

Industry Employment: Needs for the Future

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- an expected growth in most agriculture-related fields.
- over the next 5 years, there will be a 5% increase in the need for graduates in these disciplines, but a 10% decline in the number of students choosing these important programs as their career path



“At a time when China and Brazil are ramping up their investment in agricultural research, we cannot afford ours be gutted, or worse still, be ignored.”

-Cathy Woteki, House Appropriations Comm.
4/17/2013



REPORT TO THE PRESIDENT ON
AGRICULTURAL PREPAREDNESS
AND
THE AGRICULTURE
RESEARCH ENTERPRISE

Executive Office of the President
President's Council of Advisors on
Science and Technology

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The United States is the undisputed world leader in agricultural production today, but as we look out across the 21st century, agriculture faces a series of challenges:

- Managing new pests, pathogens, and invasive plants.
- Increasing the efficiency of water use.
- Reducing the environmental footprint of agriculture.
- Growing food in a changing climate.
- Managing the production of bioenergy.
- Producing safe and nutritious food.
- Assisting with global food secure and maintaining abundant yields.

...provide the means to train the next generation of farmers and agricultural researchers and meet the workforce demands of U.S. agriculture in the 21st century.

HOW MANY?



-Formed in 2009

-Novel and innovative partnerships are needed to meet unprecedented demands

-To generate support to train future generations of agricultural scientists

-Engaged Readex Research; since 1947 delivering effective market research surveys



A preliminary analysis of answers from the six largest responding CSAW companies shows they expect to hire more than 1,000 scientist-level FTEs between now and 2015, representing 13% of their current U.S. agricultural scientist workforce.

84% of the total are needed in the disciplines of:

- plant sciences
- plant breeding/genetics
- plant protection

43% will need to hold the Ph.D.

US ag scientist hires by discipline will be in roughly the same proportion as the current (2012) domestic ag scientist workforce:

- 20% plant sciences,
- 40% plant breeding/genetics,
- 24% plant protection,
- Remainder:

environmental science/ecology
regulatory science, and other.

Plant sciences:

.33 FTE hrs:
plant science/agronomy,

Remaining hrs:
plant production
plant development
seed technology.

Plant breeding/genetics:

.33 FTE plant molecular genetics

**.33 FTE traditional plant
breeding**

.33 FTE plant biotechnology.

Plant protection:

.33 FTE hrs:

**development/discovery of new
and novel chemistries for crop
production and protection**

**Remaining hrs split between
seven other sub-disciplines.**

Companies are concerned about filling this workforce need between now and 2015.

In each of the three major disciplines, virtually all respondents agreed (often strongly) with these statements:

- **The pipeline of graduates in this discipline isn't as full as it needs to be.**
- **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 of those we hire in this discipline.**

Where and How?

- Headhunter / professional search firms
- Hiring from other companies
- Use scientific society job services
- Participate in scientific society annual meetings to identify potential candidates

Where and How?

- Direct contact with university departments for upcoming graduates
- Focus on key universities
- Focus on individuals who receive internships / fellowships from your organization