



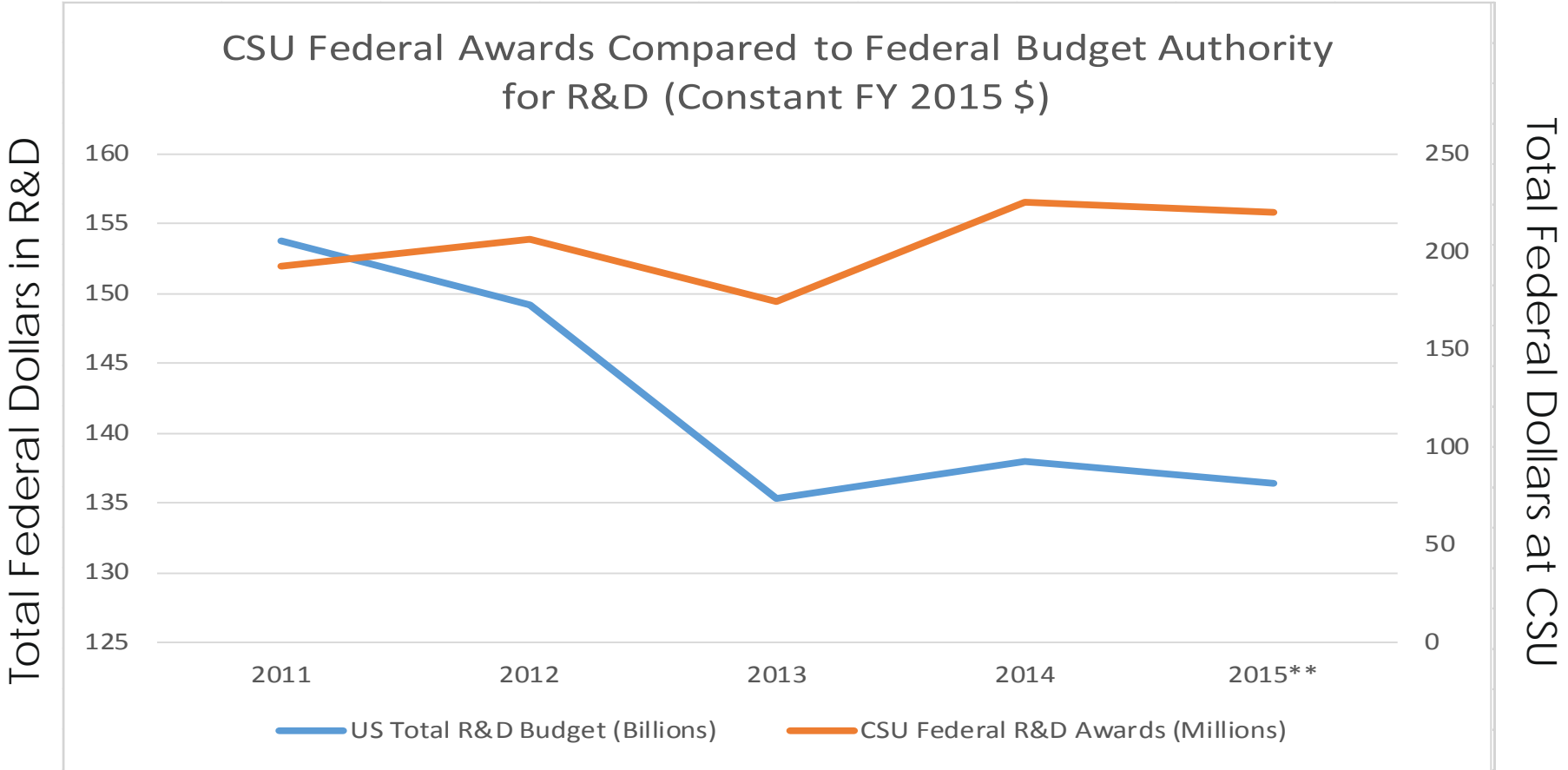
STATE OF OUR STATE

2016 AES RESEARCH CENTER CONFERENCE

MARK WDOWIK, ASSISTANT VP FOR RESEARCH & INDUSTRY PARTNERSHIPS

National Research Trends

CSU Sustains Funding Levels over Federal Decline in Research Dollars



CSU Research Trends

Robust Year for Discovery & Innovation

- Research Expenditure in FY15 = \$317.2 million
- Foundation-related spending increased 41% - \$5.6M to \$7.9M
- Federal funding expenditure increased by 3% to \$219.3M

