Governor's School For Ag Sciences In Session

UNIVERSITY PARK (Centre Co.) — College graduates with expertise in agricultural sciences will enjoy a strong employment market through the 1990s, according to a recent USDA report. Positions in marketing, merchandising, and technical areas will be difficult to fill and scientists, engineers, and related specialists will be in great demand.

"There are tremendous opportunities in the agricultural sciences for young people today," said Dr. Marianne Houser, instructor in Penn State's College of Agricultural Sciences.

Penn State is trying to catch the best and the brightest at an early age to teach them about these career opportunities. This summer, 64 of the state's leading high school students are spending their vacations studying agricultural economics and business, plant and animal science, land use, remote sensing, and computers at the Pennsylvania Governor's School for the Agricultural Sciences, July 5 to August 8.

The students, who come from both urban and rural areas, were selected from hundreds of applicants for their strong academic credentials and interest in science and technology. Each student has been awarded a full scholarship, which covers tuition, classroom materials, student activities, and room and board in the university's residence halls.

"Governor's School is a once in a lifetime experience," said Houser. "Students are exposed to a wide variety of fields - agricultural economics, and business, animal science, engineering systems, plant science, international agriculture, and managing natural resources and the environment. They learn about methods and techniques of agricultural research, leadership development, and career planning."

Participants also may elect to study entomology, soil and water conservation, remote sensing, and geographic information systems. They work individually with faculty members on independent study projects.

Penn State's extensive teaching and research facilities provide the students with access to classrooms, computers, libraries, and laboratories. Governor's School assistants supervise the students and take part in classes, special events, and field trips.

Governor's School scholars also have the opportunity to meet and interview professionals about career opportunities in industries such as food processing and agricultural communications.

Field trips and activities are planned, including visits to Longwood Botanical Gardens, Hershey Foods, the New Bolton Center at the University of Pennsylvania, the Atlantic Breeders Cooperative, and Shaver's Creek Environmental Center.

The Governor's School for the Agricultural Sciences is sponsored by the Pennsylvania Department of Education, the state's intermediate units, and Penn State's College of Agricultural Sciences. For more information contact Marianne Houser or Nancy Walker at (814) 865-7521.

IPM Requires Cooperation, Communication

NEWARK, Del. — As insect pest management programs rely more heavily on biological control agents, pest cntrol can be summarized in the four "P's" — pests, pathogens, parasites and predators, according to Dr. Tommy Allen, chair of the University of Delaware Department of Entomology and Applied Ecology.

"Ever since humans decided to settle down and grow food about 10,000 years ago, there has been a constant battle between humans and insects for the crops," Allen said. "For much of those years, it was problematical who would win the yearly battle. Most of the time, it was the insects."

But in the 1940s, the battle was heavily tipped in favor of the humans. New synthetic chemicals such as DDT gave farmers powerful weapons for pest control. Production and yields soared. The new technology was not without costs, however.

"By the late 1950s farmers and entomologists began to realize that some of these pesticides had a detrimental effect on non-target organisms such as fish, birds, and other wildlife," Allen says. "And target pests built up resistance to the insecticides, thus requiring higher dosages for control. The insects were winning again."

Faced with insect resistance and environmental contamination, entomologists opted for new control strategies. Insect pests had to be managed. This involved a variety of new practices including closely monitoring pest populations and the development of the crop, as well as timing insecticide application for the best effect.

Limiting insecticide applications and using the lowest dose possible helped maximize the effect of natural parasites and predators on the pest population. Entomologists also increased their research efforts to discover and develop biological control organisms including pathogens, parasites, and predators.

"Developing and using biological controls is an arduous task at best," Allen says. "But there have been some successes. Here at the University, Dr. Judith Hough-Goldstein is studying the use of a stink bug, *Perillus bioculatus*, a natural predator of the Colorado potato beetle. Dr. Clifford Keil has identified and developed a fungus, *Pandora gloeospora*, that effectively controls flies in mushrooms."

Allen said that Delaware has been highly successful in implementing pest management programs. Due to the efforts of Cooperative Extension pest management specialist Joanne Whalen, many growers now participate in scouting programs, timely application of insecticides and maximizing natural control agents, he said.

"The challenges of modern agriculture are enormous," Allen said. "Researchers, Cooperative Extension personnel and farmers must work together more closely than ever. Communication and cooperation are fundamental if we are to succeed in production agriculture."

Growers who would like more information on pest management programs are invited to contact the Department of Entomology and Applied Ecology at 831-2526.

Dairylea Pays 13th Check

SYRACUSE, N.Y. — The Dairylea Cooperative Board of Directors recently approved a 5-cent-per-hundredweight cash patronage dividend paid to members on all milk marketed through the cooperative between April 1, 1991, and March 31, 1992.

The allocation marks the end of a year of growth for the 2,500-member milk marketing cooperative.

"Dairylea continues to be financially strong, competitive and a stable market for member milk," said Dairylea President Clyde Rutherford.

This is the fouth consecutive year Dairylea members have received a 13th milk check. In addition to the patronage dividend, members of the Cooperative received more than $13.5 million in premiums during fiscal 1991-92.

According to Chief Executive Officer Rick Smith, Dairylea remains committed to its mission of maximizing returns to members consistent with the development of a sound financial base and effective marketing system.

"Despite low milk prices and an unbalanced supply/demand situation, Dairylea stayed on plan and had a profitable year," Smith said. Pre-tax profits totaled $1.5 million.

Beyond maximizing returns to members, Smith said that Dairylea continued to offer members a variety of innovative, valued and needed services and programs that increase on-farm profitability.

"Our financial services — the member loan program, energy loan program, direct deposit and pre-tax benefit plans for members and their employees — were particularly important to our members. The increased utilization of these services is the proof of their worth," Smith said.

Adding to the cooperative's strength during fiscal 1991-92 were sales of $306.4 million, an increase of 7.5 percent over 1992, and total assets of $42.5 million.

Additionally, the amount of milk marketed grew from 1.98 billion pounds in 1991 to more than 2.2 billion pounds, a volume increase of 13 percent in a milkshed experiencing only a 1 percent increase in production.