evolving sophistication of California agriculture now requires that JCAST expand its efforts.
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- a. Promote “legacy” recruitment of students whose parents and relatives attended Fresno State.
- b. Recruit high-achieving, well-rounded high school students with developed leadership skills. Use Fresno State events such as the statewide FFA Conference to increase awareness of JCAST.
- c. Recruit through student-run enterprises, Ag One Foundation scholarships and opportunities for applied research programs for undergraduate and graduate students.
- d. Develop a summer institute for talented high school students interested in agriculture and food related careers, providing a meaningful pre-college experience at Fresno State before they apply to college.
- e. Expand participation in and create new opportunities for job fairs, focusing on agricultural and food related career opportunities.
- f. Support students through scholarships, competitions, extra-curricular activities, professional organizations and continuing education.
- g. Expand outreach to recent JCAST graduates and survey student graduation rates and job placement.
- h. Develop new and improved methods to engage alumni and friends in programs, internships, career pipelines and public-private partnerships.
(See Recommendation 7.)

6) Applied Research: The [California Agricultural Technology Institute](#), created in 1984, serves as the umbrella for JCAST research and grant opportunities. The addition of the Jordan Research Center, slated for groundbreaking in spring 2014, will provide a state-of-the-art facility to conduct long-term scientific and engineering innovation in such areas as food and wine sensory evaluation, water modeling, bioenergy systems, environmental quality, microbiology, entomology and plant pathology. More can be done to support and improve ongoing and planned programs.

- a. Prioritize opportunities such as irrigation and water technology, food safety and energy efficiency.
-

- b. Advance development of patents where applicable.
- c. Create an environment where research and technology transfer to industry will thrive.
- d. Address faculty release time to provide for increased research and industry engagement.
- e. Improve industry outreach to explore new problem-solving opportunities for partnerships, using the Viticulture and Enology Research Center and the Center for Irrigation Technology as models.
- f. Review integration of research centers/institutes with core academic programs, and develop additional opportunities for departments in JCAST and with other colleges.
- g. Aggressively pursue grants, donations and alumni support for applied research programs and infrastructure to accommodate grant programs.
- h. Enhance working partnerships with all government agencies, including the California Department of Food and Agriculture and the USDA.
- i. Foster interdisciplinary collaborations with the Lyles College of Engineering, the College of Science and Mathematics and others focused on addressing issues and concerns relevant to the Central Valley.

7) Communication and Outreach: There are many stories in JCAST waiting to be told, including those about exceptional students who have overcome obstacles to pursue their educational dreams.

- a. Create and recruit a public relations/communications staff position within JCAST to develop and implement an ongoing internal and external plan to increase awareness of JCAST.
 - b. Lay the foundation to attract high-achieving students and highly qualified faculty, engage alumni and attract investment for agriculture and food related initiatives.
 - c. Develop messaging to help instill pride in JCAST students who will become alumni and future supporters.
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- 8) Water: Ample surface and groundwater supplies are essential for agricultural productivity. With increasing competition for limited developed water, agriculture must manage water efficiently and safely for the ultimate benefit of all Californians.

“Fresno County is ‘Ground Zero’ on water and agricultural issues. Fresno State has the golden opportunity to take advantage of that and create majors and programs that address those issues.” Commission Member Mario Santoyo

President Castro will create a campus/industry task force to coordinate existing water-related programs and to redefine Fresno State as a recognized leader in the area of water technology, water resource management and policy.

The Commission supports this action, which will add value to existing programs.

- a. Promote findings of the task force as full-service to industry, academia and government.
 - b. Create water-related majors/minors that train future water managers and related positions. Such courses would include water systems, irrigation technology, agricultural engineering, agricultural and environmental biology, water policy and water resource management.
 - c. Promote the Water and Energy Technology (WET) Incubator as an internship and career development center for students and faculty interested in water and energy related issues. Establish partnerships with other Colleges to enhance the visibility and utility of the WET Incubator.
 - d. Improve alignment between water cohort faculty to better connect them to water centers and institutes, research, agricultural programs, science and engineering.
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Next Steps

Challenged by President Castro to think boldly and broadly, Commission members did just that, offering specific ideas and creative paths to strengthen JCAST and position it to be a world-class agricultural education institution.

This report is preliminary, but represents the beginning of an expansive process requiring the full engagement of industry leaders throughout California who are willing to share their time, talent and resources with the University and JCAST.