Commercialization

- 92 invention disclosures filed and 49 patents filed
- 43 agreements with companies to license CSU technologies
- Industry-related revenue increased by 276%, to \$4.78M

Research Expenditures in 53 Accounts for Academic Colleges

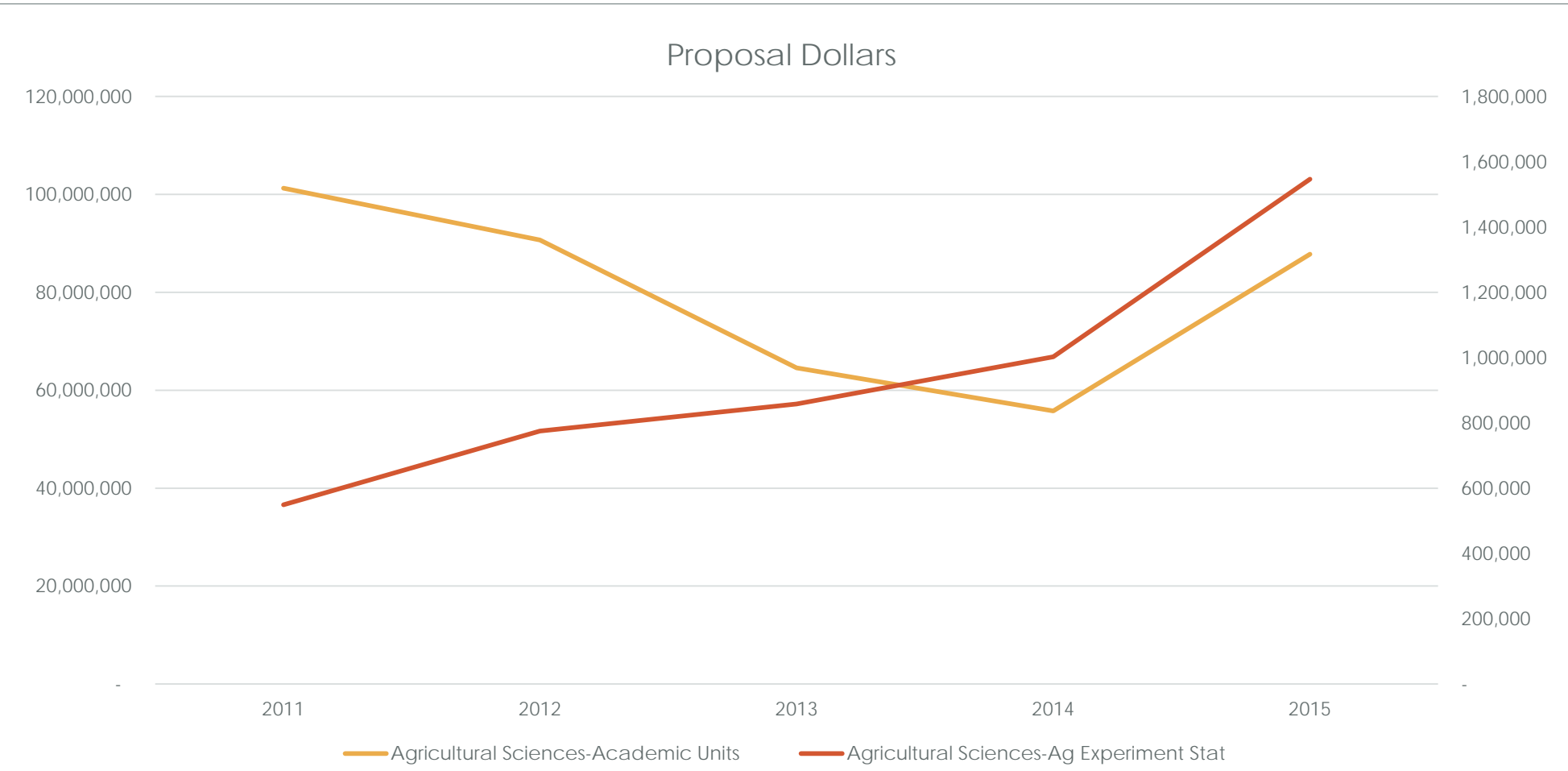
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Five-Year Change
Agricultural Sciences	13,282,762	13,754,050	13,095,281	13,831,079	11,775,614	15,854,761	19.4%
Business	4,214,609	1,321,033	1,600,542	1,480,805	1,310,321	931,811	-77.9%
Engineering	57,640,408	62,160,762	63,915,079	63,491,306	60,500,167	59,115,887	2.6%
Health & Human Sciences	9,796,763	9,566,357	9,700,817	7,141,502	7,060,139	6,554,173	-33.1%
Liberal Arts	1,687,976	1,898,468	1,927,546	2,081,446	1,626,014	1,908,570	13.1%
Natural Sciences	28,167,309	31,131,052	32,773,041	36,295,681	34,639,658	32,533,500	15.5%
Veterinary Medicine	57,132,847	54,156,980	54,786,886	51,144,349	49,848,922	44,997,445	-21.2%
Warner College of Natural Resources	48,516,544	49,358,971	50,321,679	53,202,947	59,685,413	64,916,302	33.8%
Total	220,439,218	223,347,673	228,120,871	228,669,115	226,446,248	226,812,450	2.9%

