

SCIENCE & EDUCATION Impact

Benefits from USDA/Land-Grant Partnership

Academic Advances

Life-long learning at the Land-Grants.

From 1989 to 1998, undergraduate enrollment in agriculture and forestry programs increased from 79,720 to 111,755, a 40.2 percent increase. The number of job openings is increasing, too. In addition to the opportunities offered to traditional students on campus, the U.S. Department of Agriculture (USDA) and the Land-Grant universities are using new methods of distance education to make a difference for non-traditional students. It's a big difference, too. According to the last census, a bachelor's degree holder earns an average \$2,552 per month, compared to a high school graduate's earnings of \$1,595.

Payoff

- **Get a job.** A survey of 1998-99 **Iowa State** College of Agriculture bachelor's degree recipients found just 0.7 percent were still looking for work six months after earning their diplomas. **Purdue, Nebraska, Oregon State, North Dakota State, Utah State, Louisiana State, Nevada, Ohio State, Texas A&M, Florida** and several other Land-Grant universities regularly report placement rates above 90 percent for job-seeking students. A **Purdue-USDA** study of agricultural job prospects for the next five years projects there will be 58,000 jobs for approximately 57,000 graduates.
- **Cooperative classrooms.** Thirteen animal science faculty members at **Purdue, Wisconsin, Illinois, Missouri** and **Iowa State** designed and delivered an upper-division undergraduate course in meat-animal growth, development and evaluation for 182 students at 11 institutions via distance learning technologies. More than 100 students were able to take a class that was not offered at their school. The Midwest poultry industry helped 13 Land-Grants create the Midwest Poultry Science Undergraduate Center of Excellence at the University of **Wisconsin**. In 1997, faculty from the **Illinois, Kansas State University, Michigan State, Minnesota, Ohio State, University of Wisconsin-Madison** and **University of Wisconsin-River Falls** joined in teaching six classes over two summers. Thirty-eight students from 11 universities participated in the program during its first two years.
- **Dream catchers.** Advances in distance education have made college degrees possible for people who can't come to campus. Forty-one **Nebraska** students

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earned master's degrees in human resources and family sciences without ever setting foot in a classroom. One farm widow was able to complete her degree while managing a farm and raising a family and qualified for a better job. The program has expanded to 25 states and three countries. Four **Arizona** universities are working together on interactive television courses for residential students, as well as 70 working students who live hundreds of miles from the nearest college classrooms. In 1999, **Arkansas** organized the Arkansas Consortium for Teaching Agriculture (ACTA) for 10 two-year and four-year institutions. Community college students can choose either an associate's degree option or a bachelor's degree track that will transfer to the university. **Maryland** has been providing distance courses in animal sciences as part of an agricultural business management program for students in Garrett County, Maryland, West Virginia, and Pennsylvania. More than 120 students have been involved in this distance—learning program since its inception—many of whom would not have otherwise enrolled in college. **Virginia Tech** offers an off-campus graduate degree program at night for working students. By October 1999, 86 people had taken courses offered in the program, with 30 graduates to date.

- **Teaching teachers.** Helping high school teachers keep up with the latest information and improving their ability to teach complex subjects is the motivation behind several continuing ed classes. A shortage of secondary school agriculture teachers and the need for technical resources prompted an **Arizona** program that has helped 90 students complete undergraduate and graduate courses in agricultural education. A **Purdue** program offered high school science teachers a three-credit course in natural resources that reached 96 teachers from 47 different schools in the past two years. With an average class size of 25 students, approximately 2,400 benefit each year from the teachers' newfound expertise. **Mississippi State** faculty members started a similar class in 1998. **Missouri Extension** has created a novel program that gave 18 teachers "externships" at area businesses. The teachers will use their real world experience to devise more relevant lessons for their students.

- **Urban agriculture.** Turfgrass students in **Florida** anticipate starting salaries up to \$32,000, and the program attracts 50 internship opportunities every summer. Golf courses are the No. 1 employer, but turf managers are in demand for airports, athletic fields, resorts and theme parks, landscape businesses and cemeteries. Because urban entomologists are in short supply in Florida, the starting salary for a bachelor's degree can climb to \$35,000. A graduate level urban entomologist can pull down \$40,000 a year to start and a doctorate's worth \$60,000 a year in the private sector. **Purdue** ag graduates report strong job markets with 1999 starting salaries for all degree fields averaged \$30,318, compared to starting salaries that averaged \$24,702 in 1995.
- **No borders.** Global competition demands global understanding, and many Land-Grant Universities have made international appreciation programs a priority. **Delaware** offers students a chance to study wildlife conservation with the Masai people in Tanzania; plant pathology, botany and banana production in Ecuador; and pastoral agriculture in New Zealand. **Georgia** graduate students in agricultural and environmental sciences can earn graduate credit through Peace Corps service. The first Masters International graduate student started a two-year assignment in Ghana in September 1999. Thirteen students from **North Dakota State**, **Minnesota** and **South Dakota State** are part of a new leadership development program for agriculture. They participated in symposia addressing food systems issues for Native Americans, rural issues, urban issues and food systems in developing countries, democracy.



**Cooperative State Research, Education,
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