

# College of Agricultural Sciences

## Strategic Intent Conversation Summaries

As you review the summaries, please consider these questions:

- Is there something in this conversation that especially resonates with you?
- Did the conversation miss something you think is important?
- Of all that was covered in each conversation, what ***one idea*** do you consider to be the ***most strategically important*** for our College?
- Of what was mentioned, what's the most "do-able"?

### Contents

Student Success	2
International	7
Communications	11
Faculty Success	14
Research Emphases	18
Diversity, Equity and Inclusion	22
Marketing	25
Outreach and Engagement	28
Graduate Education	32
Resources/Business Plan	34
Role in STEM Education	36
Infrastructure/Facilities	39

**College of Agricultural Sciences  
Strategic Intent Conversations  
Student Success: Summary**

Strategic Intent Conversations

It is time once again to consider our strategic intent and, to that end, we are initiating a series of conversations that ultimately will engage both internal and external stakeholders. We intend these conversations to ensure we are attentive and responsive to environmental, economic, and social dynamics as well as frontiers of science and advances in pedagogy, and that we allocate our College's resources for maximum benefit.

Student Success

*Student success* is common terminology among those in higher education and yet the definition is not solidly agreed upon. Webster's dictionary defines "success" as a "favorable or desired outcome." It is not surprising that the term *outcome* drives much of what we do at the University. In part then, perhaps we can rely on some developed outcomes as definitions of student success, for example the University's Learning Goals for Graduates. The University then measures student and institutional success in undergraduate education by examining a variety of indicators of achievement of these goals, including measures of learning, retention, graduation, engagement, health and wellbeing, and opportunities after graduation.

<b>OSU Learning Goals for Graduates</b> 1. Competency and Knowledge in Multiple Fields 2. Critical Thinking 3. Pluralism and Cultural Legacies 4. Collaboration	5. Social Responsibility and Sustainability 6. Communication 7. Self-Awareness and Life-Long Learning <a href="http://oregonstate.edu/leadership/provost/initiatives/learning-goals-for-graduates">http://oregonstate.edu/leadership/provost/initiatives/learning-goals-for-graduates</a>
---	--

As we discuss what we see the College of Agricultural Sciences to be like in 5 years or longer we need to consider what our guiding definition of student success will be and whether we are on a path which will allow us facilitate students meeting their goals successfully.

Process

We worked through questions Q1 thru Q5 (Q2 and Q3 were merged), focusing on Q5. We also allowed people to submit thoughts they felt were not covered. Since Q5 was our end goal, we gave everyone 3 votes (stickers) and they selected their top three topics listed for Q5.

Our Questions

Q1. What defines student success for the College of Agricultural Sciences at OSU? Why are these important?

Q2. What do we do/provide that impacts student success? What are the drivers of student success? Why are these important?

Q3. What do we, CAS, do well that has a positive impact on student success?  
Why does it have a positive impact? Why do we excel at it?

Q4. What could we do better that would improve student success?  
Why does it have a positive impact? Why do we not excel at it?

**\*Q5. What should we be focusing on to maintain or improve our impact on student success over the next 5 years? Why are these important?**

---

Interested in attending other Strategic Intent Conversations? Visit this webpage  
[http://agsci.oregonstate.edu/about/strategic\\_intent/](http://agsci.oregonstate.edu/about/strategic_intent/)

Student Success: Summary  
August 29, 2013 11:30 - 1:30 pm ALS 3005

Our Questions	Your Thoughts
	Are we “roughly right and directionally correct” - to meet needs and excel.
<p>Q1. What defines student success for the College of Agricultural Sciences at OSU? Why are these important?</p>	<p><i>The factors of student success are many and diverse. However, there was strong support that student success is related to students finding both personal meaning and professional application in their studies; such that when they graduate they have an intentional direction and a set of skills which will serve to accomplish their goals.</i></p> <p><b>Important factors of student success include:</b> Development of skills that are transferable and lifelong, eg critical thinking. Intentional engagement on campus. Experiencing the social, economic, and ecological impact of their education. Understanding the value of lifelong learning or a habit of inquiry.</p> <p><b>Metrics:</b> First year retention Degree completion (4-5 yrs) Job location and satisfaction after graduation</p>
<p>Q2. What do we do/provide that impacts student success? What are the drivers of student success? Why are these important?</p> <p>Q3. What do we, CAS, do well that has a positive impact on student success? Why does it have a positive impact? Why do we excel at it?</p>	<p><i>CAS students are successful for a number of reasons but most can be linked to our mission to provide the personal student learning experience. Our advisors and faculty are committed to individual student engagement and the College is committed to offering a breadth of opportunities.</i></p> <p><b>Factors of student success we excel at:</b> Creating a personal student experience. Acknowledgement of student success. Credible and engaging faculty in the classroom and working directly with students. Creating opportunities for a variety of student experiences, including: research, internships, study abroad, clubs, targeted population programs, and leadership. Providing scholarships.</p>
<p>Q4. What could we do better that would improve student success? Why does it have a positive impact? Why do we not excel at it?</p>	<p><i>The College of Agricultural Sciences is a diverse college and the “things we do” are exciting, STEM based, globally relevant, and the skills are sought after by employers. We need a collaborative and intentional way to get the word out to students, high schools, and elementary schools that “this is where science is applied” and it’s exciting.</i></p> <p><b>Factors of student success we could improve:</b> Global competency of our students and faculty; providing linkages from classroom to the world. Utilizing University support services, including: writing, math, and academic coaching. Communicating “what we do” in our professional areas; emphasizing the STEM basis for agriculture, food production, and resource management. Utilizing the application nature of our work to attract students earlier in their educational experience – recruitment. A targeted recruitment and growth plan for the College. We need an intentional path as programs grow and resources remains static or shrink. A strategic plan that calls for a mix of instructional delivery and student experiences.</p>

<p>*Q5. What should we be focusing on to maintain or improve our impact on student success over the next 5 years? Why are these important?</p>	<p><i>For CAS to grow and excel, we need to recognize that not only are student demographics changing but the options they have for post-secondary learning will be changing and growing. We need to remain relevant by continuing to excel at providing a personal student learning experience but be forward looking to a new model of personal engagement. We did not hear about scholarships or funding for these items.</i></p> <p><b>The Top 5 factors which will become important are:</b>  Diverse student types and how they engage: non-traditional, veterans, 1<sup>st</sup> generation, international, transfer/transitional.  Classroom options: hybrid, Ecampus, off-site, experiential.  Faculty- student partnerships in learning.  Cross curriculum linkages.  Strategies for enrollment management.</p>
--	---

### Recorded Comments

<p><b>Q1. What defines student success in College of Agricultural Sciences? What comes to mind when you hear student success in the CAS?</b></p> <p>Finding a major that fits</p> <p>High wage career (competitive)</p> <p>Positive feedback from employers</p> <p>Degree completion *</p> <p>1<sup>st</sup> year retention *</p> <p>Involvement</p> <p>Transferable skills</p> <p>Critical thinking skills</p> <p>What we are doing and why it's impactful.</p> <p>Positive social, economic and ecological impacts of Ag.</p> <p>Comp. of being a working professional</p> <p>Increasing time spent on campus / Reducing comp. factors.</p> <p>Measure of involvement</p> <p>Quality of experiences</p> <p>Collectively impactful to society (Preparing next Gen)</p> <p>Value of lifelong learning</p> <p>Habit of inquiry – Quality of information</p> <p>Being able to advocate for critical thinking</p>	<p><b>Q2. What factors impact student success?</b></p> <p>Professional development</p> <p>Level &amp; Number of orientation courses</p> <p>Level of faculty involvement</p> <p>Dedicated advisors &amp; advisor access</p> <p>Exp. Learning participation</p> <p style="padding-left: 40px;">- Built into curriculum</p> <p>Required PINS – intrusive advising</p> <p><b>Q3. What do we do well that has a positive impact on student success?</b></p> <p>Acknowledging student success</p> <p style="padding-left: 40px;">Courses being taught by content experts</p> <p>Approachable faculty</p> <p>Students being involved outside of classroom</p> <p style="padding-left: 40px;">- AgExec</p> <p style="padding-left: 40px;">- AMB</p> <p style="padding-left: 40px;">- CLUBS</p> <p>Internship connections &amp; activity- Paid/Credit</p> <p style="padding-left: 40px;">* Research</p> <p style="padding-left: 40px;">* Study Abroad</p>
--	--

<p>Purpose of studies</p> <p>Connection &amp; recognition of (AgSci) community for our E-campus population. (Numbers growing) Important for retention of this group.</p>	<p>Helping student progress to careers or grad programs</p> <p>Variety of experience for students</p> <ul style="list-style-type: none"> <li>- Encouragement</li> <li>- Funding</li> </ul> <p>Access to course with multiple delivery methods</p> <p>Intentional efforts for various student populations</p> <p>Investments in leadership opportunities</p> <p>Provide an integrated curriculum</p> <p>Offer lots of scholarships thru CAS &amp; Departments</p>
--	--

<p><b>Q4. What are some of the things we could improve upon or that we are not doing?</b></p> <p>Better International involvement</p> <p>Global Competency</p> <p>Cultural competence is needed among all faculty not just “diverse” ones!</p> <p>Student/Faculty ratios</p> <p>Utilizing Academic support services (possible resources)</p> <ul style="list-style-type: none"> <li>- WR – Sciences – Math</li> <li>- Supporting faculty knowledge of resources.</li> </ul> <p>Supporting other programs/awareness (CAMP/SMILE/etc.)</p> <p>Broader science education- *core</p> <p>Communicate on STEM learning</p> <p>Modernize Quality/Quantity skills</p> <p>Increased reliance on fixed term instructors (too much)</p> <p>Better recruitment of undecided or unaware students of opportunities in Ag.</p> <ul style="list-style-type: none"> <li>- Earlier recruitment</li> </ul>	<p><b>*Q5. What should we be focusing on to maintain and improve our impact on student success?</b></p> <p><b><u>Tier 1. 4 or more votes: in order of most votes of importance (everyone had 3 votes)</u></b></p> <p>Better understanding of who our students are</p> <ul style="list-style-type: none"> <li>- Non-traditional</li> <li>- 1<sup>st</sup> year students</li> <li>- Diverse students</li> <li>- 1<sup>st</sup> generation students</li> <li>- International students</li> <li>- Transfer students</li> <li>- Urban/Rural</li> <li>- Out of state</li> <li>- Veterans</li> </ul> <p>Training faculty to help them know/learn of how to support student success</p> <p>Intentional partnering with industry, community colleges, other universities, community</p> <p><b><u>Tier 2: 2-3 votes (no order)</u></b></p> <p>Adapt to increasing class sizes</p>
---	---