Ag Research Trends

College of Agricultural Science & Agricultural Experiment Station Proposal Dollars Five Year Trend

Proposal Amounts By College, Department	Fiscal Year					Grand Total
	2011	2012	2013	2014	2015	
Agricultural Sciences-Academic Units	101,243,862	90,686,121	64,547,793	55,769,642	87,767,098	400,014,516
Soil + Crop Sciences - 1170	26,765,980	23,496,243	16,810,987	6,945,328	37,097,997	111,116,535
Horticulture + Landscape Architecture - 1173	8,030,052	39,456,814	17,821,317	20,812,127	17,291,671	103,411,981
Bioagricultural Sciences + Pest Mgt - 1177	12,553,013	13,852,756	22,206,115	19,404,161	21,109,714	89,125,759
Agricultural + Resource Economics - 1172	42,764,645	6,215,570	4,085,750	3,490,625	3,464,189	60,020,779
Animal Sciences - 1171	11,062,702	7,017,186	3,584,821	5,106,113	8,719,812	35,490,634
Dean of Agricultural Sciences - 1101	18,000	647,553				665,553
Soil, Water + Plant Testing Laboratory - 1120	49,470		38,803	11,288	83,715	183,276
Agricultural Sciences-Ag Experiment Stat	549,329	774,803	857,721	1,002,532	1,546,732	4,731,117
San Luis Valley Research Center - 3043	232,995	450,709	817,869	704,800	991,218	3,197,591
Agricultural Experiment Station - 3001	135,000	256,705	8,000	282,647	292,647	974,999
Southwestern Colorado Research Center - 3050	17,298	20,319	27,852	15,085	247,867	328,421
Western Colorado Research Center - 3046	140,682				15,000	155,682
Arkansas Valley Research Center - 3040	23,354	47,070	4,000			74,424
Grand Total	101,793,191	91,460,924	65,405,514	56,772,174	89,313,830	404,745,633

