

Coalition for a Sustainable Agricultural Workforce (CSAW)

2013 Agricultural Science Workforce Census

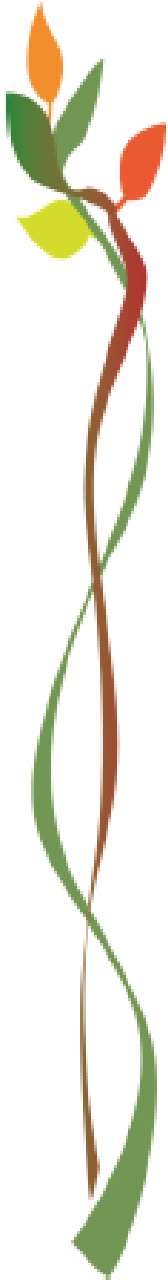




Key Questions

- 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?





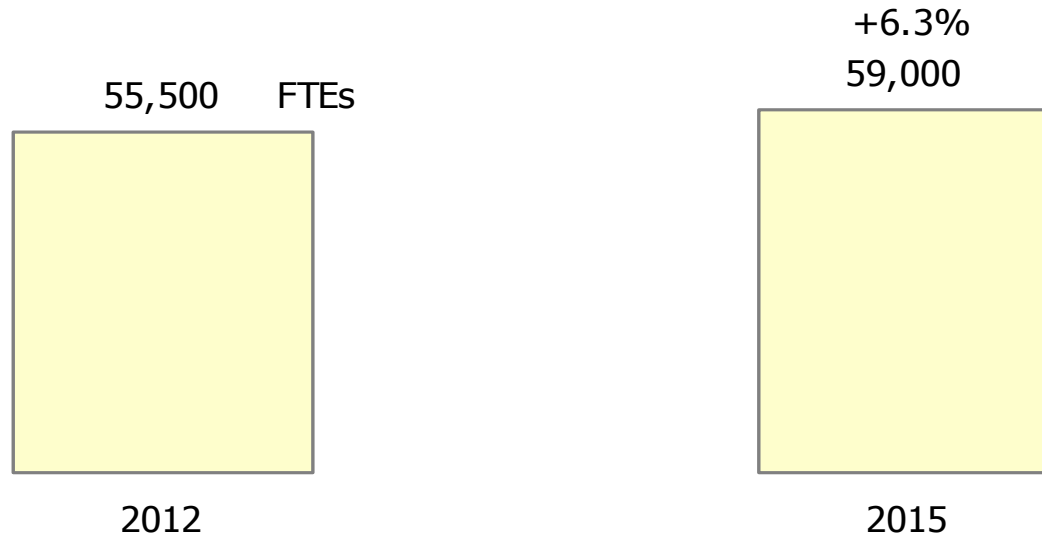
Methodology & Participants

- 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



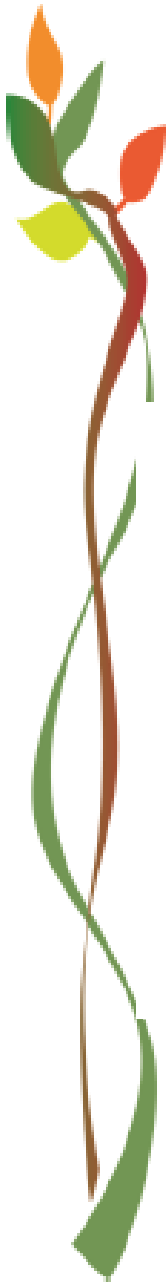
Global Ag-Related Workforce To Grow by 6.3%

