Natural Resources Conservation Service

January 2014

A Message from NRCS to Growers Utilizing Seasonal High Tunnels through the EQIP Program

Seasonal high tunnels have applicability to all farms, but may offer particular advantages to small, limited resource and organic farmers by extending the growing season, producing higher quality crops and improved yields, and addressing soil and water quality concerns.

This year, Connecticut NRCS has adjusted two of the rules for seasonal high tunnels through the Environmental Quality Incentives Program (EQIP):

- 1. Applicants may apply for up to three seasonal high tunnels
- 2. The maximum allowable size for a seasonal high tunnel through EQIP has increased not to exceed 2880 sq. feet each per high tunnel (approximately 30 x 96)

APPLICATIONS ARE ACCEPTED ON A CONTINUOUS BASIS

Maintenance

The Blizzard of 2013 caused problems for some Connecticut growers utilizing seasonal high tunnels. Because high tunnels are not designed to hold the weight of heavy snow, NRCS recommends plastic be removed during winter months from those funded through the EQIP Program.

This year, make sure you take preventative steps so your high tunnel doesn't become damaged during inclement weather or any other time. For a successful seasonal high tunnel experience, follow these guidelines supplied by the University of Vermont:

<u>Tunnel Selection</u> - Gothic designs have higher light transmission and shed snow easier. Most high tunnels are built of galvanized steel tubing and are available from many manufacturers. Steel makes a strong frame to carry snow or wind loads and still allow about 80% of the light to enter. Individual tunnels are easier and less expensive to build and maintain, and site preparation and assembly costs are less. In addition, expansion of growing area is easier without disturbing plant production.

<u>Orientation</u> - The ideal site is a slight southerly facing slope for good light and protection from northerly winds.

<u>Installing Wirelocks</u> - To prevent the single layer of greenhouse plastic on the high tunnels from wearing out at the pinch points of the wirelock: before you

attach wirelock, cut long strips of plastic (old greenhouse plastic will work) 12" wide in half and staple along the edge. Place folded plastic over the high tunnel and force the wire through it. It is a little hard to get started, and you have to hold the extra piece so it doesn't wander out of the channel. Having the 6" wide double layer gives you some leeway. You also can add another wire into the channel, which gives you more staggered pinch points.

<u>Plan for Wet Conditions</u> - In rainy years, many farms struggle with excess water flowing into tunnels due to insufficient perimeter drainage, causing delayed planting, slow growth, and root rot. Growers doing winter production should keep in mind that water flowing under a tunnel can remove heat from the ground. Some farms don't have water problems inside the tunnel, but outside, the driveways and walkways

were not designed to deal with high traffic in the early spring when the ground is very wet. Plan ahead for effective water diversion to prevent mud, ruts, and soil erosion.

<u>Other suggestions for snow events</u> include additional bracing, raising temperatures inside, and proper snow removal from top and sides of the high tunnel.

<u>Preventing Wind Damage -</u> Do not roll up both sides of the high tunnel if there is a cross wind. This will cause to wind to get under the high tunnel and lift it off the ground. Keep the side against the cross wind rolled down if wind is 10+ mph.

Natural Ventilation - Tunnels needs the right set-up to maintain good ventilation naturally. Smaller, narrow houses can get away with roll-up sides as their only form of ventilation, but even these may suffer when there is little or no wind, since that's what drives sidewall ventilation. Larger tunnels really need both sidewall and ridge vents to assure good air movement. That way, the tunnel is vented by both wind and thermal gradients. Small roof vents, cut into the plastic, with heat-activated openers are a low-cost alternative to a ridge vent.

<u>Sanitation Pays</u> - Make tunnel cleanliness a priority in your efforts to prevent pest problems. Recommended

sanitation activities include regular washing of tools, containers, and equipment that comes in contact with plants or growing media using a greenhouse disinfectant. Employees should be aware that they can carry pests from one tunnel to another and know how to minimize that risk.

To avoid the spread of disease, hose ends should not be left nearby. Trash containers in the tunnel should be emptied daily. If any plants are discovered to have insect or disease problems they should be put in a plastic bag to minimize spread of spores or insects and then removed from the tunnel.

Outside the tunnel, weeds should be removed and turf kept closely mowed to limit the habitat for pests. Compost piles, dead plants, old pots and other breeding sites for insects and disease should be located as far from the tunnel as practical.

For more information, contact your local NRCS Field Office:

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