

Seasonal High Tunnel Q & A for Participation in NRCS Financial Assistance Programs

1. Can I construct my own seasonal high tunnel? Are all needed materials included in the kit?

Yes. Producers must purchase a prefabricated kit from a manufacturer. The manufacturer must provide a warranty on the film for at least 4 years and on the frame for one year. All materials are not included in the kit. The producer may have to purchase lumber, additional anchoring equipment and end walls.

2. Where is this practice eligible and what crops are eligible?

This practice is eligible on lands that are suitable for crops and on lands farmed in short and long term sod based rotations. Eligible crops include vegetables, ornamentals and dwarf fruit trees.

3. What are the maximum size requirements? Is there a minimum size requirement?

2,178 square feet is the maximum square footage that a producer can receive cost share assistance. A producer could construct multiple structures or a structure bigger than 2,178 square feet but, they would be responsible for the difference in cost. Also, the sidewalls must be six feet in height at a minimum. 600 square feet is the minimum size requirement based on MAFES requirement.

4. What are the things to consider before constructing a seasonal high tunnel?

1. Site Selection

- High Tunnels require frequent and easy access.
- Ideally, tunnels need to be oriented in a direction that allows for air movement in the summer and protection from cold in the winter.
- Tunnels need to be constructed in an area where they won't receive shade/shadows from trees, other buildings, etc.

2. Soils/Topography

- Tunnels shouldn't be constructed on slopes that exceed 3%.
- Loamy type soils are appropriate because they drain well.
- Tunnels require good drainage to remove excess water from around the high tunnel.
- A soil analysis report should be conducted to determine nutrient needs and pH levels. These seasonal high tunnels should be managed as a business and soil samples allow the producer to know those nutrients that need to be applied.

3. Water Supply

- Irrigation water needs to be of good quality and readily available.
- Drip tape is recommended. However, overhead sprinkler systems may be used. Drip irrigation reduces the risk of foliar diseases and is more efficient than a conventional sprinkler system. It can be used in conjunction with plastic mulch. The drip lines need to be placed underneath the plastic in order for the plants to receive optimum moisture. Cost share assistance is available for drip irrigation but not for overhead sprinkler systems.



Drip Irrigation

4. Structure Selection

- Producers need to have some idea about how big a tunnel to purchase. They also need to consider the increased workload.
- The frame for the structure can be constructed out of metal, wood or durable plastic. However, a prefabricated kit must be purchased and there are no commercial vendors that make tunnel frames from durable plastic or wood.
- 6 mil polyethylene film is the minimum requirement for the plastic cover.
- The tunnel should be oriented perpendicular to the prevailing wind if site conditions allow. In Mississippi, this means a Southwest to Northeasterly direction. This would maximize sunlight evenly throughout the high tunnel.

- Producers need to know what shaped structure to purchase. Quonset or Arched/Gothic?



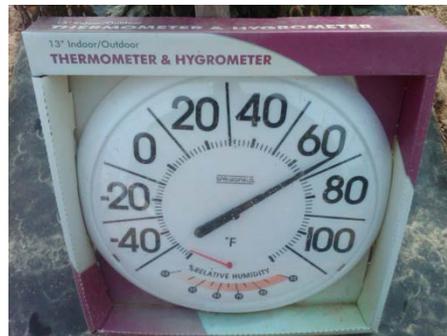
Quonset



Arched/Gothic

5. Can electricity be added to seasonal high tunnels?

Electrical components **cannot** be added to seasonal high tunnels. A battery operated timer for the irrigation system is eligible along with a battery operated thermometer to monitor the temperature within the seasonal high tunnel.



Thermometer

6. Should I use hay or straw in the alleyways?

Straw should be used because hay contains weed seed.

7. How far should they be spaced apart?

If a producer has multiple high tunnels, they should be spaced as far apart as they are wide.

8. When should I remove the plastic from the seasonal high tunnel?

The plastic should be removed during periods of inclement weather such as tropical depressions or hurricanes. Soil tests should be conducted annually. Seasonal high tunnels are vulnerable to salt buildup so the soil test could be used as a guide. It is an NRCS requirement that all program participants remove the plastic in order to grow a cover crop. The purpose of this is to allow for leaching and also improving the water movement into the soil.

The cover crop planted is not included in the cost for the seasonal high tunnel and is the responsibility of the producer. Some examples of cover crops include buckwheat and sudangrass.

9. How long and how many people does it take to construct a seasonal high tunnel? What tools are needed?

It takes about 100 hours of skilled labor and a crew of 3 people to construct a seasonal high tunnel according to data received from Mississippi State University, MAFES. It takes relatively few tools to construct a seasonal high tunnel and a cordless drill will probably be your best friend. Some other tools which could be used during construction include a high lift, ladder, and rope.

10. Is there a rule of thumb on when to open and close the sidewalls and doors?

If the daytime temperature is predicted to reach 90° F, open side walls and end doors accordingly. Additionally, if the nighttime temperature is predicted to be below 40° F, close the side walls and end doors in enough time to capture enough heat to get keep the tunnel properly heated through the night.

11. How much financial assistance will I receive from the Natural Resources Conservation Service (NRCS)?

The Environmental Quality Incentives Program (EQIP) is a voluntary conservation program from the USDA Natural Resources Conservation Service that makes payments based upon social or income requirements. Based on the category under which they fall, a producer could receive 1 of 3 payments. If they qualify as a base farmer, they receive \$1.90/SF. If they qualify as a certified organic producer or are transitioning to organic farming, they receive \$2.70/SF. If they qualify as a Historically Underserved producer which consists of Beginning Farmer, Limited Resource Farmer and Socially Disadvantaged, they receive \$3.30/SF.

12. Is damage from animals a problem in seasonal high tunnels?

There have been instances where animals have entered seasonal high tunnels. However, these instances were small animals burrowing in for warmth during periods of cold weather or chewing on drip irrigation lines. In early fall or early spring the side walls and the end walls may be rolled up during the day and even at night in remote areas. Deer and other game may browse at any time. Similar measures to control animals in a normal garden setting should be considered to control animal damage.