Why Review Agronomy?

- New faculty
- New administration
- Ensure program relevancy
- Reality check
- It’s time

Change in University Leadership

- France Córdova
  President - 2007
  - New strategic plan
  - University accreditation, 2010
- Randy Woodson
  Provost - 2008

Change in Ag. Leadership

- Dale Whittaker
  Academic Prgm Director - 2002
- Chuck Hibberd
  Extension Director - 2007
- Pamala Morris
  Diversity Director - 2006
- Bill Solomon
  International Prgm Director - 2009
- Jay Akridge
  Dean - 2009
- Chuck Hibberd
  Int’l Prgm Director - 2009
- Jess Lowenberg-DeBoer
  Int’l Prgm Director - 2009
- Sonny Ramaswamy
  Research Director - 2006

Purdue is BIG!!!

- Comprehensive University: 10 Colleges
- Over 800 student organizations
- Over 400,000 living alums
- Campus: 2,500 acres
- Ag. Land: 14,500 acres
- 2nd largest international student population
- Ranked 26th of top 50 public institutions
- One of top 25 universities for Peace Corps volunteers

Ag is important to Indiana: $25B industry

(5% of economy, 15% of workforce)

- Land: 23.2 M acres
- Farmland: 15.5 M acres
- Cropland: 12.9 M acres
- Corn: 5.1 M acres (5th)
- Soybean: 5.7 M acres (4th)
- Ducks: 1.1 M (1st)
- Layers: 21.9 M (5th)
- Hogs: 3.5 M (5th)

The Centers excel in five dimensions:

- Quality
- Economic development
- Interdisciplinary
- Leverage
- Leadership
Comprehensive College of Agriculture
- Agricultural and Biological Engineering (35)*
- Agricultural Economics (45)
- Agronomy (43)
- Animal Science (34)
- Biochemistry (19)
- Botany and Plant Pathology (24)
- Food Science (22)
- Forestry and Natural Resources (32)
- Entomology (21)
- Horticulture and Landscape Architecture (29)
- Youth Development and Agricultural Education (9)
* number of faculty

Predicting the Future
- National initiatives
  - USDA, NSF strategic plans
- State initiatives
  - ISDA strategic plan
- University initiatives
  - Purdue/College of Ag. strategic plans

A Sense of Urgency for Agriculture
- Global competitiveness for Indiana agriculture
- Food safety and security (e. coli, salmonella, BSE)
- Enhancing human health through nutrition (obesity, diabetes)
- Biobased economy (energy security)
- Environmental stewardship and sustainability
- Improving economic viability of rural communities

Society looks to us for answers; requires systems thinking

Lilly Hall of Life Sciences
- Home to Agronomy
- Other locations:
  - Whitemarsh
  - Plant & Soils
  - USDA Soil Erosion Lab
  - Top two floors parallel with State Street

Diversity is our Strength
- One of larger departments in the College (375 total)
  - 43 Faculty + 9 USDA-ARS
  - 21 Post docs/visiting scientists
  - 70 Support Staff
  - 168 undergraduate students
  - 64 graduate students
- Comprehensive Department

Earth and Crop Sciences Work Together
- Earth System Science
  - Soil biology, chemistry, physics, mineralogy, fertility
  - Soil classification, land use, conservation
  - Remote Sensing
  - Watershed hydrology/biogeochemistry
  - Meteorology/climatology
- Crop Sciences
  - Cropping systems/plant nutrient management
  - Plant Breeding/Genetics/Genomics
  - Crop physiology/agroecology
  - Turfgrass science
Multiple Disciplines/Multiple Scales

- **Signature Areas**
  - Genetic Improvement of Economic Crops
  - Environmental Soils and Landscape Scale Processes
  - Cropping Systems and Plant Nutrition
  - Turf and the Urban Interface

Agronomy Mission

We serve our broad based clientele by:

- Providing progressive and relevant education
- Conducting high impact fundamental & applied research at multiple scales, addressing immediate & future challenges
- Engaging partners in public & private sectors
- Contributing to national & international agendas

Department is Healthy

- Undergraduate student numbers up
- Graduate student numbers steady
- Faculty FTE’s increased by 5 since 2002
- Research expenditures highest in College
- Extramural funding up
- Private giving up
- Rankings (Academic Analytics; Chronicle HE)
  - 2006/2007; Soil Sci., 3rd; Crop Sci. 6th

Over A Century of Purdue Agronomy

- 500 Alumni, Faculty, Staff, Students, and Friends
- 100 Years of Excellence
- 18 States Represented
- 12 Legends of Agronomy