The Commission will continue its work on behalf of President Castro by assisting in the implementation of its recommendations and others that may follow. Throughout this ongoing process the Commission looks forward to working shoulder-to-shoulder with faculty, staff, students, industry partners, alumni and friends of JCAST.

“We need to make Fresno State the best – not just a niche, not a regional leader, but the best agricultural college.”

Commission Member Barry Bedwell

The President's Commission on the Future of Agriculture

Co-chairs

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Hanford/Sacramento; Owner, Log Haven Dairy, Hanford
Dr. Andrew Hoff, California State University, Fresno, Interim Provost

Commission members

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Kim Ruiz Beck, Chairman, Ruiz Food Products Inc., Dinuba
Barry Bedwell, President, California Grape and Tree Fruit League, Fresno
Carol Chandler, Co-owner, Chandler Farms, Selma
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Steve Olson, Publications Editor, California Agricultural Technology Institute, Fresno State

Amanda Banks, Events Coordinator, Office of the President, Fresno State

Related Links

California State University, Fresno – www.fresnostate.edu

Jordan College of Agricultural Sciences and Technology – www.fresnostate.edu/jcast/

Rue and Gwen Gibson Farm Market – www.fresnostate.edu/agf/farmmarket/

Center for Irrigation Technology – www.fresnostate.edu/jcast/cit/

Department of Agricultural Business – www.fresnostate.edu/jcast/agbs/index.html

Department of Animal Sciences and Agricultural Education –

www.fresnostate.edu/jcast/asae/index.html

Department of Child, Family and Consumer Sciences –

www.fresnostate.edu/jcast/cfcs/index.html

Department of Food Science and Nutrition – www.fresnostate.edu/jcast/fsn/index.html

Department of Industrial Technology – www.fresnostate.edu/jcast/indtech/index.html

Department of Plant Science – www.fresnostate.edu/jcast/plantsci/index.html

Department of Viticulture and Enology – www.fresnostate.edu/jcast/ve/

Center for Agricultural Business – www.fresnostate.edu/jcast/cab/

College of Science and Mathematics – www.fresnostate.edu/csm/

Lyles College of Engineering – www.fresnostate.edu/engineering/

Craig School of Business – www.fresnostate.edu/craig/

Jordan Research Center – www.fresnostate.edu/jcast/jrc/

California Agricultural Technology Institute – www.fresnostate.edu/jcast/cati/

Ag One – www.fresnostate.edu/jcast/agonefoundation/

Appendix

Jordan College of Agricultural Sciences and Technology

Mission:

Provide world-class programs through innovation and leadership in agriculture, food, family, and related sciences and technology

Goals:

1. Serve students through innovative, real-world academic programs
2. Conduct applied and strategic research and scholarly activities to benefit the region
3. Strengthen the region's economy, environment, and quality of life.

Values:

- Teamwork
- Integrity
- Quality of work
- Respect
- Accountability

How does the College see itself?

The Jordan College of Agricultural Sciences and Technology is distinctly positioned to serve the education, practical research, and continuing education needs for the San Joaquin Valley. Our programs are focused on engaging and serving this unique area, the most productive agricultural region of the country.

By the numbers

- 7 academic departments-Agricultural Business; Animal Sciences and Agricultural Education; Child, Family and Consumer Sciences; Food Sciences and Nutrition; Industrial Technology; Plant Science; Viticulture and Enology.
- 10 Bachelors degree programs-2097 undergraduate student majors in Fall 2013
- 6 master degree programs-55 enrolled graduate students in Fall 2013
- 12 minors and certificate programs
- 44 tenured/tenure track faculty
- 24 student clubs and organizations.
- 200 student employees
- 6 centers and institutes-California Agricultural Technology Institute; California Water Institute; Center for Agricultural Business; Center for Food Science and Nutrition Research; Center for Irrigation Technology; Viticulture and Enology Research Center.
- 1011 acre farm augmented with 4500 acre San Joaquin Experimental Range and 1000 acres of pasture near Millerton Lake
- \$1.5 million in sales through on campus farm market
- 300 plus medals for student produced wines
- #1 University owned Jersey milk production herd in the U.S
- \$51 million raised in recent comprehensive campaign-24% of the University total
- \$7-\$11 million annually in grant and contract activity-always among the top colleges at the university in this category

