## **Ohio Offers Agricultural Business Development Courses**

COLUMBUS, Ohio — People developing new agricultural business ideas or diversifying existing operations often wonder if they have what it takes to make these ventures successful.

Two upcoming workshops could provide some answers, said Ron Övermyer, agriculture, natural resources and community development agent for Ohio State University Extension's Agricultural Business Enhancement Center in Bowling Green.

Agricultural entrepreneurs will have an opportunity to explore their innovative ideas and business development skills at two "Tilling the Soil of Opportunity" workshops. A northern Ohio, 11-week course is sponsored by the Ohio Small Development Center at the Bowling Green State University Training Center, the Ohio State University Extension Agricultural Business Enhancement Center and the Ohio Department of Development.

The course will be from 9 a.m. to noon on Tuesdays from Jan. 9 through March 20. The meeting location will be the College Park Building, Room 2, on the Bowling Green State University campus in Bowling Green.

The second set of training sessions is for 10 weeks, from 6 p.m. to 9 p.m. on Tuesdays from Jan. 9 through March 31, and will be offered in southern Ohio. Training locations are the Ohio State University Learning Center East in Caldwell, Ohio University in Athens, the Ohio State Universi-Centers at Piketon, Shawnee State University in Portsmouth and the Southern State Community College Southern Campus in Sardinia.

"Participants will learn a practical hands-on approach to solving the problems and issues arising from the development of an agricultural business," Overmyer said.

Some of the questions the courses will address include: "What is the market potential for my product?"; "Who will be the end users?"; "How will the product be distributed?"; "How does the cash flow through the entire operation?"; and "Will I receive a fair return for my time and investment?"

Answering these questions and addressing other important business development issues will help entrepreneurs determine if their agricultural business venture will be economically viable, Overmyer said.

The northern workshop instructors will be Pat Fligor, director of the Ohio Small Business Development Center at BGSU; Overmyer; and Mary Donnell, Ohio State University Extension horticulture agent at the Agricultural Business Enhancement Center. Resource people with specific expertise will participate in selected workshop sessions.

A team of two instructors one business specialist and one agricultural specialist --- will be at each of the five southern training locations. Video conferencing will allow interaction among participants at the five sites.

The \$275 fee for the northern Ohio course includes a workbook, snacks, and a parking pass. The registration deadline is Jan. 2. For more information or to register, contact the BGSU Office for Continuing Education, International and Summer Programs, at (419) 372-8181 or tollfree at (877) 650-8165.

The fee for the southern Ohio course is \$100 thanks to scholarship funding made possible 15. through the USDA Rural Development Office and the Ohio Department Agriculture. Group discounts also are available. The registration deadline for the southern training sessions is Dec.

For more information, contact Julie Fox at the Ohio State University Centers at Piketon at (800) 860-7232 or e-mail her at fox.264@osu.edu.

## Low-Technology Plastic Greenhouses, Called High Tunnels, Could Help Farmers **Extend Growing Season For Many Crops**

UNIVERSITY PARK (Centre Co.) - Buying fresh local tomatoes in June or July and cultivating spinach and other leafy greens year-round could become a reality if farmers adopt a lowcost, low-tech, high-quality, highyield plastic technology called high tunnels, according to a team of researchers in Penn State's College of Agricultural Sciences.

"High tunnels can be used as a side enterprise to a larger farm operation, or you could start a large operation using four to six commercial-size high tunnels," said William Lamont, associate professor of vegetable crops. 'You can use these for gourmet or specialty crops, or for organic farming. You even can put small fruit trees such as figs inside the structures."

High tunnels are single-car garage-size structures covered with clear plastic sheeting to manipulate soil and air temperatures using the energy of the sun.

During the next five years at Penn State's horticulture research farm, Michael Orzolek,

professor of vegetable crops, and Lamont will conduct a series of growth trials in 24 research high tunnels, which are 36 feet long, 17 feet wide and 9 feet high.

The structures are built by stretching plastic sheeting over a tubular frame. Three separate sheets of plastic form the roof and sidewalls of the tunnel. Farmers can raise the sidewalls to ventilate the structure. The endwalls are constructed so the one-piece section has a doorway, but it also is designed so that two people can lift the section and place support poles under it so that a tractor with attachments can be used inside.

As temperatures drop in the fall, farmers can use other plastic technologies inside the structure such as low tunnels (small plastic-covered frames shaped like a Quonset hut), floating row covers made from various plastic polymers, and thermal covers, which use reflective surfaces to trap heat around the plants at night.

Orzolek, Lamont, and other researchers are conducting growing trials for a variety of vegetables, including tomatoes, peppers, potatoes, spinach, lettuce, okra, ornamental gourds, cauliflower, raspberries, blackberries, strawberries and cut flowers.

Commercial-size versions of high tunnels, which are 96 feet long, also protect plants from insects, diseases and wind damage, virtually eliminating field loss, which can run as high as 25 percent for some crops. Construction costs for a commercial high tunnel are from \$1,800 to \$3,000, compared to \$15,000 to \$20,000 for a production greenhouse.

High tunnels have been used in Europe and Japan for decades, but Lamont said Penn State has the largest high tunnel research program in the United States.

In addition to the research tunnels, Penn State Cooperative Extension agents in eight counties operate demonstration high tunnels. Within the next three years, Orzolek and Lamont hope to complete a high-tunnel operating manual for producers that can be printed or posted on a Website.