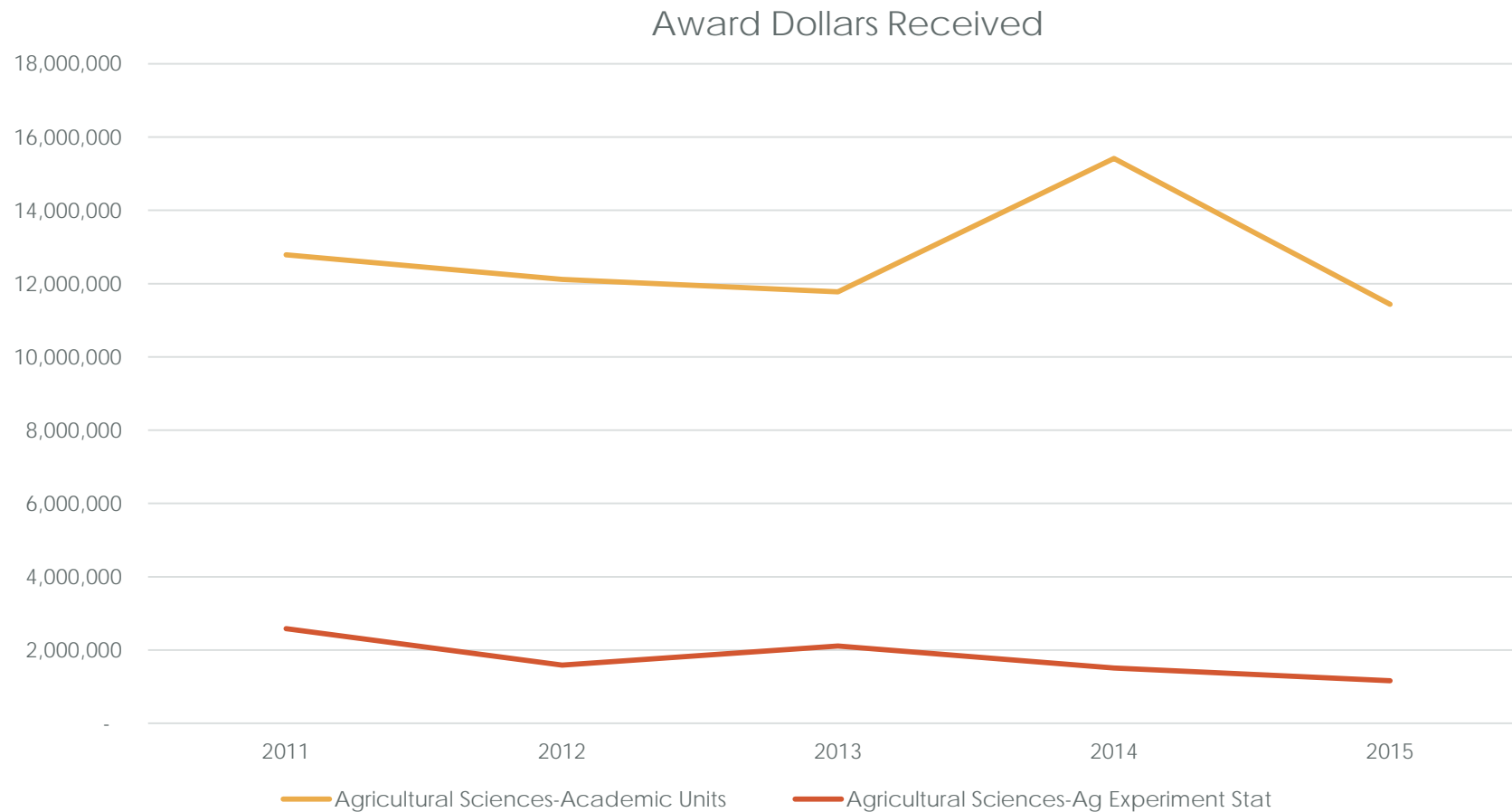
College of Agricultural Science & Agricultural Experiment Station Proposal Dollars Five Year Trend