Enrollment Profile: Fall 2013

Select Term
Fall 2013

Select Program
 CERT
 GRAD
 Other PBAC
 UGRD

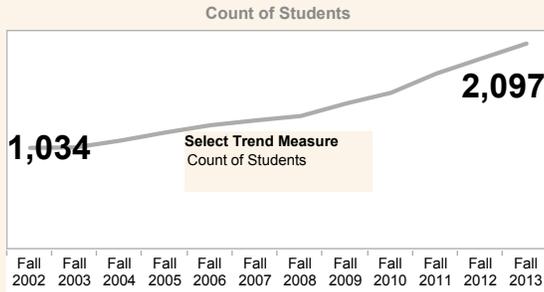
Select New Students Only
All

Select College
JCAST

Select Department
All

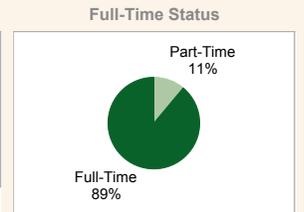
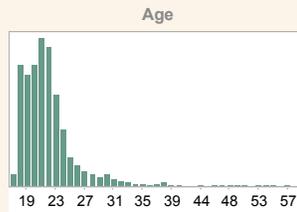
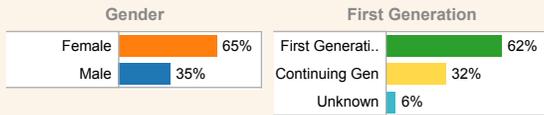
Select Major
Multiple Values

Academic Standing
End of Term
 Null
 1. President's List
 2. Dean's List
 3. Good Standing
 4. Disq/Probation



Student Level & Enrollment Status

	Freshman	Sophomore	Junior	Senior	Grand Total
Continuing	138	263	310	772	1,483
First-Time	291	2			293
Transfer	4	3	221	54	282
Returning		1	4	8	13
Returning Transfer	1	3	8	13	25
Transitory	1				1
Grand Total	435	272	543	847	2,097

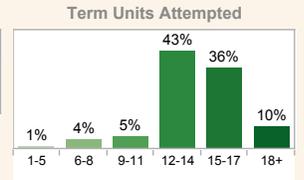


Race/ Ethnicity (drill down for detail)

Category	Race/Ethnicity	Percentage
URM	Hispanic	36%
	African American	2%
	American Indian	1%
	Pacific Islander	0%
Non-URM	White	38%
	Asian	9%
Unknown	Unknown	7%
	Two or More	4%
	Non-Resident Alien	3%

Residence Status

CA Residen..	2,061 (98%)
Foreign	25 (1%)
Another Sta..	11 (1%)



Performance (Select Variables)

Variable Rows
Race / Ethnicity

	Female	Male	Grand Total
African American	2%	0%	2%
American Indian	0%	0%	1%
Asian	6%	3%	9%
Hispanic	24%	12%	36%
Non-Resident Alien	2%	1%	3%
Pacific Islander	0%	0%	0%
Two or More	3%	1%	4%
Unknown	5%	2%	7%
White	23%	15%	38%
Grand Total	65%	35%	100%

Institution of Origin

Public HS	54%
Community College	37%
Private HS	4%

Institution	Count
Fresno City College	200
Sunnyside High	40
California State University, Fre..	38
Bullard High	33
Edison High	30
Clovis West High	28
Central High East Campus	23
Duncan (Erma) Polytechnical H..	19
Herbert Hoover High	17
Roosevelt High	17
Washington High	16
McLane High	14
Fresno High	12
San Joaquin Memorial High	11
Clovis North High	8
Fresno Christian Schools	3
Central High	1

