Steering the Best Talent Towards Colleges of Agriculture

Jay Akridge
Glenn W. Sample Dean of Agriculture
Purdue University
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The Talent Pipeline

- Supply and demand for high potential talent:
  - **57,900** annual jobs available, B.S. and higher, food, renewable energy, environmental specialties
  - **35,400** agriculture, forestry/natural resources, and veterinary medicine graduates

Source: Purdue and NIFA (2015)
Agriculture Talent Pipeline
Drivers Of Change

• Flat enrollments overall, growth in Agriculture enrollment could continue
• More diverse student body, more women in agriculture and higher levels of attainment
• Fewer students with ‘traditional’ background
• Mixed perceptions of agricultural industry
• Increased role of technology in education
• Major focus on affordability/attainment/value
• Industry looking for ‘career ready’ graduates
• Career opportunities look strong

Purdue University is an equal access/equal opportunity institution.
Ratings of Skills, Capabilities, and Experiences Sought in New Hires with the Potential to Become Future Company Leaders

What does industry want in terms of background, skills, capabilities?

- Interpersonal Communications Skills 5.00
- Critical Thinking Skills 4.92
- Writing Skills 4.36
- Computer Skills 4.27
- Cultural/Gender Awareness/Sensitivity 4.08
- Quantitative Analysis Skills 4.07
- Knowledge of General Business Management 4.00
- Oral Presentation Skills 4.00
- Knowledge of the Food/Agribusiness Markets 3.62
- Knowledge of Accounting and Finance 3.42
- Intern/Co-op Work Experience 3.29
- Knowledge of Macroeconomics, Intl. Trade, etc. 3.08
- Broad-based Knowledge in Liberal Arts 2.75
- International Experience 2.75
- Foreign Language Skills 2.56
- Production Ag Experience 2.36

\(^{a/}\) Rated on a scale of 1 to 5, where 1 is unimportant and 5 is absolutely essential.

Source: NFAMEC, 2006
Seven in 10 hiring managers say students are not ready for success in the workplace of tomorrow

Q31. Do you feel students of today are well prepared for the workforce of tomorrow? n=1068
Q32. (If underprepared) What are your top negative perceptions of students who are underprepared for success in their future profession? Please select up to 3; n=733
Seven in 10 hired students feel well prepared; 61% say students of today need skills for success.

Q31. Do you feel students of today are as well prepared as those in the past? (If not) What are your concerns?

Q32. (If underprepared) What are your concerns?
Futility…

Doing the same thing over and over again, and expecting different results…
Exploration of New Models

- Year-round University – Trimester Concept
- 3 Year degrees
- 2+2 programs
- Community colleges
- Distance degree programs
- Corporate sponsorships
- Corporate universities
- Competency-based degrees
- Certificate programs
- …. 

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Creative Recruiting Approaches

University of Idaho

College of Agricultural and Life Sciences

CALS Ambassadors

The CALS Ambassadors program was the first of its type at the University of Idaho and continues to be the largest college ambassador team on campus. The team

Illinois Center for Urban Agricultural Education
Focus on Changing Perceptions

<table>
<thead>
<tr>
<th>Perception</th>
<th>Reality</th>
<th>Future Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>What grandpa did</td>
<td>Applied science, not voc. tech.</td>
<td>Contributing to society</td>
</tr>
<tr>
<td>What Midwesterners do</td>
<td>Diverse</td>
<td>Work that makes a difference</td>
</tr>
<tr>
<td>= Farming</td>
<td>Majority of grads don’t farm</td>
<td></td>
</tr>
<tr>
<td>Dull; not sexy</td>
<td>Opportunity for breakthroughs</td>
<td></td>
</tr>
<tr>
<td>Digging in dirt, driving a combine</td>
<td>Field, lab, mgmt., business, marketing, international</td>
<td></td>
</tr>
<tr>
<td>No perceptions</td>
<td>Biofuels, safe water supply</td>
<td></td>
</tr>
<tr>
<td>Not scientific</td>
<td>Leading-edge science</td>
<td></td>
</tr>
<tr>
<td>“I don’t fit there”</td>
<td>Customizable studies</td>
<td></td>
</tr>
<tr>
<td>No demand; not a career</td>
<td>Recession-proof</td>
<td></td>
</tr>
<tr>
<td>GMOs</td>
<td>Solving challenges</td>
<td></td>
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Describes **how we are seen** ➔ Describes **what we are** ➔ Describes the **value we create**
Major Focus on Attainment