2015 Ag Award Amounts

Award Amounts By College, Department and PI	Fiscal Year					Grand Total
	2011	2012	2013	2014	2015	
Agricultural Sciences-Academic Units	12,784,609	12,112,817	11,775,503	15,415,271	11,433,185	63,521,385
Agricultural + Resource Economics - 1172	349,672	1,854,311	1,465,389	1,821,628	1,706,763	7,197,763
Animal Sciences - 1171	2,017,964	1,665,958	1,062,361	1,786,977	928,314	7,461,574
Bioagricultural Sciences + Pest Mgt - 1177	4,790,138	3,298,414	2,331,472	3,439,585	2,296,749	16,156,358
Dean of Agricultural Sciences - 1101	18,000	24,025				42,025
Horticulture + Landscape Architecture - 1173	2,155,797	2,137,986	3,345,330	2,390,359	1,479,182	11,508,654
Soil + Crop Sciences - 1170	3,403,568	3,132,123	3,542,248	5,857,085	4,938,463	20,873,487
Soil, Water + Plant Testing Laboratory - 1120	49,470		28,703	119,637	83,715	281,525
Agricultural Sciences-Ag Experiment Stat	2,581,215	1,592,762	2,114,437	1,510,202	1,161,827	8,960,443
Agricultural Experiment Station - 3001	364,852	153,000	388,535	315,647	609,819	1,831,853
Arkansas Valley Research Center - 3040	25,174	1,500	28,600	4,000	5,000	64,274
San Luis Valley Research Center - 3043	1,968,482	1,139,831	1,235,599	1,149,352	149,100	5,642,364
Southwestern Colorado Research Center - 3050	17,298	20,319	18,053		91,424	147,094
Western Colorado Research Center - 3046	205,409	278,112	443,650	41,203	306,484	1,274,858
Grand Total	15,365,824	13,705,579	13,889,940	16,925,473	12,595,013	72,481,829

College of Agricultural Science & Agricultural Experiment Station Award Dollars Five Year Trend



Top Ag Stories for 2015



Sept. 9 - CSU study proposes new approach to retaining soil carbon



Sept. 28 - Researchers receive \$1M grant to study cropping systems in the Western Great Plains