<ul style="list-style-type: none"> <li>- Career Fairs</li> <li>- Stations</li> </ul> <p>Our student (and faculty) awareness of the full Land Grant Mission of OSU and the values it adds</p> <p>Training for faculty on Research opportunities</p> <p>Out of state experiences</p> <p>Targeted student growth in college</p> <ul style="list-style-type: none"> <li>- Growing Resources</li> </ul> <p>Course access &amp; how that is communicated.</p> <p>Effective tracking/measures of student involvement</p> <p>Supporting faculty success</p> <ul style="list-style-type: none"> <li>- The CTL can be a fantastic resource for “teaching the teachers”</li> </ul> <p>Provide faculty training in how <u>best</u> to create, structure and <u>constructively</u> run undergrad research experience</p> <p>E-campus Student vs. Campus students</p> <ul style="list-style-type: none"> <li>- Limitations to experiences</li> <li>- Scholarships</li> <li>- Liability</li> </ul> <p>On-campus students having to take E-campus courses</p> <p>Are we offering correct programs, support, exp.?</p> <p>Have many majors have “capstone” courses for graduating seniors? Are they effective in preparing students for their post-graduation careers?</p> <p>Although we are decentralized in nature, I think we could improve on more centralized</p> <p>Communications for students. eg: Student services, opportunities, internships, etc... an email forwarded to advisors about a great job or opportunity is not sure to reach the intended population. Great opportunities often lost!</p> <p>Student Services – define as part of student’s experience &amp; resource hub. Hard to explain this office to students, lots of potential here to create “hub”/“home-base” at college level.</p> <p>Avenue to prepare/train students for what is needed in careers. “Soft-skill” development</p>	<p>Keeping up with technological learning</p> <p>Preparing/training for students that is needed for career</p> <ul style="list-style-type: none"> <li>-Based on industry input</li> </ul> <p>Maintaining Human Resources with growth and responsibilities</p> <p>Better understanding/communication of how skills transfer to a variety of careers.</p> <ul style="list-style-type: none"> <li>- Diversity of students</li> </ul> <p>Utilizing AES/Ext. faculty to support teaching</p> <ul style="list-style-type: none"> <li>- Better awareness/training of faculty &amp; staff on psychological issues related to students &amp; staff</li> </ul> <p>Better connection with Honors College, etc.</p> <p>Availability of on-campus courses (Bacc. core &amp; more)</p> <ul style="list-style-type: none"> <li>- reconsider restrictions to exploring students</li> <li>- Portal – videos</li> </ul> <p><b><u>Tier 3: 1 votes (no order)</u></b></p> <p>Transitions for students</p> <ul style="list-style-type: none"> <li>- University, Technology, etc.</li> </ul> <p>How to effectively communicate with students</p> <p>Cross curriculum</p> <p><b><u>Tier 4: no votes</u></b></p> <p>Understanding students are going to have more options for education</p> <p>Trends for students/faculty and how they play together</p> <p>Curricula aligns with NIFA &amp; other agencies</p> <ul style="list-style-type: none"> <li>Aware of population growth</li> </ul> <p>Five years on, know that we will need students who can address “big issues” related to a growing world population &amp; global market</p> <p>Diverse faculty and incentives</p> <ul style="list-style-type: none"> <li>- Faculty that can be engaging for student</li> </ul>
--	---

courses/programs.	success Scholarships for certain programs (SMILE, CAMP)
-------------------	--

## STRATEGIC INTENT – INTERNATIONAL

### Capturing “Big Ideas” of Participants

#### **Catalog, leverage and publicize existing capacity within the College of Agricultural Sciences (CAS)**

- The college has tremendous international capabilities (faculty are a golden asset, branch station capacity, known successes such as AquaFish), but they need to be brought together and publicized to enhance our reputation. CAS has success stories, comparative advantages, and a bright future. Highlight the level of Oregon exports, research on carcinogens, etc. The success of our international programs depends on attention to full coverage in our disciplinary areas and hiring faculty within those areas who stand above the crowd. This implies that we pay close attention to the programs that have critical mass to keep them comprehensively covered, the hiring of top-flight new talent wherever they will fill a key gap, and if resources allow, identification of areas of incipient critical mass and emerging importance where new areas of disciplinary excellence can be developed.
- Because we are teetering on the edge of critical mass in so many areas, our international reputation depends on identifying and rebuilding cohesive swaths of disciplinary excellence by hiring people who are or will become renowned PI's who build the bridges which draw individuals to our community. Clearly strategic investment is essential to this outcome.
- CAS should expand understanding of the benefits to funders from engagement in international activities.
- Deans should incentivize faculty to engage in additional international activity if deemed important by the college. We need to reach out more to the international community. We need to determine how to advertise OSU as an international destination. Send administrators overseas via relationships established by our own international faculty. Target more MS and PhD students that are fully funded by their home countries or institutions. Recognize the dependence of other countries on agriculture. Promote additional reciprocal exchanges, pre-articulated undergraduate programs, and exploration of existing study abroad destinations with programs in agriculture and natural resources. A platform already exists by virtue of impressive legacies such as plant breeding, land managers/supervisors and administrative leadership (Directors of agencies, Presidents of Universities).

#### **Provide support for faculty and students to engage in international activities**

- Provide kick start funding for international activities through OSUF – specific donors.
- Faculty and students need support resources such as assistance with visas or resources to address country specific issues. Make it easy for them. Allow faculty changes in station.
- Facilitate faculty and student success in obtaining services from the OSU International Programs office, Risk Management and other OSU entities.
- Evaluate barriers around effective administrative support of international students and research, including better alignment and support from international programs, the research office, and the business centers.

#### **Promote international faculty collaboration**

- Many recipients of OSU degrees become key collaborators on advanced research after returning to their home countries. We should recruit MS students from foreign institutions to train toward PhD so those students can become our future research collaborators, ambassadors for OSU, and educators in their home countries. Ensure CAS is an inviting atmosphere.
- Collaborating on research across borders allows for multi-country grants.
- The college should pursue new relationships and potential collaborations, including following up on existing relationships without MOU's to discover unrealized opportunities. We can share our experience with extension and experiment stations with overseas institutions.



- OSU should be a leader in education at the PHD level, create interdisciplinary professor-based teams for targeted programs and work with non-US Universities to enhance recruitment of their resident MS instructors interested in a higher degree.

### **Assess and address the number of international students in the CAS and then enhance the acquisition and retention of international students**

- We should ask the question: do we want more international students in CAS? We are not currently perceived as a university at the forefront of global agricultural activity, so if we do want more international students, how will we attract them? Who should we be trying to attract? How do we increase student diversity? Benefits include being a good world citizen, going after resources, brings quality students, and enhances domestic student experiences.
- There needs to be additional college-supported incentives for studying abroad.
- Strategic partnerships should be developed with international research stations in our respective disciplines.
- Establish a campaign with the OSU Foundation in support of international activities.
- CAS should be the model College for international relationships.
- Undergraduate and graduate opportunities should be encouraged and enhanced (via funding and course credits).

### **Assess, demonstrate and communicate the benefits of international activities to Oregonians**

- Oregon agricultural interests are tied to international markets and college programs facilitate supplier success in these markets. Examples include:
  - Fisheries and wildlife research to open crab markets and plant pathology work to open Chinese markets.
  - Development of ecologically-based farming and land management programs. – clean air, clean soil, clean water, safe food.
  - Restoration and conservation for ecosystem services and ecotourism.

### **Get alignment within OSU and CAS**

- Align CAS initiatives with the new university plan and the work of the 2010 CAS Task Force.
- Align international activities with other CAS priorities.

### **Understand and deliver international programs in a way that addresses economic realities**

- Understand funding situations in countries. Seek OSU tuition reductions for targeted student recruitments.
- Address ECampus – many international students are priced out.
- Consider open campus, online delivery for students in developing countries.

### **Launch global community initiatives**

- Gather international-related statistics first so we know where we are before we plan where to go. Ask the questions: Is international activity in the state's best interests? How should we engage stakeholders and legislators? What value is brought back to the state by engagement in international activity? We should collaborate on innovations and technologies that provide a "positive feedback loop" and revenue stream to fund ongoing international activities. Improve the visibility of OSU with individual stories about remarkable international relationships formed by collaborating with CAS. Can OSU acquire a USAID grant and start a program like Michigan State's "Feeding the World's Future"?
- Implement a cohesive program focused on international agriculture and hire a Director who can coordinate and expand activities. An example is Purdue's international program: <https://ag.purdue.edu/ipia/Pages/default.aspx>. Purdue has a very structured program with study abroad, scholarships, well defined research programs, etc. This of course takes funds and human capital investment and one would need to ask "what do we give up" in return. The other option would be to land a significant grant that would allow us to expand our international agriculture program.
- Narrow the CAS international activities to long-term promising program areas.

- Enhance programs (well beyond current efforts) for OSU Profs to obtain an experience in research/teaching beyond US borders.
- Go beyond MOU agreements and create site and programmatic specific long-term program(s) of exchanges between faculty and students.
- Offer a for-credit class on foreign soil attended by OSU and resident students that is repeated so students see predictability and consistency in the program.

Participants:

Bisson, William <bissonw@science.oregonstate.edu>  
 Ciuffetti, Lynda (ciuffetl@science.oregonstate.edu)  
 Cowen, Robert <Robert.Cowen@oregonstate.edu>  
 Diebel, Penelope <Penelope.Diebel@oregonstate.edu>  
 Edge, W. <daniel.edge@oregonstate.edu>  
 Egna, Hillary <Hillary.Egna@oregonstate.edu>  
 Felix, Joel <Joel.Felix@oregonstate.edu>  
 Jaiswal, Pankaj - COS <jaiswalp@science.oregonstate.edu>  
 Lesser, Virginia <lesser@science.oregonstate.edu>  
 Lev, Larry <larry.lev@oregonstate.edu>  
 Machado, Stephen <stephen.machado@oregonstate.edu>  
 Mallory-Smith, Carol <carol.mallory-smith@oregonstate.edu>  
 Mata-Gonzalez, Ricardo <Ricardo.MataGonzalez@oregonstate.edu>  
 Miller, Betsey <millebet@hort.oregonstate.edu>  
 Miller, Jeffrey <Jeffrey.Miller@oregonstate.edu>  
 Morrissey, Michael T <michael.morrissey@oregonstate.edu>  
 Myers, James <myersja@hort.oregonstate.edu>  
 Selker, John S <john.selker@oregonstate.edu>  
 Sidlauskas, Brian <Brian.Sidlauskas@oregonstate.edu>  
 Sylvia, Gil <gil.sylvia@oregonstate.edu>  
 Walton, Vaughn <waltonv@hort.oregonstate.edu>

Co-owners:

Breen, Jack <Jack.Breen@oregonstate.edu>  
 Dorres, Paul <Paul.Dorres@oregonstate.edu>

October 10, 2013

## Communications

Communication cuts across everything we do in the College.