Faculty Achievements

- ~ 3.4 articles/chapters per faculty (2007)
- $/research FTE/yr (since 2003):
  - Agronomy = $442,173
  - Ag. College = $384,788
- Numerous honors, awards, positions of leadership in research, education, and outreach
- Extensive international presence in research, education, outreach

Agronomy Expenditures

- Dollars Expended
- Fiscal Year
- $ Millions
- '02/'03
- '07/'08
- hard funds
- soft funds
Expenditure of Outside Funds

Federal Grant Sources

Improving Crops and Preserving the Environment

Excellent Field Facilities Near Campus

Nanotechnology Research

Remote Sensing to assess watersheds in Indiana
Impact of weather on plant growth and human activities

Using satellites to see the big picture

Plant Breeding & Genetics

Traditional Plant Breeding

Molecular Genetics

Turf Management

Studying Biofuel Alternatives to Corn/Beans

Switchgrass Plots Seeded in May 2007

Close working relation with USDA-ARS

USDA National Soil Erosion Research Laboratory

Nationally Recognized Educational Programs

Book of Great Teachers in the Purdue Memorial Union

9 out of 316 university inductees from Agronomy
Students and faculty work together to create unique learning environments

Opportunities to Combine Laboratory and Field Studies

Engagement is Integral to Our Mission

Beck Agricultural Center
- State of the art outreach educational facility
- 21,000 sq ft., 5 classrooms, multimedia, distance education

The Beck grandkids in front of the Beck Ag. Center

Extension Web sites

Soil Fertility & Corn Extension
- www.soilfertility.info
- www.kingcorn.org

Department Advances: Increased Intellectual Capacity
- 14 tenure track faculty since 2002 (11.75 FTE’s)
- New thrust areas in:
  - Turf physiology
  - Climatology
  - Biogeochemistry
  - Fertility extension
  - Watershed hydrology
  - Landscape scale modeling
  - Maize genetics/breeding
**Department Advances: Faculty Support**
- Faculty Mentoring committees
- Improved formative and summative faculty evaluation process
- Articulation of professional values
- Grants and contracts office
- Large scale equipment purchases

**Department Advances: Facilities Improvements**
- $20+ Mil in actual/planned building/renovation
  - Beck Ag Center, $5.2M
  - Intermediate term seed handling, $500k
  - Long term cold storage, $450k
  - Multiple laboratory renovations, $1M
  - Land acquisition and improvement at ACRE, $1.5M
  - Planned seed/tissue handling bldg., $12M

**Department Advances: Curriculum/Students**
- Undergraduate curriculum revision
- Learning performance outcomes
- Agronomy Ambassadors
- Increased study abroad
- Graduate curriculum revision
- Industry supported graduate stipends
- Increased graduate stipends
- Graduate student internships

**Departmental advances: Improved communication/engagement**
- Agronomy Advisory Council
- Department head advisory committee
- Communications specialist
- New departmental Web sites
- More targeted development efforts/increased private giving

**The Planning Process**
- Planning is part of our culture
  - Annual retreats
  - Bi weekly faculty meetings
  - Bi semester faculty/staff meetings
  - Town hall staff and grad student meetings
  - Semi annual advisory council meetings
  - Department Head Advisory Committee
  - Ongoing committees:
    - grad, teaching, curriculum, earth system science group, crop science group

**Planning for the Review**
- Initiated planning for review: Fall, 2007 retreat
- Frequent meetings to discuss programmatic areas
- Weekly meetings in fall, 2008 around Grand Challenges
- November, 2008 retreat with Advisory Council
- Document finalized January, 2009
Two-fold Approach to Review Programs/Issues

- **Focus on programs:**
  - Education: Undergraduate, Graduate, Extension
  - Disciplines: Earth System Science, Crop Science

- **Questions asked:**
  - Where are we now?
  - Where do we want to be?
  - How do we get there?

Approaches: Programs & Issues

- **Focus on issues**
  - Grand Challenges (an evolution in our thinking)
    - Bio-feedstocks
    - Chemical/Biological Constituents in the Environment
    - Climate Change
    - Harnessing Plant Breeding and Genetics
    - International Agriculture Research/Engagement
    - Landscape-scale Management

Integrating our Disciplines

Presentation of Programs

- **Education focus – day 1**
  - Undergraduate
  - Graduate
  - Extension

- **Research focus – day 2**
  - Earth System Science
  - Crop Sciences

- **Grand challenges – day 3**

Feedback Needed On:

- Vision and direction (are we on the right track?)
- Areas to grow (priority setting)
- Solutions to issues
- Ways to enhance visibility