Employment Opportunities for College Graduates

in the U.S. Food, Agricultural, and Natural Resources System, United States, 2005-2010

The Big Picture

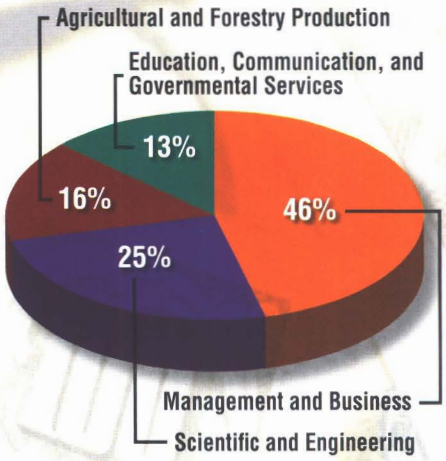
Employment opportunities for U.S. college graduates with expertise in the food, agricultural, and natural resources system are expected to remain strong during the next five years. We expect slightly more than 52,000 annual job openings for new graduates during 2005-2010, and some 49,300 qualified graduates available each year for these positions.

Annually, an average of approximately 32,300 new graduates from U.S. colleges of agriculture and life sciences, forestry, and veterinary medicine are expected to take jobs in the system. Other job openings will be filled by some 17,000 qualified graduates from allied higher education programs such as biological sciences, engineering, business, health sciences, communication, and applied technologies.

Four major factors will define the market for graduates during 2005-2010:

- Consumers and their preferences.
- Evolving business structure in the U.S. food system.
- New developments in science and technology.
- Public policy choices and food system security.

Employment Opportunities



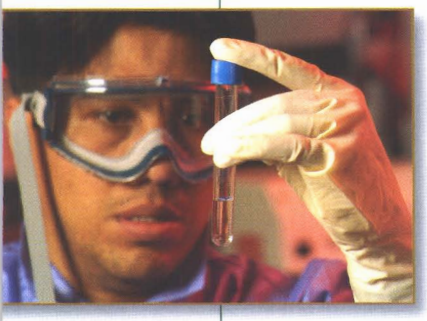
You'll find most opportunities in management and business, where graduates can expect more openings than qualified applicants. Graduates also can expect a large number of positions in scientific and engineering specialties. They'll find specialized niche opportunities in agricultural and forestry production. Ample qualified graduates are forecast for positions in education, communication, and governmental services.

New graduates can expect the best opportunities in:

- sales and marketing,
- veterinary medical specialties,
- food safety and biosecurity,
- forest ecosystem management,
- precision agriculture technologies,
- biomaterials engineering,
- landscape and horticultural crops,
- plant and animal genetics,
- specialty crops production,
- food and nutrition services,
- environmental science and management,
- food system nanotechnologies,
- plant and animal inspection,
- consumer information technologies, and
- animal health care and well-being.

Projected Job Opportunities

- **Management and business occupations** will provide some 24,000 annual openings compared to about 20,200 graduates who will have expertise in these areas. We anticipate relatively stronger employment opportunities for technical sales specialists; brokers; financial management specialists; and forest product, fruit, and vegetable marketing representatives. These individuals will work for organizations that add value to agricultural and forest commodities. We anticipate declining employment opportunities for sales and business representatives who provide production inputs to farmers and ranchers, and fewer opportunities for merchandisers of grains and food animals.



- **Scientific and engineering occupations** will have about 13,000 annual openings. In contrast, some 12,700 qualified graduates will be available each year, leaving a slight shortfall. We project increasing opportunities for graduates with skills in precision agriculture, biotechnology, nanotechnology, new product development, biomaterials engineering, food quality assurance, forest science, animal health and wellbeing, nutraceuticals, and environmental science. Graduates will find fewer opportunities in wildlife science, agricultural machinery engineering, and veterinary medicine general practices.
- **Agricultural and forestry production occupations** will have some 8,000 annual employment opportunities compared to 7,100 graduates with the required expertise. We project increasing opportunities for producers of horticultural crops including fruits, vegetables, and landscape plants, and for growers of specialty crops that provide raw materials for medical and energy products. Expect expanded opportunities in forest products consulting. Due to business consolidation, graduates should find relatively fewer opportunities as farmers and ranchers who produce traditional commodities (e.g., wheat, corn, cotton, soybeans, cattle, and hogs).
- **Education, communication, and governmental services occupations** will provide about 7,000 annual job openings in the nation's food, agricultural, and natural resource system. We expect about 9,300 qualified graduates each year. We anticipate relatively stronger opportunities in plant and animal inspection, public health administration, foods and nutrition, outdoor recreation, environmental management, high school agricultural science and business teaching, and land-use planning occupations. Limited opportunities are projected for agricultural communicators, farm and ranch advisors, and government farm services representatives.

Sources of Graduates

U.S. colleges and departments of agricultural, food, and natural resources sciences are expected to generate about 32,300 graduates each year between 2005 and 2010. In addition, some 17,000 graduates from allied academic disciplines such as engineering, life and physical sciences, communication, business, and health are expected to have the skills needed to compete for jobs in the food, agricultural, and natural resources system.

For the complete report, log on to:

http://faeis.ahnrit.vt.edu/supplydemand/2005-2010/

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Produced through a cooperative agreement (2004-38837-01875) between USDA's Cooperative State Research, Education, and Extension Service and Purdue University.

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