Nov. 9 - Ag economist looks at how consumers interpret food labels



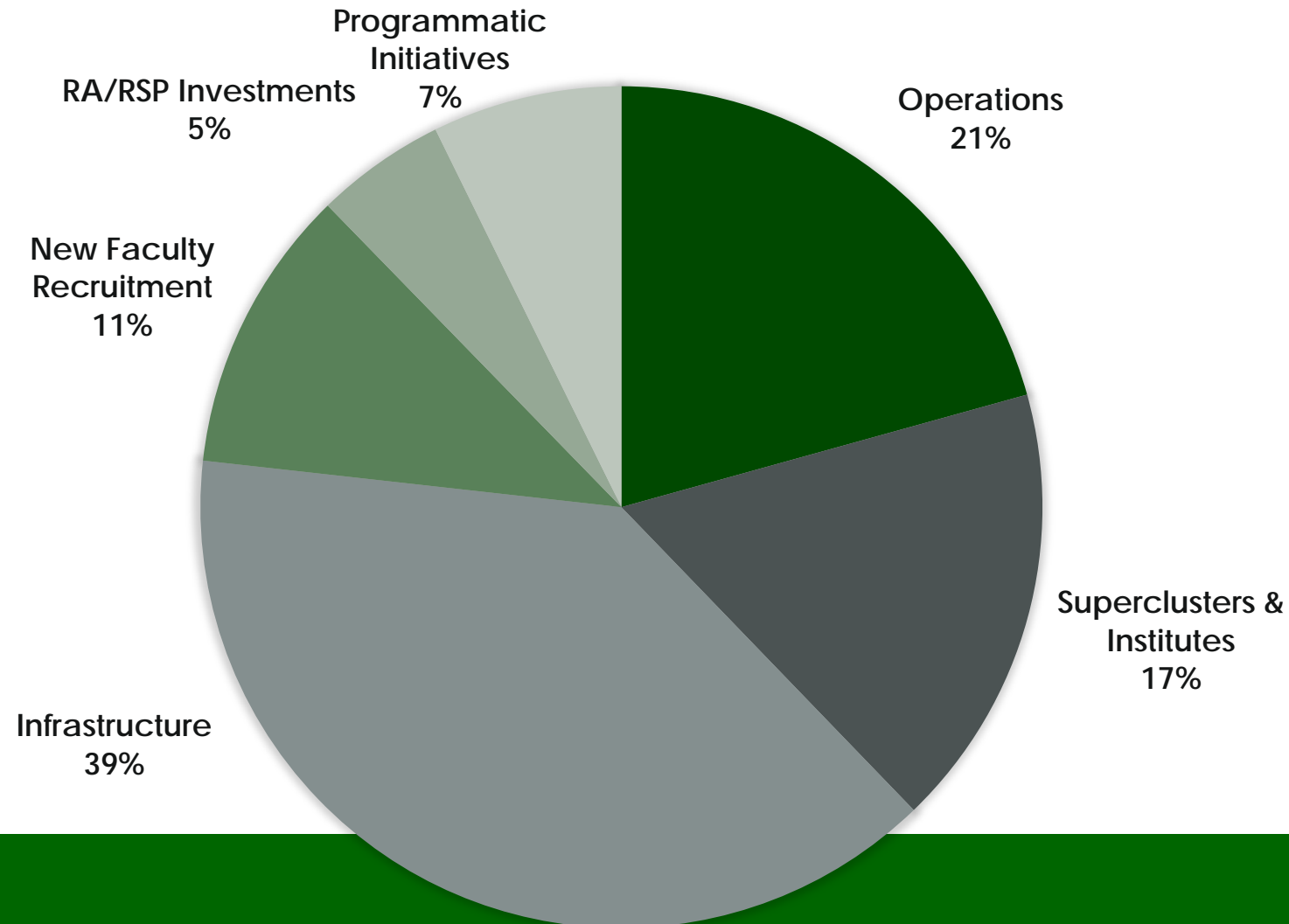
Aug. 18 - CSU researchers investigate industrial hemp

VPR Initiatives

Emerging Research Success Initiative Through Strategic Planning Process

- Grow transdisciplinary translational research teams with programs such as Catalyst for Innovative Partnerships and through cluster hires
- Complete implementation of Research Administration programs Quali Coeus and Digital Measures
- Develop master plan for research facilities at Foothills and Central Campus
- Enhance research internationalization including Todos Santos and programs in Asia, Africa, India and South America
- Incorporate inputs from additional faculty stakeholders

FY16 Percent Budget Allocation By Category



Infrastructure Sponsored Programs:

- Office of Sponsored Programs Pilots in Colleges Underway
- Quali Coeus and Digital Measures Implementation Underway
- Complex Proposal Support Office Development

Catalyst for Innovative Partnerships



"Big Bet"
Funding

- Driving towards multidisciplinary, multi-partner proposals in excess of \$10M
- Diverse funding base: Federal, Industry, Foundation, Private Donor

Cluster
Hires

- Synchronized with PACH
- 5 new positions, linking social and physical sciences

Science
Of Teams

- Research network formation, organization, impact on interdisciplinary research
- CPN case study, expanding to all of CIP

Leveraging
Relationships

- Engagement with Advancement/Corporate Relations, Foundation Relations, International Programs, etc.
- Cathay Biotech, Coke, Leprino, Mars, National Western Center, Starbucks, etc.