### **We need a more intentional system of internal communications among CAS colleagues:**

1. *We need a mechanism to share information about current research interests, facilities, and available equipment.* A clearinghouse of such information would improve our research efficiency and make it easier to create new research collaborations.

- New faculty don't have the established network to know who to ask if they need a particular instrument or a specific expertise. They sometimes go outside of OSU to access equipment or collaborators that might have been available at OSU, if such information were shared.

- A database of equipment alone would greatly inform new research proposals and enhance opportunities for research.

- A database of current research projects would also serve to connect potential collaborators and provide administrators with a snapshot of current research across CAS.

- A database of current research could facilitate federal reporting, legislative updates, and public accountability. This might be a revision of Oregon Invests! (on that topic, I suggest that we re-think the exclamation point[!]).

- Such a research database would require considerable time and effort to keep updated. One way to update annually would be to design annual performance reviews so that they include a keyword-based accounting of current research projects, equipment, and strategic themes linked to the CAS research database.

- The idea of actively sharing research highlights at an annual event got mixed reviews from our group. Some thought it would be a good opportunity to broadly share information, such as happens with EMT and FWS gatherings. Others thought it would be one more burdensome request with little payoff for faculty.

2. *We need better coordination among staff communicators within each department and program.*

- We need to clarify what communications are best accomplished on the statewide scale versus on a program- or department-scale. Websites, for example, are non-standard across departments. Branch station websites, on the other hand, adhere to a shared design and content management system. Most news releases and media relations are required to be standardized through OSU's policy of single point of release to media.

- Some programs and departments are creating their own communications units to serve their individual needs. Individual programs, branded individually, work well for small groups, but they lower

the online “findability” of CAS as a whole, dilute the “brand awareness” of both CAS and OSU, and limit the opportunity for multi-disciplinary collaboration.

- We need to convene all unit leaders and communicators across the College to identify their communications activities and develop a workable, effective strategy for the College as a whole.

**External communications push and pull in two distinct directions: public access to CAS information and public understanding of CAS science.**

*1. The public needs access to CAS information.*

- Disseminating research-based information is done primarily through EESC, in collaboration with Extension and Educational Outreach, currently under the Division of Outreach and Engagement.

- The mechanisms in place to deliver information to the public do not seem adequate to reach all audiences with all the information they need or that CAS has to offer. It might be there, but it’s not findable.

- It’s easier to engage a small group of constituents with similar interests than to engage a large group with mixed interests; but does the smaller group know they are part of a larger OSU community?

- We are not doing enough with web-based delivery or social media to really engage the public in CAS programs and information, to pull them in as participants.

- Some existing strategies to engage interest and share information (such as Ask an Expert) create a burden on a few faculty who answer the most questions. Is it possible to automate the system to relieve the burden, or compensate faculty for the time they contribute to this program?

- Much of the information the public seeks is from the Statewide Public Service Programs. What is CAS’s role in serving, managing, or leading the SWPS?

*2. How can we raise awareness of the good work happening within CAS?*

- CRIS and other reports are a burden on faculty and often need interpretation to be meaningful. They could be a good source of communications that demonstrate the importance of CAS research to the public who funds it. Can these reports be more meaningful through a strategic approach to the research database discussed at the beginning of the conversation?

- As mass media merge into social media, so we should expand our ways of communicating agricultural and environmental science. Where do people get their information these days? What conversations must we take part in to be relevant? We need a broad-target strategy for communicating the value of agricultural sciences.

- How do we increase public awareness of CAS’s role in solving larger, more intractable problems of society? These stories are bigger than a single research project and represent the power of collaborative, multi-disciplinary approaches, a distinct strength within CAS and AES.

- We have two upcoming opportunities to engage influential people in understanding the value of CAS research and teaching:

1. *OSU's new governing board* will need to learn FAST who the players are at OSU. They need to see CAS as a leader in agricultural and natural resource sciences on the state, national, and global scale.

2. *OSU's 150<sup>th</sup> anniversary* will be an opportunity to showcase the College's founding leadership in OSU history and our continuing leadership in OSU's future.

• And the perennial question: would changing the College's name increase its visibility in the marketplace of ideas? The College of Agricultural and Environmental Sciences? The College of Food, Agriculture, and Natural Resources? The College of Agricultural and Life Sciences? We've had this discussion many times. What's different now? What are the opportunities and consequences of changing the College's name at this time?

### **Communications with students is both information sharing and as skill-building.**

• Communications is one of the competencies required of successful OSU graduates. Where do they learn this essential skill for successful careers? Should CAS design a communications option that would fit the needs of its diverse student body?

• Could we design a plug-and-play opportunity for students to contribute to the broader impacts of research through field-based experiences? Would this enhance our research and our outreach and engagement while enriching the student experience?

• What is the best way to reach students with information they need, short of contacting their parents?

### **Suggested actions that could enhance communications, and the community, of the College.**

In summary, we see that it's difficult to separate communications from research and teaching or from outreach and engagement. The word comes from the Latin *communicare*, the same root as "community." To be an effective community, CAS must communicate effectively.

1. Create a shared database of current CAS research interests, facilities, and available equipment.
2. Convene department heads and communicators to discuss needs and strategies that will make public access to CAS information more effective for departments, programs, and the College. Repeat the process with branch station directors.
3. Identify important themes of research and teaching that demonstrate how CAS contributes to solutions to some of society's most complex problems.
4. Use those key themes to frame a clear message about the strength of agricultural sciences for OSU's new governing board and OSU's 150<sup>th</sup> anniversary.

## Strategic Intent Conversation: Faculty Success

September 12, 2013

**Please describe the attributes of an environment that leads to success as a faculty member. You can frame your response from both personal experiences as well as from a more generic standpoint.**

### Environment

- Select good colleagues and co-workers compatible with your personality for collaboration, good networking; continue professional development, diversify, be more of a generalist rather than a specialist, collaboration, be a team player.
- Great to be encouraged to do more than just writing, papers, and get grants, whole contribution to OSU and region is considered in P&T. Inclusive, supportive environment—my opinion matters.
- Most faculty want an environment that promotes and builds opportunities to get together; give an opportunity to pause and get to know others.
- Collegiality—Feeling part of a community that supports its own. Collegiality is important, helping CAS and Departmental members feel they are in a good place.
- Flexibility for families within an academic environment is positive, when faculty know that others care about them. We want to feel that we are supported across the college/university.
- Nice to know that the department is looking at my total contributions and that they matter.
- There is a need for more opportunities to make connections across campus; opportunities to work beyond one's own basic science and “serve” larger community.
- We need support for fiscal management, compliance, janitorial. These detract from the teaching and research.

### Professional Networking

- Do not focus only in your area but away from your area. You can learn a lot from what others are doing to apply to your local area, “be visible” so people know who you are and what you are capable of.
- We need more opportunities for intentional networking. This would help newer campus members identify others with who collaborations may be appropriate.
- Professional development needs to be supported by the unit leaders, e.g. for teaching. Need full support. More opportunities for professional development both on/off-campus would be helpful.

### Guidance

- The mentoring committee structure is very important; perhaps especially for off-campus. Performance reviews that provide consistent feedback are helpful for the success of an employee, especially for those who need to rely on it for P&T purposes. Include senior faculty and retention of faculty; faculty efficiency is important.
- Liz Etherington has been very helpful with grants; and the statistics help desk is helpful; would like it to be more available for graduate students.
- College and Departmental issues can be enhanced by transparency; the more everyone knows what is happening, the easier it is to be successful.
- Right mix of faculty is very important; can sometimes build barriers between faculty categories. There needs to be reasonable expectations of all faculty levels. i.e. from professional faculty perspective, it would be helpful to have benchmarks, project goals.
- Want expensive equipment, need to find out how one can get it...
- We don't always know what success will or should look like. It is important to know what options I have to reach success in a broad way.

## Recognition

- Is there a way to expand opportunities for awards for young faculty?
- More named and funded/ endowed professorships.
- More awards to recognize mid-career and senior faculty.
- More retention incentives for faculty.
- Supplemental incentive compensation plans could reward highly successful faculty.

## Promotion and Tenure

- Ample time and freedom to work on the tasks that count most for P&T. Faculty need time to focus on what matters for P&T. Faculty also need clearly laid out P&T expectations, i.e. for push to associate and then on to full.
- Faculty need to know where the bar is, how close you are to it, and what is still needed.
- Clarify time expectations, linked to the position description.
- Should be clear scholarship expectations, especially for nontraditional appointments; i.e. with a three way appointment, very clear guidelines are needed.
- P&T forum is very helpful because it makes everyone aware of changes. Have a department head knowledgeable about the process and engaged in getting all the documentation in order (e.g. peer teaching evaluation, student evaluations).
- Change in the process at the college level for P&T could be helpful, is the college still providing assistance with dossiers?
- Faculty success includes both promotion and tenure of early career faculty and equally importantly, faculty success and retention of mid- and senior level faculty.
- 3-yr review was very helpful and reassuring.

## **What elements of support should be added/enhanced at OSU to further facilitate the success of our faculty?**

### Course work and Student Support

- A big issue for HMSC, is the access for students to courses on campus, accessibility and reliability of connection for courses especially those offered by other colleges.
- Online vs. on campus graduate tuition and fees clarification.
- Promotion of e-campus courses.
- Provide more support for remote faculty to supervise more graduate students.
- Graduate students at OSU are uncompetitively expensive, which incentivizes utilization of post docs for research grants rather than training of students. Lack of institutional funding for GTAs and GRAs limits our student numbers.
- Student recruitment funds, especially minority stipend and tuition.

### Faculty Support

- What is an appropriate University level service for remote faculty?
- Provide financial help (or partial 0.25, 0.50) to hire techs. This can also add to the efficacy of a faculty. Improve quality of facilities, labs. Just as we worry about buildings, we are worry about how to cover our payroll.
- We say that we value the three legs of the land-grant but feel that they are not equally important. A lot of teaching may still leave a lot of sleepless nights about needing to write research papers.
- More support for attending conferences; looking for continuation of supportive colleagues.
- Professional development in teaching; need college level events, could provide increasing opportunities.
- Reduction in current paperwork burdens and restoration of faculty efficiency.
- Providing a good environment and guidance on how to say “no”; I’ve picked up additional classes, serve on everything that I’ve been asked to do, but could use better guidance on “how to

say” no.

- More investment in faculty.
- We need to define what is meant by “faculty”; instructors are key to success of academic units but aren’t usually included in support for research/teaching.
- Better control and support of growth.
- Retention is very important for longer term.
- 9 minute appointments are problematic for students(?).