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



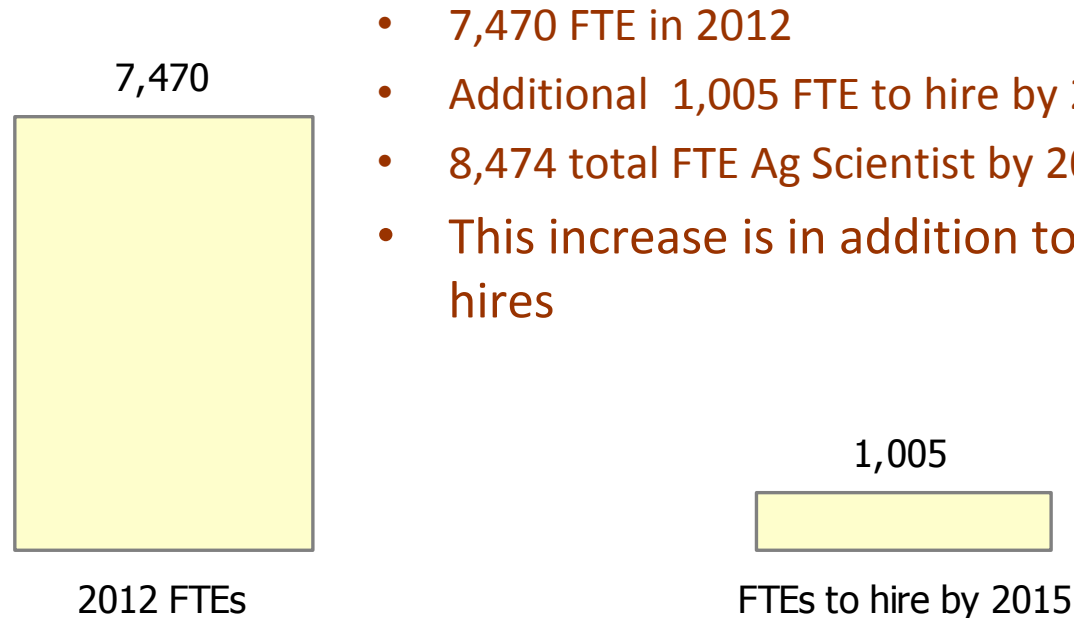
- This increase is in addition to any replacement hires

base: six largest responding CSAW companies



>1,000 Domestic Ag Scientist Hires Expected by 2015

Domestic Ag Scientist FTEs 2012 and 2015



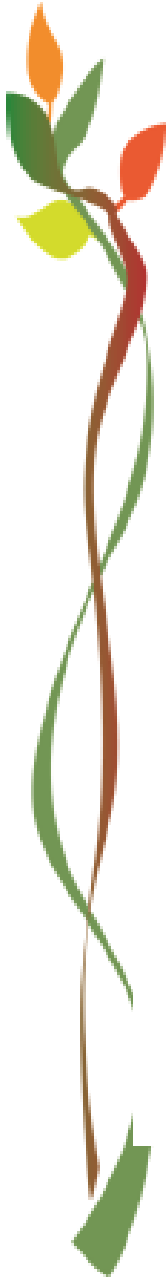
- 7,470 FTE in 2012
- Additional 1,005 FTE to hire by 2015
- 8,474 total FTE Ag Scientist by 2015 = 13% increase
- This increase is in addition to any replacement hires

base: six largest responding CSAW companies



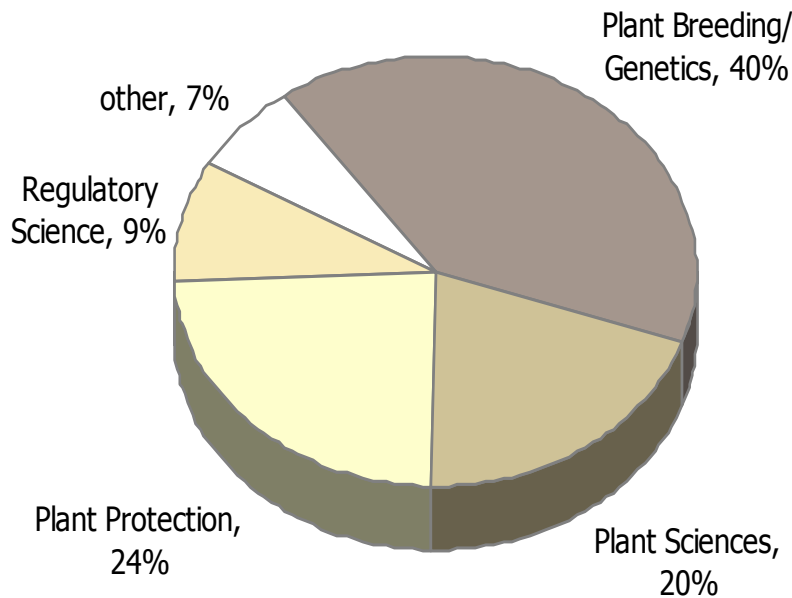
Scientist-Level Positions Sought

- 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



Domestic Ag Scientists
Academic Requirement
percentage of FTEs

- 46% Doctoral
- 27% Masters
- 26% Bachelors

base: six largest responding CSAW companies



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



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