- Expand Exploratory Studies
- Coordinated ‘First Year Experience’
- Program of study maps
- Restructuring D/F/W courses
- Investments in advising
- Promotion of ‘4/3/2/1’, ‘Take 15’
- Targeted summer offerings
- Technology to monitor progress/timely interventions
- Expand residential housing
- Academic Boot Camp
- Work with High School Advisors
- Enhanced prerequisites
- ...

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Odds of thriving in all areas of well-being are:

- 4.6x Higher if … Engaged at work
- 2.5x Higher if … [College] prepared me well for life outside of college.
- 2.0x Higher if … Emotionally attached to school
- 1.9x Higher if … [College] passionate about the long-term success of its students.
- 1.7x Higher if … I had a mentor who encouraged me to pursue my goals and dreams.
- 1.7x Higher if … My professors at [College] cared about me as a person.
- 1.5x Higher if … I had at least one professor at [College] who made me excited about learning.
- 1.5x Higher if … I had an internship or job that allowed me to apply what I was learning in the classroom.
- 1.9x Higher if … graduates experience all three
- 1.4x Higher if … I was extremely active in extracurricular activities and organizations while attending [College].
- 1.3x Higher if … graduates experience all three
- 1.1x Higher if … I worked on a project that took a semester or more to complete.
Transforming the Classroom Experience

- ‘Flipping’ the classroom
- Intensive use of technology
- Passing ‘The Pajama Test’
CATE: College of Agriculture Transformational Experiences

- Study Abroad
- Undergraduate Research
- Internships
- Leadership Development Certificate Program 2.0
- Entrepreneur Day
- Issues 360 Certificate Program
- Student Farm
- ...

Purdue University is an equal access/equal opportunity institution.
Connecting with Industry, Creating Innovative Partnerships

- Internships
- Experiential learning support
  - Non-traditional students
- Classroom visits
- Field trips/experiences
- Advisory boards
- Recruiting collaboration
- Scholarships
- Mentoring support
- Blending ‘work’ and ‘school’
- …
Looking Ahead: Issues/Opportunities

• Attracting diverse talent
• Managing cyclical nature of industry, perceptions and understanding
• Capitalizing on ‘agriculture’ as an area of focus
• Creating access, respecting land-grant mission
• Focus and state boundaries
• Utilizing technology in productive ways
• Blending ‘work’ and ‘school’
• Managing cost, demonstrating value
The 21st Century Land Grant

• Teaching...
  “... the design comprehended not only instruction for those who may hold the plow or follow a trade, but such instruction as any person might need – with ‘the world all before them to choose’ ....”

Senator Justin Smith Morrill, 1887,
Speech to Massachusetts Agricultural College
“The picture’s pretty bleak, gentlemen. ... The world’s climates are changing, the mammals are taking over, and we all have a brain about the size of a walnut.”
ENROLLMENT

4-YEAR INSTITUTION FALL ENROLLMENT TRENDS & FORECAST

Data provided by the National Center for Education Statistics Database
Driver: Demographics – Enrollments Flat

- % High School graduates attending 4 year institution flat (40-42%)
- Numbers growing slightly with population – mostly Hispanic
- Male/Female ratio leveled off at 44%/56%
- Female college attainment stronger than male

Data provided by the National Center for Education Statistics Database
Indiana High School Graduates

Indiana High School Graduates

Driver: Demographics – More Diverse Student Population

- Fewer White, Black, and Asian children of college age in next 14 years
- % enrolling in College relatively flat for White (67%), Black (60%), and Asian (80%)
- More Hispanic students, enrolling at a higher rate (70% in 2013)
Student Backgrounds Changing
Purdue College of Agriculture

- Rural Farm: 31%
- Rural Non-Farm: 20%
- Suburban: 21%
- Small Town/City: 18%
- Urban: 10%

% of Total
College Majors That Are Useless

Are you going back to school in hopes of graduating to more job opportunities? You might want to avoid these degrees.