### Budgets and Budgeting

- There are some very difficult budget issues; lack of clarity on budget processes makes things difficult. Help in this area is very needed. Faculty needs access to competent, internal assistance in being able to spend the research grants obtained.
- Fiscal support is insufficient (business centers, contracts, and OPAA are especially problematic, resulting in lost research contracts, over spending of research grants, under spending of research grants and return of funds to agencies, and inefficient grant and contract management by faculty).
- More support for paperwork, budgets, permitting and compliance issues. PIs need to be spending more time writing, researching, teaching and mentoring rather than paperwork.
- Better customer service attitude from those whose help we need, better return on research overhead, need investment in core facilities, infrastructure.
- Need creative models in regards to open access costs.
- Greater proportional investment by OSU in research and graduate education arenas.
- Greater across the board administrative/fiscal support for faculty and improved ‘customer service’ attitude from OSU support units (fiscal, HR, facilities, compliance, etc).
- OSU OPE rates are so high as to make OSU faculty less competitive/productive in the extramural research funding arena.
- I don’t know the exact question what to ask, e.g. type of start-up funds and how to spend them.

### Guidelines and Compliance

- Way too much time is spent on compliance, accounting and assessment requests, can we make it simpler?
- There is an absence of understanding of those seeking information for compliance that we are trained professionals.
- Compliance committees at OSU are too slow, uncooperative, not investigator friendly, and often obstructionist (*especially* IACUC and IRB).
- Some faculty do not use live animals in classes due to the IACUC requirements. IACUC permitting and reporting for courses (research is likely too specific) is slow and burdensome.
- Constantly increasing paperwork and compliance tasks and distribution of previously centrally accomplished tasks down to the faculty level, are requiring inordinate amounts of faculty time, taking them away from instruction and research.
- Risk management compliance for field trips.
- “How the message is delivered” is very important; an excellent example of good service is Radiation Safety (can we model it?).

### Help from the College and University

- Improve quality of facilities, lab, etc. We could spend more time writing proposals for research than worrying about the lab and the needs of the lab. Campus power unreliability is a major problem, resulting in interruption and loss of research results and damage to major instrumentation (also an Infrastructure topic issue).
- Core support/availability of major instrumentation is insufficient (also an Infrastructure topic issue).
- College help is needed for better support and to control growth; improve communications on who



to contact for what in the business center.

- We need links on the “new faculty” page for classroom technology.
- No one gets training in budgets; new faculty need help with budget. Need template for budgeting. Can we assign someone to each new faculty for budget?
- Support staff needed to assist with budget, regulatory compliance, assessment documentation.
- Overall campus research infrastructure, including IT, is not competitive, negatively impacting student and new faculty recruitment, research productivity, and impeding faculty retention (also an Infrastructure topic issue).
- Counseling should be available for everyone without stigma.

## **Does anything keep you awake at night about your work and life balance?**

### Work Balance

- You want a balance, but I worry about it all (grants, students, teaching)
- Clarifying how much time goes to what tasks, specifically heavy teaching vs research.
- Finding grants keep me awake; difficult to fund my research agenda because of the particular area.
- Can we set up “informal” forums for more support? Young parents, CAS women’s network, ????
- Make really sure that each faculty has someone (or several) to go to for guidance on a confidential basis.
- Tenure process is itself something that keeps one awake; if more clarity is available, that would help.
- Growth of student numbers, how do we keep up?
- How to engage faculty in conversations about experiential learning when faculty are already overtaxed?
- Chronic anxiousness about completing enough work and enough success had been completed to keep job and meet necessary milestones. Keeps one from moving forward in private life, if you are constantly worried about your future.
- Third year review very helpful but the “yeah, but…” it would be nice to have 2.5 M federal grant even though they aren’t available.
- Counseling services for faculty? Most wait until a crisis point. Early intervention, prevention.
- Retention is a problem.
- Writing grants ! Deadlines, papers !!! Yes, it keeps me awake.
- Granting environment has changed.
- Find more ways to reward faculty, especially mid-career.
- Facilitating success of instructors. TT positions are very limited, need to have clear pathway to success, good career path options.

### Work and Family

- Flexibility provided by academic environment is great for families, especially when you have an understanding unit leader.
- 

**Meeting Attendees:** *John Killefer (AnRS), Stella Coakley (CAS), Ryan Contreras (Hort), Brian Sidlauskas (FW), Ramesh Sagili (Hort), Christian Langpap (AEC), Kimberly Halsy (MB), Penny Diebel (CAS), Craig Marcus (EMT), Mike Borman (AnRS), Selina Heppell (FW), Greg Thompson AgEd), Danielle Jarkowsky (FW), Jessica Miller (HMSC), Silvia Rondon (HAREC), Liz Webb (CAS).*

## Research Intent Conversation Notes Sept. 18, 2013

Various themes repeated throughout the discussion:

1. CAS is very diverse with focus close to home (i.e. here in Oregon) and expanding into the greater needs of a nation and the world. Differences exist as to how much emphasis should be placed on research that benefits Oregon directly and the nation and the world more broadly.
2. Research agenda varies by research area – therefore, funding availability varies by research area
3. Maintaining the land grant mission is made more difficult by ever changing federal research programs.
4. Faculty need additional support to maintain capacity (students, FRAs) during funding dry spells and newer faculty need additional support and mentoring to learn the “research enterprise”

### ***Question #1: Does our faculty research agenda match well with existing funding sources?***

Summary:

- CAS is so large and diverse that it’s funding sources tend to reflect this diversity. However, this diversity can lead to faculty members that occupy a specific niche that has limited funding. This point is compounded by the fact that specific disciplines tend to have specific funding sources, i.e., commodity, industry, federal, state, or other sources. If the funding is sufficient to support the research program for a given faculty member, that may be supported by the administration. If not, there are often attempts to require faculty members to pursue other funding that may interfere with existing research and impact existing research support. Too often, funding sources dictate research emphasis rather than research needs dictating funding availability.
- Some differences arose regarding the importance of maintaining an “Oregon” research focus to sustain legislative and stakeholder support while others believed that research that addresses national and international needs can also translate well to Oregon’s specific needs. Most competitive research funded through federal agencies requires researchers to adapt existing research foci to what is being funded.
- More effort should be expended to assist newer faculty with collaborative opportunities both within and outside of the University. Faculty may have research expertise in a smaller element of a larger research program but it is often difficult for newer faculty members to identify co-applicants or lead applicants that can utilize their expertise. (A university scale “Research Gate” that allows faculty to identify other researchers with particular expertise is recommended).

*Notes from conversation:*

- *Is what we have adequate support to drive program – educate students, etc.?*
- *We need to first properly identify stakeholders*
  - *Are they the people of OR #1; if so, what are critical needs of OR – now? 10 yrs.? And how do we meet these critical needs?*
  - *ex) Climate change – how does it fit in?*
  - *Balance OR/local needs with the greater need*
    - *ex) Obesity cross-cutting*
    - *Careful not to lose votes in OR legislature*
    - *Other research may have to look more broadly to fit*
  - *Maintain leverage with state funding*
- *It depend on research priority which is specific to faculty member*
  - *Tough for niche / assigned research, especially those who work with industry specifically*
    - *Feel they are continually asked to seek out more federal funding (which may not be well suited)*
    - *Deans’ feel this that it is OK if it (funding) all comes from industry as long as it is enough to fund, expand on a program*
  - *Position descriptions may be for one, very specific assignment but zero funds available*

- *Balance adaptation vs. research area/specialty*
  - *Comes back to what is being funded e.g., getting federal agencies (NOAA, USDA) to collaborate and recognize “food systems” broadly*
- *CAS is so very diverse! Varies significantly: commodity-industry-federal*
  - *Audience expands to national & international (which also translates to OR)*
    - *Make sure we capture a wide-range in our intent*
- *Tough for new faculty to know*
- *“No” – tail is wagging the dog; asked to adapt = not consistent*
  - *Funds drive what we do vs. what research feel should be done*
- *Decreasing dollars from the state paired with loss of long term federal earmarks make it difficult to maintain long term research*
- *Where is the flexibility? What tax-payers may not know*
  - *Is extension visible*
  - *Flexibility is appreciated*
- *Not as successful with industry & NIH funding*
- *Invested in core competencies*
- *Cross – disc. /Inter disc. – how does this fit in?*

***Question #2: What do we do well and what could we do better? Is our research focus appropriately aligned with the University’s strategic plan and the Statewide Program’s strategic plan?***

What do we do well?

- Most attendees agree that CAS does a good job of securing outside funding, and the College is aligned well with the OSU and Statewide strategic plans. The importance of the Statewides to the College’s success is recognized.

What could we do better?

- Faculty need more resources including facilities, time, funding for students, seed funding for preliminary proposal and data development, and central support for large proposal/collaborative proposal preparation
- Faculty need clarification on scholarly activity and research focus, particularly commodity specific research and how that affects promotion and tenure – e.g., increased focus on obtaining more federal funding and journal publications.
- Large collaborative projects require additional incentives as individual faculty awards on large projects are seldom sufficient to fund a graduate student. Projects should also be focused on engaging students and research stations.
- Outreach and engagement and communications should become part of all research proposals. Faculty feel the need for someone other than the researcher to take responsibility for this role. It is also important that OEC demonstrate to Oregon stakeholders the value of our research.
- An internal searchable database for equipment availability and research interests of all University labs and faculty is needed.
- More central support for mentoring faculty in the research enterprise (attracting funding, writing proposals, budgeting, securing resources, finding collaborators, etc.)
- Faculty want the administration to recognize that time demands for teaching, research, and outreach make it difficult to stay on top of all three requirements.
- Research compliance requirements are too burdensome.