Click for Special Options

Degrees and Time-to-Degree

Select AY
12-13

Select Degree Level
 Bachelor's
 Doctorate
 Master's

Select College
JCAST

Select Department
All

Select Primary Major
Multiple Values

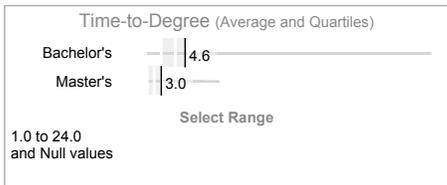
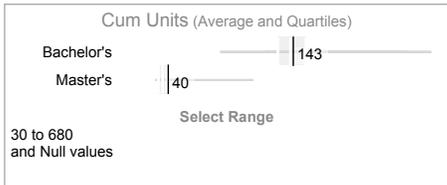
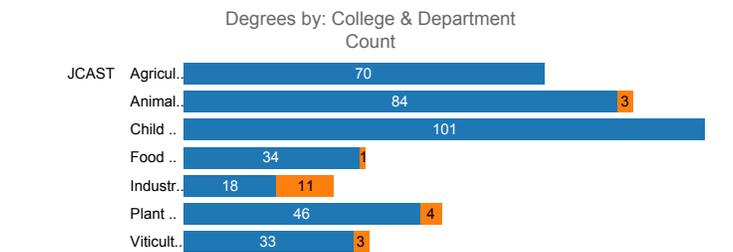
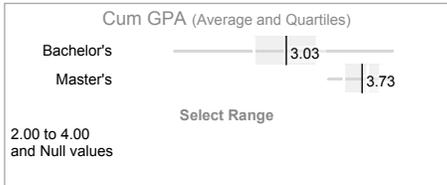
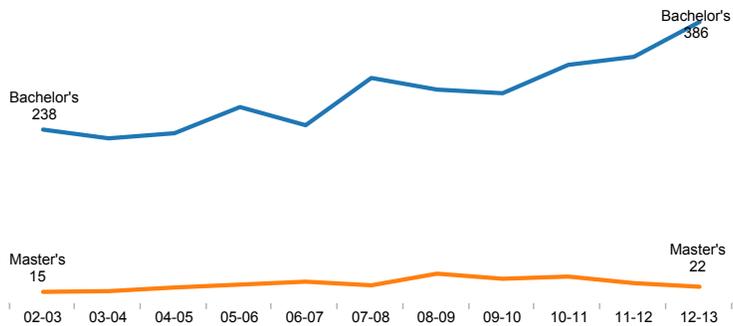
Degrees by:

Select Category 1
College

Select Category 2
Department

Select Measure
Count

Count of Degrees by Academic Year - Historical Trend



Legend ■ Bachelor's ■ Master's

Agricultural Business Advisory Board		
Position	Name	Organization
Chair	Mark Dutra	Horizon Pistachios
Vice Chair	Robert Sahatjian	Victor Packing, Inc.
	Joel Berberian	Bee Sweet Citrus
	Oscar Bonilla Garcia	Gerawan Farming
	Greg Calistro	Savemart
	Randy Edwards	Edwards, Lien, & Toso, Inc.
	Greg Estep	OLAM International
	Carol Gorter	Bank of America
	Richard Matoian	American Pistachos
	Justin Parnagian	Fowler Packing
	Russ Spain	Landmark Irrigation
	Donna Vaughn	Live Oak Ranch
Ex-Officio	Kari Ball	California State University, Fresno
Ex-Officio	Charles Boyer	California State University, Fresno
Ex-Officio	Mechel Paggi	California State University, Fresno
Ex-Officio	Annette Levi	California State University, Fresno

Industrial Technology Advisory Board	
Name	Organization
Ryan Brandon	JBT Foodtech
Farrell Foley	Eliminator Manufacturing
Mark Jackson	Blue Dolphin Design & Engineering Corp.
Michael Roy	Anlin Windows
Sa Vang	Schneider, Inc.
William Walls	Merced Community College
Sean Wolfe	Grundfos Pumps Manufacturing Corp.
James Yager	Strategic Farming

Agricultural Foundation Board		
Position	Name	Organization
Secretary	Joseph Castro	California State University, Fresno
Vice Chair	Larry Layne	
	H. Clay Daulton	
	Richard Matoian	American Pistachos
Chair	Pat Ricchiuti	P-R Farms & Palomate Packing
	Charles Boyer	California State University, Fresno
Treasurer	Dan Errotabere	Errotabere Ranches

Ag One Board		
Position	Name	Organization
Chair	Pat Ricchiuti	P-R Farms & Palomate Packing
Legal Counsel	John Ganahl	Dowling Aaron Incorporated
President	Ryan Jacobsen	Fresno County Farm Bureau
Secretary	John Migliazzo	Michael J.F. Smith Law Office
Treasurer	Debbie Raven	Valley Small Business Development Corp.
Vice President	Jason Karr	Derco Foods
	David Alderete	Kern Delta-Weedpatch Ginning Co.
	Aaron Attebery	Green Leaf Farms
	Rod Baker	Tre'son Ag
	Julie Baloian-Grabe	Baloian Farms
	Walter Bentley	
	Guri Bhangoo	Rain and Hail Insurance Services LLC
	Bob Boyd	California State University, Fresno
	Lawrence Clark	Clark Bros., Inc.
	David DeFrank	OLAM-Almond Division
	Dan Errotabere	Errotabere Ranches
	Bob Glim	
	Jim Gomes	
	Alcidia Gomes	Ag One Foundation
	Ron Hardy	Crop Production Services
	Harry Karle	
	Rick Leonard	Bayer Crop Science
	Ryan Logoluso	Frank A. Logoluso Farms & Bari Produce
	Karen Morais	Baker, Peterson & Franklin, CPA LLP
	Jeff Oliver	Oliver Search Consulting
	Donald Parreira	Ultra Gro Plant Food
	Joel Perkins	Harris Woolf California Almonds
	Ken Ramos	Wells Fargo Bank

