



Small Farm Field Day

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HIGH TUNNEL VEGETABLE PRODUCTION

RESEARCHERS

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OBJECTIVE

To evaluate the use of high tunnels for the production of vegetable crops.

OPPORTUNITY

A high tunnel is a simple growing system used to enhance crop growth, yield and quality. High tunnels are constructed similar to greenhouses, but are unheated and lack the electrical components and automation of conventional greenhouses. High tunnels are normally used to extend the growing season in the spring and fall. This allows the farmer to stay in the market longer and thereby receive higher produce prices normally paid in the early and late season. Other benefits attributed to high tunnels are: more even soil moisture, wind protection, warmer soil temperature, reduced chemical use, and increased ability to use biological control.

METHOD

A high tunnel is a metal-framed, dome-shaped structure covered with a single layer of clear plastic. Drip irrigation supplies the water for crop growth. Research is being conducted at the Environmental Center at the A&T Farm to compare the production of vegetables with and without high tunnels. Four high tunnels are under construction. Vegetable production in these structures will be compared with outdoor plots at the same location.

DISCUSSION

High tunnels are relatively inexpensive to build and operate. The system is most appealing to direct marketers, who can take advantage of having out-of-season produce which can be sold at a premium price. Research at other land-grant universities and experience of farmers indicate that high tunnels can extend the production season two to three weeks in both the spring and fall. Farmers can also use high tunnels to keep rainfall off plants, keeping plant leaves drier and thereby reducing disease. Farmers can supply the needed water through drip irrigation. This ability may allow farmers to grow difficult-to-produce vegetables such as heirloom tomato varieties and to assist with organic vegetable production.