*Notes from the conversation:*

- *We need to communicate properly to our OR stakeholders – communicate the value of our research*
- *We need to better support the concept of the “state as our campus” and support extension and branch experiment stations*
  - *These campuses are what reflect the diversity of the state and diversity of issues and ecosystems*
- *Support is needed for preliminary data development (i.e. seed funding)*

- *Facilities – do we have what is needed to do research? ex)state-of-the art GH for increased production*
- *Not sure there is enough support from administration if research is very commodity specific: how does P&T fit in?*
  - *Feel there is a constant pressure for more federal funds and peer reviewed publication*
- *Doing well/ OK but could do better with better resources*
  - *Extremely diverse research portfolio and responsibilities (high desert to ocean)*
- *Better define scholarly activity for clarity per faculty member (needs to be specific per assignment)*
- *As a college, we are better aligned with OSU – 3 healthy’ s, this is what we do well*
- *Need to engage more students in research(E & G \$) as well as better engage our research stations*
- *More distinctive direction/focus (more distinctive/localized production)*
- *Need resources/discussions on how to take specific research to show a global relationship*
  - *An extension of mentoring*
- *Network to help establish collaboration (database using key words)*
  - *A central person to help establish connections*
  - *Opportunities to network with new collaborators (branch out of current hole)*
- *Need incentives for engaging in large collaborative efforts*
- *Area specific: some are well aligned, some may need more support*
  - *Needs and outcomes are very different*
  - *Make sure emphasis are broad enough to capture our diversity*
  - *CAS does acknowledge faculty differences*
- *We do have good packages for new hires but those in late- to mid-career who hit a bump need more structure to support*
- *Not enough time for more research, need more centralized support*
  - *Central lead/support for large infrastructure grants ... someone to champion in college*
- *Research compliance in general is too cumbersome – too much administrative bullshit*
- *Important to see the “engines of statewides” driven by CAS*
- *Engage student (including undergrads) more in research*
- *Have resources to better priorities research but need to contact/communicate with EESC ahead of time*
  - *Build communication component into a program upfront-partnership not an after thought*
- *Would be helpful to have a centralized list of all available equipment/shared facilities*
  - *Specifically an internal searchable website*
- *It would also be helpful to have a new faculty “checklist” on what must be done to conduct research*
- *Challenge to keep individual identity while still embracing the diversity of our college*
- *There currently is a lot on faculty plates – hard to keep head above water*
- *Have great people who work hard but no rewards, not enough acknowledgement*
- *More engagement that isn’t responsibility of faculty (more support)*

***Question #3: Does our research emphasis translate well into other topics such as: 1) student success or graduation; 2) outreach and engagement; 3) faculty success); and 4) infrastructure and facilities?***

Summary:

#### Student Success and Infrastructure and Facilities

- CAS research provides a good opportunity to engage graduate students and undergraduates. However, the lack of modern facilities impacts student career potential if employers have to retrain former students on state-of-the-art equipment and facilities. All facilities, and not just research facilities, need to be improved as does maintenance support.
- Lack of teaching FTE impacts student success.

#### Faculty Success

- Faculty success must be judged within a changing landscape, e.g., open source journals, availability of federal funds, etc.

- Faculty need more time allocated for research development and there is a need for more CAS level support for development work and initiating new research programs.
- Faculty need ongoing support once the start-up package expires for graduate student training and FRA support.

#### Outreach/Engagement and Communications

- Research provides the content for communications
- Recognition that Outreach/Engagement is complicated and our stakeholders vary on how they receive information. We must ensure that we do not rely too heavily on electronic communications or social media

#### *Notes from the conversation:*

- *Our research provides a good opportunity to engage students (including undergraduates as well)*
- *We don't integrate the three land grant missions as seamlessly as we think*
  - *Have extraordinary comparative strengths given our diversity; use those strengths to provide experiential education and support for undergraduate involvement in real world issues*
- *Need more / better/ useable facilities – not just research but all facilities (maintenance support)*
- *College-level support for development & new programs*
- *Faculty success – be mindful of new & emerging landscapes .... not same now (open source, fed. funds, etc.)*
- *Find cross-cutting themes for college*
- *Student success: some areas need more support, feel not being as successful – Clarification: research strong, teaching is very lacking (CSS spec.)*
  - *Ties into facilities; need state of the art facilities so students don't have to be retrained on hired in the field*
- *Faculty support:*
  - *need more time for research development, increased responsibilities with teaching, etc.*
  - *what happens after start-package runs out (post 3 yrs.); graduate student training, FRA support; FTE (\*moving towards 9 month appt.)*
- *Research is the content for our communication*
- *Outreach/Engagement is complicated – electric/social media doesn't fit all areas*

# Strategic intent conversation about diversity, equity and inclusion

## Summary

September 24, 2013

**Owners:** Linda Brewer, Ariel Ginsburg, and Elizabeth Webb

**Participants:** Wanda Crannell, Paul Dorres, Jesse Ford, Guillermo Giannico, Cheryl Hoflich, Arlyn Moreno Luna, Dan McGrath, and Sujaya Rao. Listening: Dan Arp

### **1. Cultural differences such as ‘rural and urban’ or ‘conventional and organic’ in Oregon are examples of diversity the College encounters. What are differences to which we should be attentive?**

- Racial and ethnic
- Tribal
- Racial/underserved/economic class crossover
- Low income (Concept of low-income clientele: Land owners (white European middle class)/workers low income. We design programs for mid-class. 85% in agriculture are low-income workers. 15% are landowners.)
- First generation college students in family/multi generation college students in family
- Urban/Rural (differing views toward conservation, sustainability, climate change)
- Diversity of viewpoints within our own departments, i.e., on water issues
- Landowners/conservationists
- International/Domestic
- Out-of-state and international students/underserved Oregon students. OSU business model makes quick strides vs. serving the underserved in Oregon.
- Veterans
- Prison inmates and ex-convicts. (Life is difficult for their recovery; online education is an avenue.)
- Older-than-average students
- Rural students/Urban students
- Lesbian, gay, bi-sexual, transgender
- Secular fundamental values (stakeholder religion)
- Political values
- Community college dropouts and transfers

### **2. In your experience, what could enhance support, communication and opportunities for CAS students, staff, and faculty from diverse backgrounds? What difference could the College seek to make?**

- Continue with Paul Axtell work.
- Diverse faces shown on publications don't reflect reality.
- Be aware of disparity between faculty and classified staff. Classism: ‘some are paid to think, some are paid not to think’. Refer to CAS Climate Survey, Women and Gender Equity Report.
- Tackle retention issues.
- Integrate student organizations and training: CAMP, Leadership Academy, Ambassadors, MANRRS, SACNAS, clubs.
- Frame diversity on finding future jobs, or where your food comes from. SACNAS and MANRRS are opportunities. Cross with our other student groups. Create pipeline activities.
- Tighten links. CAMP (summer bridge and 1<sup>st</sup> year support) students come in as undeclared. Take opportunity to work with them; they may not think of agriculture; they are looking for other options besides farming.
- Notice ways of doing. Diversity is not discussed. “Just do” with people. No workshops. Just do, to gain experience and respect.

- Remember who the experts are. Have conversations to target which conversations we want to have. Who are we trying to serve? It is discourteous not to do homework before approaching those we serve. We are serving them. Everyone has something to bring to the table. How do we include? Are we the ones willing to be transformed?
- Reassess how much the image of CAS has changed. There are more women. Adjust outreach and change perception.
- Add words to the name of the College. The ‘ag’ word leaves out what else is under the umbrella.
- We aren’t great at cultural fluency. We do need training; skills aren’t being developed.
- Our faculty needs to look like the students we want to attract.
- Teach in DPD about privilege, not by focusing on diversity. It is a hard concept to get across; the dominant population has no idea about privilege and dominance. The assumption is that ‘I am in normal mode’.
- Start with cultural fluency. Examine privilege without malice; see opportunities. This is missing for faculty, staff and students.
- Be mindful of our show ponies – the over-exposed stellar students and faculty; they get stressed.

### **3. Are there new ideas we should consider to overlay diversity, equity and inclusion onto our mission?**

#### **Promotion and tenure:**

- Re-educate the P&T Committee to recognize diversity, equity and inclusion efforts. Establish a rubric to feed into P&T. To acknowledge the effort, you have to change P&T expectations. Make a commitment to long-range work. Publications are counted.
- There is value in diversity and inclusivity. In position descriptions, articulate how to demonstrate them. Make it a required qualification and hold people responsible for it. Put a requirement in SOARS for annual review, so every year you have to think about it, like the Health Engagement Model (HEM).

#### **Cultural fluency:**

- Take a scholarly approach to develop fluency. What is the hypothesis? Are there measurable changes? What are the best practices? Is there publishing?

#### **Diversity Power and Discrimination:**

- Students don’t really learn about DPD. It is a check-off for the undergraduate degree. Diversity is germane in agriculture; our graduates work in industry. We are remiss if they aren’t able to demonstrate awareness. CAS could require that you must get a “B” in DPD. Integrate DPD into multiple common courses such as writing, economics, etc.
- Consider a 1 credit DPD recitation that is experiential. There are currently few choices in DPD offerings.
- Grant a certificate in DPD that graduates can add to their resume. Garner support for this from upper administration, faculty, and students, to emphasize the importance of this measure.

#### **Transfer students:**

- Community college advisors make an error in assessing students, assuming they are only seeking an AA degree, and do not assure transferability of CC courses. These students need an alternative path to follow to college such as through Junior MANRRS, EOP, LSAMP. MANRRS and SACNAS provide a toolbox and are open to all.

#### **Navigating change:**

- Diversity is changing rapidly at OSU. How are we meeting these needs? Do we see ourselves as public servants, serving whoever comes through the door?

- We know that what works is expensive, time consuming and hard.

**4. To what should the College be paying attention about diversity, equity, and inclusiveness in order to continue progress in the next 3 to 5 years? What could make the biggest impact? What might we stop doing?**

**Marketing:**

- Define what College of Agricultural Sciences is, not what is perceived. Change the perception.
- Make ourselves stand out to students.
- Compare ourselves to what other land grant schools are doing. Do they have a titled director or associate dean named as the responsible person? Do they have a strong MANRRS chapter?

**Admission and Retention:**

- Laurels Scholarships are good intentions that don't work well. They are tuition only. Students need to be paid, given an hourly rate. Laurels tend to go to white students as an extra perk.
- OSU Financial Aid admission policy is 3.75 and above students are admitted first. This doesn't enhance diversity. What about those below 3.75? Remove barriers to students taking SATs where English is a second language. Same with the GRE so students can become GRA's.
- Address the retention issues of diverse faculty.
- NSF is GPA-driven. Everyone is recruiting the same students.
- Pay attention to student retention. Keep students here, point them to Graduate School, and help them to increase confidence. Then you have a diverse faculty pipeline.
- Not all international students are here to earn a degree

**Metrics:**

- Proportion of diverse students
- Review strategies in place
- Are we better in 2018? (5 years)
- Try a new hypothesis every 2 years
- Stop doing things that don't work
- Monitor closely
- Accept risk of screwing up
- What has made a difference?

**Advisory Committee:**

- Form a Hispanic advisory committee on how to bring groups together, learn what they need. Mid-class people don't need us; foster communication with communities that need us.

**One on one:**

- Faculty take students under their wing and mentor them.



## Marketing

### CAS strategic intent conversation summary (v 10-24-13)

Branding the College – what is the image we want to portray of CAS?

Attracting interest – what is the distinctive value offered by CAS, and to whom?

Aligning our claims – what evidence do we have to illustrate this value?

We began the conversation by listing **value statements** for CAS...

- we are a credible source of information and at the cutting edge of new knowledge
- we grow jobs for communities and career possibilities for graduates
- we share what we know with communities across Oregon
- we help solve difficult problems that require collaboration and multiple expertise
- we live and work in communities where we are engaged in regional issues
- we have personal relationships with people in communities, in industries, and in other agencies, to leverage the broadest range of ideas and expertise
- we have the ability to convene communities to help people discuss problems and find shared solutions

### What needs fixing?

There was consensus that few people really understand the breadth of work pursued by CAS research, teaching, and Extension. We work across many disciplines and geographies. Even faculty and students within the college have limited understanding of all that we do.

