Coalition for a Sustainable Agricultural Workforce (CSAW)

2013 Agricultural Science Workforce Census
Key Questions

• Is there a US agricultural workforce shortage?
• What are the key skill set or discipline needs of the agricultural industry?
• What steps are being taken to address any identified talent gaps?
Methodology & Participants

- Web-based survey instrument developed by CSAW Steering Team and Readex
- Emailed invitations to participate (and follow-ups) sent by Readex to representatives of 18 CSAW member companies in January 2013
- Six largest companies re-contacted in April to provide additional information and confirm answers to key questions
  - These participants represent 97% of the private sector US scientific workforce in biotechnology, crop protection, and seed
- This report aggregates responses from these six large life science companies:
  - Bayer Crop Science
  - Dow Agro Sciences
  - Dupont Pioneer Hi-Bred
  - Dupont Crop Protection
  - Monsanto
  - Syngenta

CSAW 2013 Agricultural Science Workforce Census
Global Ag-Related Workforce To Grow by 6.3%

Global Ag Workforce 2012 and 2015
FTEs (Full-Time Equivalents)

- This increase is in addition to any replacement hires

base: six largest responding CSAW companies
>1,000 Domestic Ag Scientist Hires Expected by 2015

Domestic Ag Scientist FTEs 2012 and 2015

- 7,470 FTE in 2012
- Additional 1,005 FTE to hire by 2015
- 8,474 total FTE Ag Scientist by 2015 = 13% increase
- This increase is in addition to any replacement hires

base: six largest responding CSAW companies
Scientist-Level Positions Sought

- molecular biologists/geneticists, molecular biology/informatics
- ecologists, ground water ecologists, non-target ecology
- environmental chemists/toxicologists
- environmental modelers
- entomologists
- plant breeders (molecular marker experience)
- plant pathologists
- plant physiologists
- regulatory science, regulatory toxicology
- statisticians
- weed scientists
84% of Hires in 3 Disciplines and 46% Require a Doctoral Degree

Domestic Ag Scientist Hires by Discipline
Percentage of FTEs

- Plant Breeding/Genetics, 40%
- Plant Sciences, 20%
- Plant Protection, 24%
- Regulatory Science, 9%
- other, 7%

Domestic Ag Scientists Academic Requirement percentage of FTEs
- 46% Doctoral
- 27% Masters
- 26% Bachelors

base: six largest responding CSAW companies

CSAW 2013 Agricultural Science Workforce Census
Strong Agreement On Hiring Challenges

- Virtually all participants agreed (often strongly) with each of these statements in each of the three major disciplines:
  - The pipeline of graduates in this discipline isn't as full as needed.
  - We anticipate challenges in finding quality applicants.
  - We are likely to have difficulty hiring the education and experience we seek.
  - We will need to retrain some hires in this discipline.
“All of the Above” Tactics Planned

- What tactics will you use to find and recruit the best ag science talent? Virtually all plan to use all tactics asked about:
  - posting positions with scientific society job services
  - participation in scientific society annual meeting activities for identification of potential candidates
  - direct contact with university departments for upcoming graduates
  - focus on key universities
  - focus on individuals who receive internships / fellowships from your organization
2013 Agricultural Science Workforce Census Summary

• Six largest responding life science CSAW member companies estimate global Ag-related workforces (all positions) will increase by 6.3% between 2012 and 2015
  – In addition to replacement hires

• 13% more US Ag scientists needed in the same time frame
  – Hiring concentrated in Plant Sciences, Plant Breeding/Genetics, and Plant Protection and 46% of these positions require a PhD

• All companies express concern about expected challenges in meeting Ag scientist workforce needs

• All are planning to use a full array of tactics to make sure they can find and recruit the best Ag science talent

• These research results suggest there may be both a long-term and very near-term issues in finding the skill and talent needed to ensure a sustainable workforce