Viticulture and Enology Research Center Advisory Board	
Name	Organization
Jim Coleman	E & J Gallo Winery
John Crossland	Vineyard Professional Services
Nat DiBuduo	Allied Grape Growers
Cathy Ference	Treasury Wine Estates Beringer
Fred Franzia	Bronco Wine Company
Glen Goto	Raisin Bargaining Association
Hal Huffsmith	Sutter Home Vineyards
Dianne Nury	Vie-Del Winery
Michael Othites	Constellation Wines US
Rick Stark	Sun Maid Raisin Company
Brian Vos	The Wine Group
Ryan Zaninovich	VB Zaninovich & Sons

An Overview of the Jordan College of Agricultural Sciences and Technology

**By Monique Bienvenue
Alpha Zeta Cal-Epsilon, Past Chancellor and
JCAST Media Coordinator, Fresno State**

The Jordan College of Agricultural Sciences and Technology is one of eight colleges present at California State University, Fresno. Here is a rundown of the college by department; highlighting strengths and noting efforts to recruit students and keep alumni ties strong.

Departments:

1. Agricultural Business

- a. Utilizes social media to promote department activities.
- b. Has a strong club dedicated to assisting students to meet industry representatives.
- c. Students sign up for both formal and informal internships.
- d. The AGBS 170S course provides 20 hours per student of volunteer hours to agriculture organizations that are nonprofits allowing students to network with industry professionals.
- e. Department Chair utilizes Listserv to communicate to both students and alumni; letting them know of open job positions.
- f. Has begun to work with the Craig School of Business on their targeted Career Fair.

2. Animal Sciences and Agricultural Education

a. Ag Education

- i. 90 – 100% of students who enroll and complete the credential program actually become teachers.
- ii. Organizes FFA Field Day and helps to coordinate the CA Annual State FFA Conference, exposing over 2,500 FFA students to JCAST's programs.
- iii. Faculty judges at local fairs, allowing them to attract future students.

b. Ag Communications

- i. Most graduates are now working through their industry internships.
- ii. Various graduates now work for various Farm Bureaus and through the USDA.

c. Meat Science

- i. Employment is 100%.
- ii. There is a growing need for people in the industry.

d. Livestock Business Management

- i. Most graduates are employed shortly after completing industry internships.

e. Pre-Veterinary Medicine

- i. Approximately, 10-15 students who begin as a pre-vet major actually go on to veterinary colleges worldwide.
- ii. Another five to ten students go on to graduate school.
- iii. The majority of the students end up changing their major after experiencing the challenges of the course.

3. Child, Family and Consumer Sciences

- a. Department does not collect information on graduate job placement.
- b. Offers one internship that all Family Science students take.
- c. Advising faculty members participate in Dog Days and Preview Days.

4. Food Science and Nutrition

- a. Growing demand in three related options: Culinology, Dietetics and Food Administration, and Food Science.
- b. Main kitchen undergoing renovation/updating.
- c. Culinology is an approved program of the Research Chefs Association.
- d. Students gain practical experience in Dairy Processing Enterprise and the Food Processing Enterprise, or research experience through the Center for Food Science and Nutrition Research.
- e. Updated Website to reflect Department changes.
- f. Dietetics offers a 9-month, rigorous certificate Internship Program accredited by American Dietetics Association.
- g. Dairy Processing and Food Processing Enterprises updated equipment.
- h. New interdisciplinary Special Major in Dairy Science and Technology available Fall, 2008.
- i. New Food Science Pilot Plant in Center for Food Science and Nutrition Research.
- j. Future plans to upgrade to the Institute of Food and Nutrition Innovation. Food Science Option is approved program of Institute of Food Technologists.