- minority students are not fully aware of the options available to them in CAS.
- potential partners and students are put off by preconceived notions of OSU politics, suspicious that the intent of our science is too closely aligned with their adversaries.
- CAS faculty, staff, and current students have limited knowledge of the college outside of one's specific area.

Although our group felt that the work of CAS is credible, balanced, and science-based, there is the possibility that one comment from one disgruntled group could damage the reputation of CAS. Therefore...

### We need to strengthen our message so torpedoes don't sink us.

Our reputation hinges on times when we are involved in contentious issues.

- Some say we have researchers on both sides of controversial topics; others say we should work only at the middle without taking sides.

- We have experts who can speak to pros and cons on controversial topics (canola; GMOs; wolves). We should not advocate for one political point of view.
- We offer clarity, not certainty.

This began an engaging conversation about **our distinctive value as scientists**. We need to explain what our science offers, to students, to industry, to decision-makers and voters.

CAS science involves understanding the value of uncertainty, the measurement of probability, and the methods of experimentation. It moves toward greater understanding. It is fluid. It means offering clarity, not certainty.

Reframe the message: How can CAS help you solve your problem?

Students often seek a pathway to develop their interests into fulfilling careers. Many in the current generation of students are passionate about food, agriculture, and conservation. We need to showcase how CAS offers distinctive opportunities to follow those passions into meaningful, rewarding futures.

Legislators often seek certainty. We need to share the context in which science operates, the rules of evidence that it follows, and the limits of its certainty. We need to show that the process of science will get us closer to understanding the pros and cons of choices and the consequences of decisions. However, science will not make the decision.

Stakeholders often seek scientific opinion. Sharing what we see as possible or probable or consequential takes time and trust. We must ask, “what can we do to help with this problem?”

Voters and the interested public often seek information that furthers their interests or solves their problems. Food, for example, interests a lot of people. So does nature. CAS has much to offer on both these topics. We can get people’s attention through the things that *we* do that *they* care about.

Maintain the credibility built upon good science

To some people, science is to be mistrusted, as the creators of Frankenfood, not real food. We need to engage our communities statewide to reinforce the value of our real work, not the fear of some imagined work.

There are plenty of people who will never care how CAS science contributes to society. We need to demonstrate what CAS can do for them in particular, that CAS is solving problem and educating students who can solve problems.

We need to share our story and messages internally, so our own faculty and students become our best ambassadors.

## **So, what IS the image we want to portray of CAS?**

- we provide research-based information to inform decisions that must be made by legislators and all levels of decision-makers;
- we test options and ideas, to increase clarity about what is at risk and what might be the consequences of one choice or another;
- we do the experiments that industry and individuals cannot afford;
- we provide real-world training and hands-on experiences in great research settings across the state;
- we provide a great return on investment: a career-ready graduate;
- our research is applicable to real problems currently facing society;
- our students have access to professors and to significant research opportunities.

## **How do we brand this image?**

If we were to distill our marketing campaign into a few words, they would be:

Food

Environment

Health

Life

Opportunity

Diversity

Ground-breaking

Experience

Collaborative

Solutions

Community

Family

**Outreach and Engagement Strategic Intent in the College of Agricultural Sciences**  
(Group leaders: Mike Bondi, Mike Borman, Bill Braunworth, Russ Karow, Willie Riggs)  
(10-13-13)

OSU has been given the Elective Classification for Community Engagement offered by the Carnegie Foundation for the Advancement of Teaching as of 2011. This classification is defined by Carnegie as follows:

Community engagement describes collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity. The purpose of community engagement is the partnership of college and university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good.

Outreach and Engagement (O&E) at the OSU level is described in the document “University Outreach and Engagement Agenda”; edited April 2, 2012. In this document it is stated that “Through the OSU Extension Service, university outreach has been successful for more than 100 years. Future success will depend on engagement based on partnerships that share a back-and-forth flow of knowledge. With this, OSU gains a fundamental understanding of the problems, interests, and opportunities faced by communities and partners in applying appropriate solutions to real world challenges.”

**Increasing Awareness of O&E at OSU**

O&E has been an important part of OSU and the College of Agricultural Sciences (CAS) in the past. Is it critical today? In strategic intent conversations, CAS faculty and staff resoundingly said yes with these specific thoughts:

- Many people equate O&E with Extension and the Agricultural Experiment Station (AES), even some of those who know these organizations well (Forest Research Lab recognition is likely similar). Extension and AES will indeed be an important part of OSU’s O&E work in the future but to be truly successful as a Land Grant institution, we need to move O&E across the university as a whole.
  - CAS can help lead this effort as we likely have more working ties into other colleges and departments on campus than others
  - We need to develop some marketing tools for use with our traditional Extension/AES audiences and others to let them know what O&E is
    - With our new autonomy from OUS we need to make it known that this long-time and current expertise within OSU is unique among state universities
- Most OSU faculty have no true idea of our statewide footprint as a university and underappreciate the potential for engagement that already exists at OSU. We need to create mechanisms for awareness with the working assumption that awareness will lead to greater opportunity for O&E work by those not already engaged in it
  - Expand the Roads Scholars program – people need to know that we have a vibrant faculty presence off campus. This can only be done “live” – our lives are too full of technology feeds of all types for a video or similar item to truly capture attention
  - Create a real-time database of the interests, locations and capabilities of people – technical skills and lab/equipment resources
    - Include both on and off-campus faculty
    - Start with CAS but build the system with the capability to expand to all of OSU
    - Make updating this database part of annual evaluation so that it happens
    - At this point, make this O&E database known as the first point of contact for faculty across campus but do not make it a public resource as there is faculty concern about presence in such a database as tacit consent to answer questions
- Most students have no true idea of what a Land Grant university is about or what their role is in it

- Offer resources for instructors to use in teaching what it means to be a Land Grant?
  - Teach a seminar class on Land Grant history and ways in which students can become engaged?
  - Ask OSU Today to be mindful of new items that exemplify O&E and highlight these in some way?
- All of the above suggestions will take some funding, but it is not funding to do actual O&E work but rather to create awareness. The thought is that through awareness, relationships will be built among faculty and between communities and OSU faculty and students and that through these relationships other resources will be found. It would be difficult/undesirable to shift large portions of existing Extension funding to broader O&E activity without losing effectiveness in what we are now doing within Extension. We have already retrenched to a base of level of activity in most areas given budget reductions over the past ten years.

### **How Can We Do O&E Better and Add Capacity for O&E**

- *As we consider better and more, we must keep two truths in mind in making all decisions*
  - We must remember that our hallmark as a university is science-based information. We must always chose to put science first in all we do or we become just another information provider in an ever expanding universe of information providers
    - If resources are limiting, we may need to make tough choices on the communities with whom we will engage and the science we will do. We have not been successful in the past in making these choices but risk becoming irrelevant if we do not
  - Engagement requires being in relationship with the communities we intend to serve. Historically these relationships have been in-person and in many instances in-person relationships will be best in the future but technology is creating new ways to be in effective community with others. We must ask our faculty who are most familiar with these technologies and their potential for true engagement to help us assess new tools. After careful assessment, if new tools seem to have potential then we need to embrace them in our organization where they make sense. The “old guard” must stand ready to open the doors for the new.
- *Capacity through adding faculty on other “recurring funds”*
  - The President and Provost have announced that up to 50 new faculty positions will be added in each of the coming years paid for with state E&G, returned overhead and tuition funds. While the usual thought is to hire teaching/research faculty into these positions, could several teaching/O&E or research/O&E faculty be championed? If this seems logical, we will need to move quickly to describe such positions and promote them with campus faculty and administrators. The expectation of all new faculty is that they will bring significant new resources to OSU. New resources should be possible with O&E split positions
    - Create established mechanisms to do O&E as required in most current federal grants. Rather than as an 11<sup>th</sup> hour add-on to a grant, have mechanisms in place to do true, broad scale O&E – this should improve faculty success in obtaining grants = new funds
    - If we create new problem-solving relationships with communities with whom we are engaged, those communities will likely bring new resources to OSU or work with us to obtain grants and gifts to do needed work. Can we create student corps for addressing community needs? These could be groups that change over time as students move through programs of study but older students would mentor younger to keep the collective moving ahead. The faculty who managed such groups and has a teaching/O&E split, would bring new resources to OSU
      - OSU Policy Analysis Laboratory (OPAL) program - <http://oregonstate.edu/opal/>
      - Expanded County College Program

- Public works projects (like CCC) – design and implement
  
- *Depth and breadth in “high-touch” and “high-tech” worlds*
  - To be useful in today’s world we likely need to have faculty with a depth of expertise that is not available through other businesses, agencies or NGOs and/or people who are exceptional synthesizers
  - At the same time, for engagement with some communities, we need a “high touch” presence. Can program aids be the first contact? Can a well-honed student internship program play a role? As the baby boomers retire in increasing numbers, can we capture the volunteer spirit that exists in many of this group to serve, once trained, as first-line contact for OSU O&E programs? We need to think creatively.
  - With younger communities and the technology savvy, electronically-based information is wholly acceptable. If we can find ways to create content-rich, easily searchable, electronic databases of information this can provide depth and high touch for some audiences.
    - “OSU approved” branding – people know the information is science-based and has been thoroughly vetted – becomes the “go to” place for information
    - Must be real time – we must find mechanisms within our system to allow on-the-go updating of content that meets the vetted criteria
  
- *Providing our engaged communities with capacity – sharing tools and student time*
  - Further enhance our electronic communication capabilities at branch experiment stations and extension offices
    - Make videoconference or phone connectivity essentially seamless to the ordinary user
    - Develop structures that allow our community partners to access our technology systems to communicate in regard to activities related to the greater good of Oregon agriculture and natural resources.
  - Offer for-credit classes for graduate students located at branch experiment stations and in extension offices and open these to interested general public people who as “observers” will not have to pay tuition. This would also be useful for undergrads who are doing term-long internships at a station or extension office
  - Provide subsidized housing on branch experiment stations or in communities so that graduate students, undergrad interns, faculty, or visiting experts have an easy access, inexpensive place to stay
  - Kindergarten to Community College connections
    - Develop system with Ag in the Classroom where student interns can work with retired, volunteer teachers to develop curriculum
      - use funds written into grants for outreach activities to pay the students and to develop all inclusive kits that can be given to teachers interested in teaching a topic
    - Have students serve as “scientists in residence” to take curricular items to schools for a week or two – they then serve as recruitment ambassadors for CAS as well
    - Vocational Ag program – we need to engage STEM faculty on campus and 4H faculty in development of natural resource programs for middle school and high school students
    - “Emerging Scholars Programs” – make information about this program at NWREC available to others and work with STEM and BRR faculty to enhance the program
    - Identify charter schools across the state that have an ag and natural resource emphasis and provide resources to them

- Enhance our efforts through Open Campus and articulation agreements with community college and other higher education partners

## Graduate Education

### Strategic Intent of College of Agricultural Sciences (CAS)

- One goal of Oregon State University is to substantially grow graduate education over the next 5 – 10 years. The current objective is to increase the graduate population from 17% to 20% of total enrollment.
- CAS is already a major player in the area. There is a record of OSU record keeping not accurately tracking our contributions. The Graduate School informs us this is no longer an issue. The most current records demonstrate modest increases in CAS graduate student numbers in recent years.
- Due to cost and productivity constraints faculty are resistant to increasing, or even maintaining, inclusion of graduate research assistants in applications for grants and contracts. With the support of Central Administration CAS must implement policies and procedures that encourage faculty commitment to training graduate students. One example is, investigator-based support for graduate students not aligned with a particular extramurally-funded project. This can provide the flexibility to address emerging issues.
- There is no systematic means for allocation of increases in tuition revenue for funding new faculty lines and graduate teaching assistants within CAS. A commitment to increase faculty numbers and establish graduate teaching assistantships in units that significantly advance the goal for graduate student growth is essential.