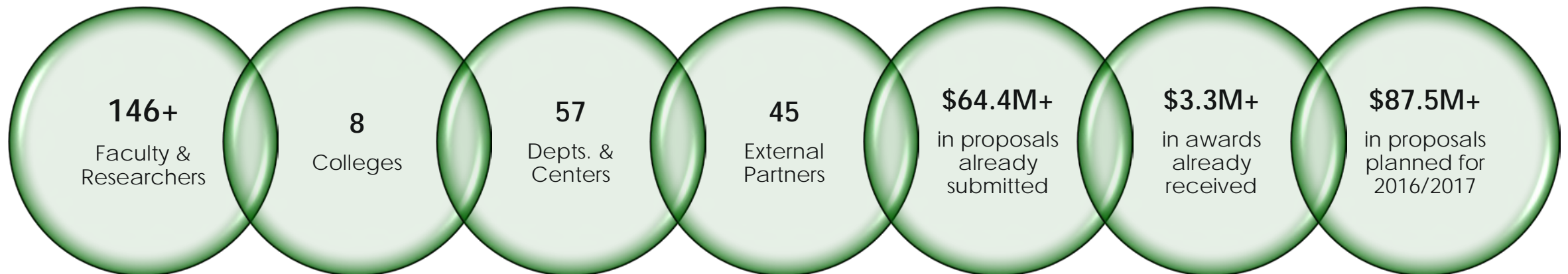
For the
Future

- Research Development Office
- Assistant Director of Development

Catalyst for Innovative Partnerships

CIP supports **7** interdisciplinary research teams tackling grand societal & scientific challenges

- Coalition for Development and Implementation of Sensor Systems (CDISS)
- Compatible Polymers Network (CPN)
- Fort Collins EcoDistricts
- Innovation Center for Sustainable Agriculture (ICSA)
- Institute for Genomic Architecture and Function (IGAF)
- Partnership for Air Quality, Climate, and Health (PACH)
- Smart Village Microgrids (SVM)



Programs for Research & Scholarly Excellence (PRSE) Update

- 2-4 year cycle, starting with nominations, leading to 3 benefits:
 - PRSE designation
 - Annual VPR resource allocation (approx. \$25k/yr)
 - Annual grad recruitment allocation (\$10k/yr)
- PRSE designation information gathering across campus
- Working with CRAD to design a revised RFP
 - Potential considerations: decouple the competitive designation process from a separate, competitive strategic funding opportunities for designees
- Feedback is welcomed
- New RFP to be launched in early 2016

One Health



- New One Health Steering Committee formed with all colleges and SoGES represented
- Established co investment planning with NWRC and CDC on particular areas on interest including antimicrobial resistance
- Director of Operations position advertised
- Engage One Health-funded pilot awards (7 projects)
 - Prototype shared project workspace supporting team communication
- Assess potential role of One Health in:
 - DoD STEP (S&T Engagement Partner Program)
 - Welcome Trust's "Our Planet, Our Health" program
- Partnership in Air Quality Climate and Health catalyst team investment

CORE Research Facilities

Foundational and Emerging Cores

- RFP Process resulted in funding 7 Research Core Facilities a reduced number with focus on sustaining and growing functional cores

The Year Ahead

- Harmonize business operations, reporting metrics and user access interfaces → Enterprise level Core Management Software
- Establish infrastructure for OVPR CORES Service
- Identifying needed resources to upgrade foundational core facilities and sustain emerging core programs
- Master planning for Foot Hills Campus; hire of new Infectious Disease Director



VIRTUAL REALITY

comes to campus

Interested in virtual reality for your research, program, department or college?

CSU is moving into the future with a Virtual Reality (VR) Initiative. With great promise for use on our campus, VR is the focus at an informational talk led by Alan Rudolph, Vice President for Research. Learn about VR's future and try virtual reality for yourself.

Four opportunities to join in!

DECEMBER 4, 2015

10-11 am | LSC Rm 308-310

3-4 pm | LSC Rm 312

JANUARY 28, 2016

10-11 am | LSC Rm 304-306

4-5 pm | LSC Rm 304-306



Colorado State University

VICE PRESIDENT FOR RESEARCH

#RamResearch
vpr.colostate.edu