5. Industrial Technology

- a. Faculty and the department administrative assistant indicate that 90-95% of graduates have jobs before they graduate.
- b. Department is part of the Valley Industry Partnership (VIP) program; one student currently participates in the VIP program.
- c. Offers one internship as an elective.
- d. Communicates its news to local community through a department newsletter that is issued twice a year.

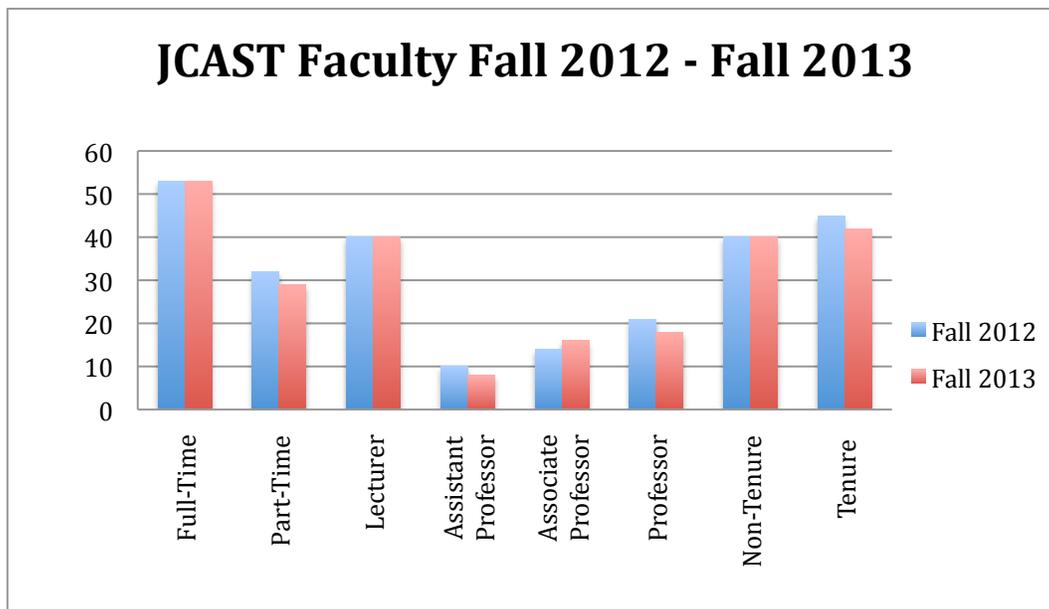
6. Plant Science

- a. Currently working on creating an alumni network.
- b. Successfully utilizes Facebook for communication and student outreach.
- c. Organizes various career fairs to allow the students to network with industry professionals.
- d. Provides students the option of gaining industry experience through classes such as Independent Studies, Undergraduate Research, Crop Project or Ag Internship.

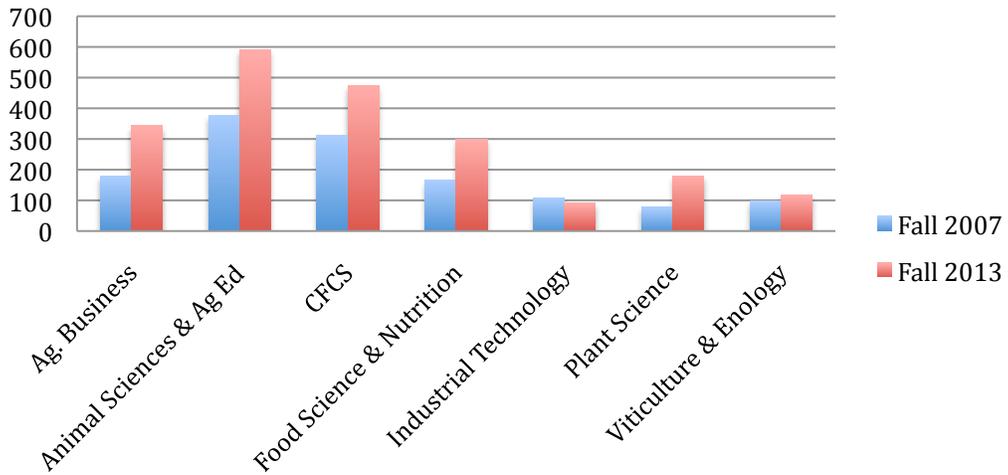
7. Viticulture and Enology

- a. There is a growing demand for faculty in the viticulture and enology departments.
- b. Formal internship is now incorporated in curricula:
 - i. Future plans indicate that this will become a graduation requirement in the next five years.
- c. Offers an international internship program in Puglia, Italy; students can get up to six units of credit through this program .
- d. Faculty engages extensively with the grape and wine industry and offers educational workshops to the public.
- e. A department newsletter is distributed quarterly.