By Terence Loose

Useless Degree #1 - Agriculture

Number of Students Awarded Degree in 2008-2009: 24,988
Typical coursework: Crops, plant diseases, animal husbandry, basic veterinary science

When schools such as the University of Idaho cut their agriculture programs, you know times are tough for this degree. The state has more than 25,000 farms, for cow's sake, according to the most recent U.S. Department of Agriculture census, in 2007.

Still, if your idea of a good day is getting up with the sun and working till it sets as an agricultural manager, a degree in agriculture might be your calling.

Just don't expect farms and ranches to be calling you, says Laurence Shatkin, Ph.D., and author of "The 10 Best College Majors for Your Personality." "It's true that farms are becoming more efficient now and so there is less of a need for farm managers," he says. That means less jobs. In fact, the U.S. Department of Labor projects 64,000 fewer jobs in this field over the next seven years.

Total Number of Agricultural Managers in 2008: 1,234,000
Projected Change in Number of Jobs 2008-2018: -64,600
Percent Change: -5
AGRICULTURE

NATIONAL ENROLLMENT IN COLLEGES OF AGRICULTURE BY PROGRAM TYPE

Driver: Demographics – Agriculture
Enrollments have Increased
• + 40,000 B.S. students past 10 years

Data provided by FAEIS
Purdue College of Agriculture

QUICK FACTS

• 11 academic departments
• 2671 undergraduates
• 675 graduate students
• 300 faculty
• 92 County Extension Offices

• Ranked #5 in the world in 2015
• #1 Ag and Biological Engineering Graduate and Undergraduate

Phil Nelson, Gebisa Ejeta – Purdue is the only University to have 2 World Food Prize Laureates on faculty

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Undergraduate Student Enrollment: 2001-15

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AFA Future Leader Preparedness Survey
Attributes Important to Career Success (2009)

AFA Future Leader Preparedness Survey
Attributes Important to Career Success (2009)

Students and Industry Aligned
• Work ethic
• Communicate accurately and pleasantly
• Excellent time management
• Think through problems
• Innovative solutions
• Presenting well in groups
• Resolve conflicts
• Knowing/applying business principles
• Excellent business writing

# AFA Future Leader Preparedness Survey

## Attributes Important to Career Success (2009)

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<td>• Think through problems</td>
<td>• Excellent computer skills</td>
<td>• Graduated from a well respected university</td>
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PURDUE-GALLUP POLL

WELL-BEING

1) **Purpose Well-Being**: Liking what you do each day and being motivated to achieve your goals

2) **Social Well-Being**: Having strong and supportive relationships and love in your life

3) **Financial Well-Being**: Effectively managing your economic life to reduce stress and increase security

4) **Community Well-Being**: The sense of engagement you have with the areas where you live, liking where you live, and feeling safe and having pride in your community

5) **Physical Well-Being**: Having good health and enough energy to get things done on a daily basis
ALUMNI ATTACHMENT

EMOTIONAL ATTACHMENT AND CAMPUS INVOLVEMENT

- All graduates: 18%
- Lived on campus: 24%
- Did not live on campus: 14%
- Club member: 21%
- Non-club member: 14%
- Sororities/Fraternities member: 22%
- Not Sororities/Fraternities member: 17%

EMOTIONAL ATTACHMENT by INSTITUTION TYPE

- Private For-Profit: 11%
- Private Non-Profit: 20%
- Private Colleges: 20%
- Public Colleges: 17%