One might argue that there are three general classifications for graduate students: (1) doctoral, research-intensive, leading to a dissertation; (2) master's, research-intensive, leading to a thesis; (3) non-thesis master's. The first two degree classes are very expensive to educate and almost exclusively require substantial extramural resources. The commitment necessary for CAS faculty to support these classes of students is typically very high. However, the outlook for federal funding, corporate attitude towards funding graduate students, and frequent time limits for international group funding are challenges for research-intensive graduate degrees. None-the-less the prospect for additional institutional support for research-intensive degrees, perhaps with a focus on doctoral programs, can stimulate effort to expand them. Does the non-thesis master's degree offer substantial opportunity for growing graduate enrollment? This indeed does seem feasible. However, substantial growth in the numbers and enrollments of non-thesis masters programs requires additional faculty. Their assignments may differ from many that is typical for the majority of CAS tenure- track and tenured faculty.

Within the context of Oregon State University's culture, what seems to work at other institutions, and what might appeal to today's students one might make a few assumptions about constraints on growth of doctoral and non-thesis masters graduate programs and potential solutions.

(1) Students in doctoral programs almost certainly require multi-year funding. Commitments to fund graduate teaching assistantships for the first one or two years of doctoral programs can greatly incent faculty to pursue research support for the remainder of their programs (often another three or four years). In today's tight budget environment it is likely necessary to link resource allocation for doctoral programs to unit productivity. Ability of graduate teaching assistants to contribute to classes with sufficient enrollments to justify their funding is one consideration. A portfolio of extramural



funding adequate to support doctoral students after one or two years on a teaching assistantship is another. Space for graduate students offices and laboratory work is a constraint on growth of our graduate programs. Finally, is the job market adequate to assimilate new people with doctoral degrees in the particular discipline?

(2) If there is a substantial increase in non-thesis masters programs in CAS it will require investment of new resources. As we indicate above, faculty that choose teaching as a career emphasis rather than pursuit of extramural research support are a likely critical to success. Mentoring the research or other experiential learning for the non-thesis masters is not typical of that for research-intensive degrees. The on-campus residence time for a non-thesis masters program is likely relatively short, say one year. Research projects that focus on mining the literature or internships are likely capstone experiences for such programs. Faculties that focus on these degree programs are likely the best people to coordinate capstone experiences.

(3) Little growth or reductions in faculty numbers in CAS units are a limitation to growing graduate programs. Effort to expand graduate programs within CAS probably requires innovation to succeed and maintain quality. It is important to look within the Division to the College of Forestry, and the College of Earth, Atmospheric and Oceanic Sciences for new partnerships. Other universities in the region offer additional opportunities to exchange courses and broaden the base of mentoring for graduate students. If CAS encourages identification and implementation of these synergies expansion in the graduate student population is feasible while maintaining or improving quality of their education.

CAS operates graduate programs in a culture of cooperation between our departments and with other colleges. There are highly successful interdisciplinary graduate programs including Water Resources, and Molecular and Cellular Biology, in addition to strong departmental programs. There is a need to communicate our strengths in the context of the Governor's 40:40:20 plan. Quality Ph.D. programs is the cornerstone for success in graduate education.

## Resources and Business Plan

### Conversation Summary

Co-owners: Bill Boggess, Jack Breen, Todd Bastian, Brian Tuck

Participants: William Bission, Bill Boggess, Jack Breen, Stella Coakley, Tom Fuller, Peg Herring, Russ Karow, Bob Martin, Tom McCoy, Brian Tuck

### Context

Resources, and the allocation of those resources (i.e. business plan), are critical to achieving the College's strategic goals and vision. They are the primary means to our desired ends. The overall focus of the strategic intent exercise is to articulate the College's vision and strategic goals. In that respect, this resources conversation is a bit premature, since the ends are still being discussed. However, we know that resources will be needed to achieve our ends. We also know that there are various sources of funding (e.g. state and federal appropriations, tuition, federal grants, tax district revenue, private donations, etc.); that the trends and potential magnitude of the various funding sources vary; and that the various sources of funds are not fully fungible (i.e. some fund sources can only be used for specific types of investments). For our purposes today, we are adopting the premise that we need a 20 percent increase in real dollar (i.e. beyond inflation or continuing service level) support to achieve our vision and strategic goals. We want to focus our conversation on strategies that will allow us to best exploit trends in resource availability and optimally utilize these funds to achieve our strategic goals.

We focused our conversation around three questions. Those questions and the key takeaways from the conversation follow.

*Where/how can we develop new and sustainable sources of funding while optimizing our current revenue streams?*

#### Appropriations:

- There are opportunities to grow state support; federal capacity funds less so.
- New OSU governing board may be a stronger advocate – enlist President Ray in helping inform the new board.
- Existing separate state budget line item for the Statewide Public Services is believed to be a plus. We can document our impacts.
- Need to be intentional about reaching out to legislators early in the process and developing relationships.
- Need to be intentional about educating citizens particularly in metro areas – use new OAP issues – make them aware of the breadth (e.g. natural resources, toxicology, fish and wildlife) of our programs. Use IMPLAN to document the economic impact of our programs.
- Challenge of Legislature wanting to fund “new programs” vs. investing in infrastructure and core capacity.
- Look at opportunities for new partnerships across colleges or universities.

#### Federal grants:

- CAS is already one of the most successful colleges nationally in securing competitive funding.
- Increasingly competitive and federal budget constraints - don't see potential for significant increases in next 5 years.
- May be able to work special grant/centers of excellence approach in particular cases.
- Opportunity to better target outreach and engagement and educational aspects of grants.

#### Commodity commission funding

- Check off funds are generally stable or growing – may be potential for more growth in some commodities.
- Commissions prefer to fund specific programs or activities, although the wheat commission has provided block funds.

- Lack of overhead contributes to the deferred maintenance challenges.
- Need to consider potential overlap/conflicts with other grower-based revenue sources, e.g. IP royalties, service districts, fees for service.

#### Industry – other than commodity commission

- Opportunity to enter joint ventures with private industry e.g. Indy Hops, Simplot/Parma ID, or Australian model.
- College of Forestry research cooperatives model may be an option worth exploring.

#### Tuition/Ecampus

- Growing source – need to position ourselves to capture more.
- Doing well in Ecampus. Need to be part of University’s state-wide initiative.
- Need to develop a strategy for greater on-campus support.

#### Private Gifts

- Making a difference in a few areas, but not the solution.
- Part of long term strategy.

#### Royalties

- Relatively small but increasingly important source.
- May need to rethink the policy for allocating royalties, e.g. strawberry program in CA.
- See earlier note about potential conflict with other grower sources of funding.

#### Continuing education/fees for service

- Considerable potential to grow fee for service activities.
- Important to “market test” our extension programs – what do stakeholders really value?
- May require a shift in Extension culture both on- and off-campus. Extension has historically been freely distributed.

#### Other

- Crowd sourcing for new, innovative endeavors.
- Service districts, e.g. Malheur.
- EFU concept – potential overlap/conflicts with service districts, etc.

*How will the changing revenue picture affect what we do or how we do it? What are the geographic, programmatic, or other implications?*

- Can/should we maintain all of our current locations? How does local support factor into this decision?
- Are there things we need to quit doing?
- Do we need more flexible staffing plans?

*What is the optimal mix of faculty, staff, deferred maintenance, enabling support, etc.? How will the changing revenue structure impact this mix?*

- Deferred maintenance is a real challenge – limited ROH – College average is ~24%; ARS sets aside 4% of their operating budget each year; not easy to sell maintenance compared to new programs.
- Enabling support can make a real difference; ARS provides a technician and limited support although that is changing; enabling support comes at the expense of faculty depth and breadth.

**Role in STEM Education**  
CAS Strategic Intent Conversation  
October 9, 2013

Background Material

The importance of Science, Technology, Engineering, and Mathematics (STEM) training at the K-12 and collegiate level has become the focus of a national movement to reform education. The National Science Foundation and other research and education institutions, including the U.S. Department of Agriculture (USDA) have provided strategic funding for programs that target undergraduate students, students from underrepresented backgrounds, as well as honors students' research experiences with STEM scientists at institutes of higher education. Both the National Academy of Science (NAS) and the Association of Public and Land-Grant Universities (APLU) include the idea of STEM education in their strategic plans to prepare the next generation of scientists in the fields of food, agriculture, natural resources, and related sciences. This includes purposeful integration of student learning with the research and extension missions of the land-grant system and their interaction with related agencies, industry and related organizations. The APLU study specifically recommends the creation of "AG\*STEM Programs to enhance the teaching of agricultural, natural and related sciences within broad science, technology, engineering and mathematics (STEM) throughout the education system. Strengthen pre-collegiate preparation and encourage pre-collegiate high school students to pursue and complete a baccalaureate or higher degree in the food and agricultural sciences."

Association of Public and Land-Grant Universities (APLU). 2009. *Human Capacity Development: the Road to Global Competitiveness and Leadership in Food, Agriculture, Natural resources, and Related Sciences (FANRRS)*. Washington, DC: Office of Public Affairs, APLU. Available online: <http://www.aplu.org/NetCommunity/Document.Doc?id=1639>

Research Council's (NRC). 2009. *Transforming Agricultural Education for a Changing World*. Washington, D.C.: The National Academy press. Available online: [http://www.nap.edu/catalog.php?record\\_id=12602](http://www.nap.edu/catalog.php?record_id=12602)

The group considered a set of questions:

*Is a CAS role in STEM Education something we should be pursuing more aggressively?*

The group was unanimous in responding with "Yes". Reasons were many and included that involvement in STEM education is essential for diversity; if we want to pursue fully supporting diversity in our students, we must pursue this aspect. There are many internship opportunities in Ag STEM with good pay. Filling the pipeline at the university means that we should more fully utilize opportunities for exposing high school students to these areas (e.g. ten week long Apprenticeship in Science and Engineering (ASE) offered by Saturday Academy, and Adventures in Learning and Out of the Box, two-week summer programs sponsored by OSU).