Statistics show that while there are a growing number of majors at the Jordan College of Agricultural Sciences and Technology, the number of faculty has either stayed the same or has slightly decreased.



JCAST College Majors Fall 2007 - Fall 2013



University Agricultural Laboratory

FRESNO STATE

Jordan College of Agricultural
Sciences and Technology

Growing the next generation of leaders The University Agricultural Laboratory (UAL) or the “Farm” operates to provide students with hands-on learning experiences in all aspects of agriculture. The 1,000-acre (405 ha) Farm located on the Fresno State campus, plus the 4,500 acres of Sierra foothill rangeland located 20 minutes from campus at the San Joaquin Experimental Range near O’Neals, CA are comprised of functional enterprises which serve as outdoor classrooms and laboratories for faculty and students. We explore the latest advancements in agriculture and conduct applied research relevant to the region’s agricultural issues and economy.



Over 20 Enterprises

serve as outdoor laboratories and classrooms. Eighty class sections are taught annually and more than 130 students are employed during the year working approximately 80,000 hours.

Students are our most valuable resource and on the Farm, Fresno students learn all aspects of agriculture including growing and managing crops and livestock, making wine, processing dairy, meats, fruits and nuts and the marketing of products.



Agricultural Operations

maintains the Farm with expertise from personnel with diversified skills in close association with students, faculty and industry partners.



The Water, Energy and Technology (WET)

Center, home to the Claude Laval Water and Energy Technology Incubator and the testing facilities of the International Center for Water Technology (ICWT) provides an entryway for entrepreneurs, innovators and established or start-up businesses to accelerate commercialization, product and business launch and the development of practical application of new technologies.



Ongoing research is actively underway through the Jordan College which annually generates over 20% of the total grants and contracts at Fresno State. The California Agricultural

Technology Institute (CATI) serves as the umbrella for our college-wide research and grant opportunities. CATI is coalesced around the following institutes and centers:

- Center for Agricultural Business
- Viticulture and Enology Research Center
- Center for Irrigation Technology

Approximately 20 researchers and 40 student assistants are active in water related research efforts both on and off the farm. Research efforts including several trials focused on improving water use efficiency via air injection, CO₂ enrichment or polymers placement are being conducted. Additionally, research using advanced irrigation methods to improve yields on “energy beets” is also underway.



Fresno State is one of four CSU campuses that receive legislative funding to support the Agricultural Research Institute (ARI). The \$4 million in ARI funds are distributed for campus based projects on a competitive basis. These projects and programs build upon a successful record of applied research accomplishments. They enhance, augment and extend the basic research conducted by the nation's land grant universities.

Enterprises managed through the college include:



- **Wine and Table Grape Vineyards**
150 acres (60 ha) of table, raisin and wine grape vineyards provides the training ground for numerous award winning viticulturists and winemakers



- **Animal Units and Food Processing**
Beef, Dairy, Horse, Poultry, Sheep and Swine units, plus meats and food processing labs maintained by our faculty and students support education



- **Horticulture Units**
Facilities for plant propagation, greenhouses and a tissue culture laboratory allow students to study plant health, soil/water, agronomy, and horticulture



- **Foster Farms Poultry Education and Research Facility**
Flocks of 20,000 day-old chicks are raised in the 16,320-sf state-of-the-art, temperature-controlled environment for 45 days until market weight



- **Tree Fruit and Nuts**
200 acres (80 ha) of orchard include grapefruit, oranges, clementine's, peaches, nectarines, olives, almonds, pistachios, walnuts and more



- **Vegetable & Field Crops**
80 acres (32 ha) of vegetable crops and 250 acres (100 ha) of field crops grow seasonal fruits and vegetables including our popular sweet corn



- **Rue & Gwen Gibson Farm Market**
Retail showcase for Fresno State, student produced wine, dairy, fresh fruits and vegetables, floral, food processing and meat science products



- **Licensed Winery**
First commercially bonded winery on any U.S. university campus; 50,000 gallon capacity; 2,000+ student hours

