Agronomy 101: Learning in the Second Century of ASA

Ken Moore
Past President
American Society of Agronomy

Washington DC • March 19-20, 2009
What is Agronomy?

Science of land management that integrates crop, soil and environmental sciences for the purposes of producing food, feed, fiber, fuels and environmental services for the benefit of humankind.

Agronomy is unique in that it is both a science and a profession... ASA promotes both the science and practice of agronomy.
ASA Task Force

Education – Mary Savin, Chair.
Goal - to discuss and evaluate the future of ASA educational programs.

Recommendations
• Focus on practicing professionals and CCAs.
• Interact with other disciplines, technologies, societies, groups.
• Technical training/workshops.

Outcomes
• Technical training webinars.
• Basics in Applied Agronomy short course.
Trends in Agronomic Education

Undergraduate Degree Programs
• BS enrollments declining in traditional programs.
• Fragmentation of degree options.
• Career opportunities strong and anticipated to grow.

Opportunities:
• Certification and licensure.
• Academic program accreditation.
• National curricula in agronomy and related fields.
• Two-year technical programs – community colleges.
• Alternative degree tracks – 3 + 2 BS/MS.
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Leslie Freehill

1. Where are you from?
   Chenoa, IL

2. What are some of the main issues for society that you are concerned about?
   I am concerned about the increasing stress on agriculture and the environment from our booming world population and demand for food and energy.

3. Why did you choose Iowa State University?
   Iowa State is well-known for its excellent agriculture programs, and the Agronomy Department helped me with everything I needed to make the transition from community college.

4. What was your first year here like?
Trends in Agronomic Education

Graduate Degree Programs
• MS and PhD enrollments declining in traditional research programs.
• Career opportunities vary with specialization.
• Flat or modest growth overall.

Opportunities:
• Collaborative graduate training programs.
• Professional degree programs.
  • Career opportunities strong and anticipated to grow.
• Distance education – Online professional degrees.
Master of Science in Agronomy

Program Description

Professional degree program
- Working professionals
- Agronomy and related fields

Offered only at distance
- Delivered asynchronously
- CD-ROM
- Internet

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Master of Science in Agronomy
Curriculum

**Traditional M.S.**
- Agronomy
  - Crop Production & Physiology
  - Weed Science
  - Research & Thesis
  - Ph.D. Program

**Distance M.S.**
- Agronomy
  - Crops
  - Soils
  - IPM
  - Climatology
  - Creative Component
### Demographics

#### Admissions per Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Admitted</th>
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<tbody>
<tr>
<td>1998</td>
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<td>2007</td>
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<td>2008</td>
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</tbody>
</table>

**Total Admitted:** 279
Demographics

Distribution of Students

Alaska, Hawaii: 2
Outside U.S.: 3
Total Students: 112

Northwest
Southwest
Midwest
Southeast
Northeast
Demographics

Enrollment in MS Programs
College of Agriculture, Fall 2007

- Agronomy, 82
- Crop Production & Physiology, 10
- Plant Breeding, 8
- Soil Science, 8
- Sustainable Ag, 6
- Genetics, 3
- Ag. Meteorology, 2
- Environmental Science, 1
- Other Programs, 120
- Ag Education, 19
- Ag and Biosystems Engineering, 6
- Sociology, 2
- Professional Ag, 27
- Plant Pathology, 11
- Natural Resource Ecology and Management, 34
- Microbiology, 2
- Horticulture, 8
- Ecology and Evolutionary Biology, 2
- Entomology, 13
- Food Science, 10
- Genetics, Development and Cell Biology, 6
- Biochemistry, Biophysics, and Molecular Biology, 5
- Animal Science, 30
Trends in Agronomic Education

**Continuing Education**
- Certification Programs
  - Certified Crop Adviser (CCA) – > 13,000
  - Certified Professional Agronomist (CPAg) – > 650
- Continuing education requirement.

**Opportunities:**
- Continuing Education Units (CEUs).
- Certificate Programs - Specializations
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The mission of the Crop Adviser Institute is to provide high quality, interactive, computer-based, learning modules designed for the continuing education of agricultural professionals. This mission is being fulfilled through an Iowa State University partnership between the Iowa State University College of Agriculture and Iowa State University Extension.

Welcome

http://www.cai.iastate.edu/index.aspx

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Agribusiness Education Program

Programs
- Ag Chemical Dealer Updates
- CCA Exam Prep Class
- Crop Advantage Series
- Crop Diagnostic Notebook
- Crop Scout School
- Field Extension Education Laboratory
- Integrated Crop Management Conf.
- Iowa Drainage School
- Iowa Water Conference

Winter Crop Schools
- Calendar
- Newsroom

Departments
- Agronomy
- Entomology
- Plant Pathology
- Ag & Biosystems Engineering

You've got mail!
Receive early notification of conferences, courses and credits. Sign up to receive e-brochures delivered right to your inbox.

News & Updates
The 2009 Crop Scout School has reached capacity and registrations are no longer being accepted.

Iowa Water Conference features combined meetings, more topics
The 2009 Iowa Water Conference will feature the combined Iowa Storm Water Conference and the Iowa Agriculture and Environment Conference. Join us as we explore The Agricultural and Urban Link to Watershed Improvement, March 9-10. Registration is now open.

All things water... The Iowa Water Conference, Mar 9-10, features a variety of workshops dealing with watershed management from the agriculture and urban perspectives.

Your partner in continuing education and professional development
The Iowa State University Agribusiness Education Program (AEP) provides a year-round schedule of educational opportunities. In addition to our regularly-scheduled programs we are available to assist in developing customized events for your organization.

Upcoming events
- Mar 7: Crop Scout School
- Mar 9-10: Iowa Water Conference
- Dec 2-3: Integrated Crop Management Conference

For a listing of all ISU Extension events please visit the Extension online calendar.
Trends in Agronomic Education

K-12
• Interest in science education is abysmal.
• Exposure to plant sciences is minimal.
• Teacher preparation does not generally include the plant sciences.

Opportunities:
• Teacher training programs.
• Development of plant science learning modules.
• Online mentoring programs.
The Concept

PlantingScience is a learning and research resource, bringing together students, plant scientists, and teachers from across the nation. Students engage in hands-on plant investigations, working with peers and scientist mentors to build collaborations and to improve their understanding of science.