*If so, what form should it take?*

There are many opportunities but most require resources to realize; one is bringing Oregon students to OSU for experiential learning but there are costs associated with transportation and housing as well as faculty/student time to provide programs. It is part of the Statewide Strategic Plan to develop more opportunities using branch stations and county extension offices. The Branch stations are in conversations about engaging undergraduates in research programs during the summer season. There is an opportunity to partner more extensively with Community Colleges, many of whom have tapped into federal granting sources for support of STEM areas of training.

*What opportunities are we not utilizing effectively to encourage our role as a STEM area?*

General Agriculture/Agricultural Education teach teachers to teach Agricultural Sciences and they are being trained in STEM education specific for agricultural. Students who go through a contextually based

STEM training do better in their biology, and chemistry training. We often lose students at the 3<sup>rd</sup> year level because they have not gotten sufficient assistance in core lower level chemistry, mathematics and biology. Is it possible to leverage success by investing in assistance in these courses (while also supporting our students as mentors)? Can we look at core courses, what are the sticking points and can we get help for the sticking points? How can we relate core classes to the majors?

Outreach to students (and K-12 teachers) to educate them that STEM includes all the applied sciences and solving world problems related to food, health, fuel, water, etc.

Ideas for fund raising include having CAS develop a pool of dollars for experiential learning from donation dollars. It was suggested we look at 4H more closely in regards to their success with fund raising for providing experiences. Would it be possible to create opportunities for funding faculty time/participation in experiential supervision of students?

**1. Improved internal communications to stimulate collaborations.** There is much that we already have in place, in terms of talent, interest, programs, facilities, and individual resourcefulness. What we lack is purposeful coordination, to share opportunities for collaboration on grants, internships, summer programs, etc. Such coordination requires more than a good website; it requires conversations, such as ours today, to stimulate new thinking and make personal connections. New Faculty Orientation is a good place to begin. Conversations can continue at departmental staff meetings, where potential partners in other units are invited to introduce what they do and how they can contribute to STEM-based grants and initiatives. Such cross-fertilization can encourage small groups to self-identify and move forward on new collaborative initiatives.

**2. Develop the Branch Experiment Stations as a statewide network of STEM learning centers.** The branch stations represent all of the major ecoregions of our very diverse state. We could never re-create such a learning resource from scratch. Increasingly, these branch stations are opening their labs and experiments to student interns, a great experience for a few people. These opportunities need to be assimilated into an identifiable statewide program for experiential learning and student research. Recognizing the branch stations as a network for field-based experiential learning from coast to high desert would be a distinction that no other college or university could offer.

**3. Improve network and strengthen/formalize ties with CAMP and SMILE programs.** These are well-recognized and offer students summer bridge programs and support for HS transition and first year. As substantial numbers of underrepresented students come in as undeclared and/or change majors and there is a substantial loss for STEM majors during second and third years, CAS could provide \$1500 scholarships to CAMP and SMILE students in 'good standing' that enroll in CAS majors. Students would benefit from CAS advising, SACNAS and MANRRS and improved graduation. A targeted audience and support would assist with retention and help to build community and good will leading to more diversity in CAS majors.

**4. Provide alternative sources for funding support for well-written URISC proposals** that otherwise will go unfunded which are submitted from CAS students or students seeking funds for work with CAS faculty. These student/faculty pairings have already worked together on the proposals and agreed to mentoring/ research work collaboration but for lack of funding may not happen.

**5. Develop resources for funding and academic support for SACNAS and MANRRS students** serving as officers. As recognized sponsored student organizations these groups help to carry out the mission of the university providing educational outreach, community service, professional development activities and provide the 'pipeline' for K-12, undergraduate and graduate students, faculty and professionals for success. These organizations can also assist with helping to meet grant outreach components.

**6. Offer a Computational Biology / Bioinformatics summer program,** ~ 2 weeks in summer, on the OSU campus. CAS could and ideally will take the lead in creating undergraduate and graduate degree programs in this area in the future, but an affordable summer program to attract top students from all over the US is possible right now. It does not need to be an "undergraduate course"

per se-- ideally it would be open to any student (high school, undergraduate, graduate) interested in the biosciences who does not have basic computational skills and is willing to work intensively over a two-week period to obtain them. Postdocs, faculty, and industry members could be accepted into the program for an appropriately increased fee. If advertised well and promoted each year as a recurring event, this would greatly increase OSU and CAS's visibility in an area that is in great demand and short supply. There is a "vacuum" of competition in this area-- other major research institutions do not offer this type of program affordably (and few institutions offer it at all). Students want these skills for their job marketability in industry as well as academia. Biosciences faculty (here and around the entire world) want their students to have these skills for research productivity. CAS faculty collectively have the skills to design and offer a highly relevant and successful program. CAS would look into how to facilitate this with some faculty incentives: could they offer some summer FTE up front for the design and execution of the course (which would ultimately pay for itself with enrollment fees)? Alternatively, could they allow faculty design of the course in a way that faculty built their compensation appropriately into course fees? Could they provide some administrative support in pricing and coordinating room/board options for participants? Could they leverage in-house expertise to provide high-quality advertising for the course?

#### **7. Place educational grant opportunities and incentives directly "on the plate" of faculty.**

Find out which opportunities exist (current programs and new grant calls). Summarize the estimated costs/benefits of a faculty member participating in such a program. If it's clear that there's a net benefit for very busy faculty to participate (reasonable time investment for research productivity return), people will want to do it! A point that was made is that these activities should be reflected in the evaluation of a candidate during the P&T process. A recently tenured faculty member indicated that all STEM related outreach activities (such as mentoring ASE students, bringing high school kids into his lab) was purely out of personal interest and did not really show up anywhere in the P&T dossier (there was no place to mention this). So given the competing demands on time to bring more research funds and publish papers, unless contribution to STEM education efforts are shown to be important through proper consideration in P&T dossiers most of the young faculty would probably not put this high on their priority list. Supervision of undergraduate students can be included in the category of students advised by the faculty member. A similar section can be added for supervision of high school students. It is acknowledged that the units need to know that the college and university value contributions in this area.

Come to the department faculty meetings and tell us about STEM training. What's the benefit-- increased grant acceptance chances? A good student in the lab at low monetary cost? Summer salary opportunity which facilitates recruitment of good student researchers? Salary opportunity for a lab member who wants a teaching experience? What do we do to get this opportunity-- can we easily apply alone? Will CAS partner us with others who want to participate? Will they facilitate the grant coordination administratively if a large number of faculty are required? Do they already have resources to help with writing/assessment/other components of the grant? Will they lower time costs to a reasonable range by assisting with required paperwork, such as background checks and safety training for high school students?

## Infrastructure Strategic Intent Conversation

For the purposes of this report, infrastructure includes both buildings and major equipment. In some cases there is a permanent physical connection between a building and major equipment, in other cases there is not.

In the case of buildings, there are two kinds of projects the college may undertake in response to deferred maintenance and program expansion, renovations and new buildings. Designation of the OSU Corvallis campus as a historic district favors renovation of existing buildings over demolition and new construction. Cost is an obvious additional factor; Cordley, Withycombe, Wiegand, and Gilmore are striking examples of on-campus buildings in need of major renovations. There is a challenge of equivalent magnitude off-campus, but individual projects are typically, but not always, of narrower scope.

New buildings remain an essential element moving forward. Examples of substantial need for new instruction include: I-FERM housing pilot plants for cheese, beer, and wine. A new “meats lab” in the vicinity of the Oldfield Teaching Facility. A Conservation Biology Building (A multi-college building for FW, BEE and part of AnRS). In today’s fiscal environment, private giving is an essential prerequisite to funding a new building. At present new building funding requires 50% in donations and a 50% match in bonding.

The current situation for major equipment is less dire than for buildings in terms of overall need across the college. As with facilities we deal not only with scientific instrumentation but also farm equipment like combines and tractors. There are a few basic arrangements for acquisition and maintenance of major instruments and other equipment:

- (1) Instrument cores under the Research Office.
- (2) Shared Instrument clusters within departments, centers, or institutes.
- (3) Major instruments for individual investigators.

Availability of funding streams (current or anticipated) for improving infrastructure varies greatly among project type. There are several modest but reasonably dependable sources for minor renovations, major instruments and farm equipment. Research equipment reserve fund (RERF), indirect costs returns (ICR), building use credits (BUC), intellectual property revenue (IP), are examples. Other funding sources include:

- (1) Leveraging gifts to obtain other state funding, particularly bond authority for new construction is challenging but probably essential.
- (2) Federal assistance will continue for instrumentation, but basically unavailable for new buildings, and is unlikely to change in the near future.
- (3) There are other options that require making difficult decisions, specifically substantive resource reallocation (details below).

Dwelling on the scope of deferred maintenance on the Corvallis campus and at our branch stations can divert us from addressing core issues. Those outside CAS recognize our good history of updating laboratory space and offices within our space allocation. The term “program renewal” is a descriptor for this practice. While renovation of laboratories and offices is within the scope of CAS capacity, other vital work is not. “Building renewal” is a term that describes renovation at the scale of an entire building. An example is replacement of HAVC and electrical systems, at a cost of about \$100/square foot. Since most

CAS buildings serve a broader group than our departments, and the building renewal cost is in the \$10M+ range, university-level funding is necessary. Creation of a university-level board perhaps provides an opportunity to move forward in this area. A university-level capital plan does not exist. The Board may likely expect one that includes: (1) an adequate maintenance budget, (2) a schedule and annual budget for building renewal, (3) a schedule and budget for program renewal, and (4) plans for new building construction that do not draw funds from other parts of the capital plan. A regular investment approach is an absolute requirement to accomplish this. Past practice of blending resources to address issues is problematic and essential to avoid. Scaling down the University of Washington model indicates an annual university-wide need of \$60M.

A role for CAS in program renewal is certain to remain in the future. From 2009-2013 the CAS investment in infrastructure ranges from \$3M to 4.5M/year. This figure does not include construction of the Oldfield Teaching Facility. A larger commitment may be necessary in the future. This leads us to consider redirection of revenue streams. Investment of a greater proportion of the annual AES budget (currently about 4%) at the cost of faculty lines, increasing CAS-level retention of indirect cost returns and intellectual property revenue are examples. This may also require more discipline in cost recovery from private sector funding.

The CAS record of maintaining infrastructure for teaching and research is good relative to other colleges at this university. The large number of aging buildings and failing infrastructure within them leads us to conclude major change is essential. A realistic university-wide capital plan is the first step towards solutions.