Ag Matters

Outreach and Community

FFA Field Day, host to 2,000+ FFA Students – Red Wave Classic – Big Fresno Fair – Meat Science Showcase, Industry Appreciation – Grape Day – City of Fresno, Water-Wise Plant Exchange – Farm Festival at Gibson Farm Market – Give a Gobbler – Helping Hams – Orange Picking at University House – Le Vin Nouveau – Vino Italiano – Ag One Fresno-Madera Wine Tasting – Valley Farm – Farm Tours for students in grades K-12, plus thousands of other domestic and international visitors



Continued Success

The newly constructed Gibson Farm Market is breaking records with strong community support and sales revenues. First-year annual sales should reach \$2 million.

Dairy Processing produces its highly popular and delicious products, including ice cream available at the hand-scooping counter at the new Farm Market.

Financial Support

In spite of reductions in the state budget, the University Agricultural Laboratory continues to succeed financially. The state budget allocates \$1.4 million to help fund the Farm, which costs approximately \$7 million to operate.

The difference is made from Farm revenues which exceeded \$5.75 million in 2013. The healthy financial position allows strategic investments for the Farm.

Jordan Research Center

Made possible by a generous gift from the Jordan family, the Jordan Research Center will become the first-of-its-kind research center on a CSU campus. Designed to change and grow with the latest scientific needs, the center will link students and faculty in Agriculture, Science, Mathematics and Engineering with industry leaders to nurture a cohesive environment through interdisciplinary collaboration and research.



**The President's Commission on the Future of Agriculture
California State University, Fresno**

**Food and Agriculture Institute
A working concept paper by David Mas Masumoto**

I propose that CSUFresno establish an institute called the Food and Agriculture Institute. Similar to CVELI - Central Valley Educational Leadership Institute, part of Kremen School of Education or the Maddy Institute at CSUF - this institute would serve both the School and Ag and the agricultural community in programming, research and educational outreach.

Among the possible objectives:

Create and maintain an internship program between students and ag business community. This program could serve as a clearing house for the many opportunities that exist in the ag community for student involvement - and work as a one stop center for ag businesses to contact for potential internship and apprentice programs.

Sponsor and organize educational programs that explore timely issues for the ag community - such as food safety, labor, water and the environment. Such programs are not academic in nature but geared for practical uses on the farm. For example, with pending regulations on food safety on the farm, a conference could be planned bringing together the different agencies and industries to share information and review compliance methodologies. Also invited would be private sector businesses that would work with the ag community in their fulfillment of the new regulations.

Provide a forum for exchange between CSUF School of Ag faculty and the work in their facilities with the broader ag community. New relationships and partnership may arise from this interface, as well as new opportunities for graduate students and campus researchers. In addition, the CSUF Food and Agriculture Institute would work with other agricultural related state agencies such as USDA and UC Coop extension, as well as the other ag campuses such as Cal Poly.

Another possible program could involve the ag education program and working with area high schools and community colleges and their ag programs. For example, students and faculty could work closer with high school FFA programs and partner with the School of Ed students and their ag teacher training programs. My sense is that now many valley ag instructors were trained at Cal Poly. Missing is the local and valley connection which can be centered at a Fresno State Food and Ag Institute.

Sponsor "food program" events, conferences, an annual Ted Talk style gathering, and/or a valley wide "foodies" event. This will reach out to a broader community, especially urban community as they explore their relationship with food, especially food from the valley. Existing programs such as nutrition at CSUF could broaden their scope of interest. Research topics can be explored, especially in partnership with other

researchers throughout the state. Also the role of our valley in the world of food could be addressed - a macro examination - as well as a micro perspective, the role of agriculture in the valley's rural communities.

A focused food and agricultural communications initiative could be housed within this institute. It would partner with other university departments (Journalism) as well as the private sector (media) in exploring the significance of food and food production in our valley. New technologies would play a larger role in this arena as the institute explores agricultural in a new century of change. On line learning strategies can be developed and fostered, broadening the scope of the School of Ag.

This institute would require private funding from the ag community, but many of their programs (such as conferences) can be revenue generating too. Foundations and grants would also help support this work, especially with start-up costs.

By creating a Food and Agriculture Institute, many issues and topics can be addressed as well as creating a flexible organization that can respond to the needs of the ag community. This can possibly be established without major changes from existing programs. I envision a new type of organization, a perfect interface between the university and the public.