



## Seasonal High Tunnel System for Crops

### Definition

A seasonal high tunnel is a polyethylene covered structure, at least 6 feet in height, which modifies the climate to create more favorable growing conditions for vegetable and other specialty crops grown in the natural soil within the covered space.



### Purpose

The purpose of the seasonal high tunnel is to extend the crop growing season, improve plant quality, improve soil quality, and improve water quality from reduced nutrient and pesticide transport.

### Where Used

A seasonal high tunnel may be used where existing crops are grown in open field conditions, and extension of the growing season is needed due to climate conditions.

Commercially available high tunnel structures are made in numerous widths and lengths. High tunnels are constructed of metal bow frames that are covered with a minimum of 6 mil polyethylene. Ventilation is achieved by means of a combination of roll-up side vents, end vents, and occasionally roof vents. Generally, the end walls are framed-in to create door and ventilation areas. The high tunnel structure covers several crop rows, is wide enough to allow crop growth to full maturity under the tunnel, and is tall enough to allow spraying, cultivation, and for harvest to occur with the tunnel intact.

### Conservation Management System

Water runoff from the high tunnels or from other nearby sources can cause erosion and ponding issues that may require the application of other practices such as infiltration trenches, diversions, underground outlets, and critical area plantings. These additional practices must be planned and installed as a condition for the installation of a high tunnel. Additional practices should be considered as part of a conservation plan such as nutrient and pest management and crop rotation.

## Seasonal High Tunnel System – Job Sheet

Producer \_\_\_\_\_ Location \_\_\_\_\_

Contract # \_\_\_\_\_

Materials List	
<input type="checkbox"/> High Tunnel manufacturer and size(s) _____ <input type="checkbox"/> Polyethylene cover, 6 mil greenhouse grade or better, UV resistant <input type="checkbox"/> 4 year cover warranty <input type="checkbox"/> 1 year cover warranty, to be replaced annually by producer	
<p><b>Supporting Practices Required:</b></p> <input type="checkbox"/> Manufactured Gutter System (included with high tunnel kit) <input type="checkbox"/> Critical Area Planting (job sheet attached) <input type="checkbox"/> Infiltration Trench Along Each Side (construction plan attached) <input type="checkbox"/> Underground Outlet (construction plan attached) <input type="checkbox"/> Diversion (construction plan attached) <input type="checkbox"/> Other _____	<p><b>Additional Support</b> <i>(not available for payments)</i></p> <input type="checkbox"/> Ventilation <input type="checkbox"/> Heat <input type="checkbox"/> Electricity
High Tunnel System Construction	
<ul style="list-style-type: none"> <li>Contact <b><i>Before-You-Dig</i></b> (800-922-4455) at least 3 working days in advance of construction for location of underground utilities.</li> <li>Obtain any required permits.</li> <li>Prepare site according to manufacturer’s instructions.</li> <li>Lay out building location according to site plan.</li> <li>Assemble high tunnel structure according to manufacturer’s instructions</li> <li>Install supporting practices as required, according to construction plans provided.</li> </ul>	
Operation and Maintenance	
<ul style="list-style-type: none"> <li>Periodically inspect structure and cover for damage. Reinstall or repair promptly.</li> <li>Follow manufacturer’s instructions for operation and maintenance of the high tunnel structure.</li> <li>Avoid damage to structure from equipment operated in and around the seasonal high tunnel.</li> <li>Inspect runoff control measures after every significant rainfall event. Repair promptly.</li> <li>Remove and store high tunnel cover at the end of each growing season, unless manufacturer warrants the cover for snow loads. Replace cover prior to use in the spring.</li> <li>If winter use is expected, snow must be removed from cover and around base.</li> </ul> <p>_____</p> <p>_____</p>	

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**Seasonal High Tunnel System – Layout and Location**

Plan view of seasonal high tunnel system site shown below.

Scale 1"= \_\_\_\_\_ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")



<b>Additional Specifications and Notes:</b>		
<b>Design Certification</b>		
This Seasonal High Tunnel System plan meets the requirements of NRCS Conservation Practice Standard 798.		
Signature _____	Title _____	Date _____

**Seasonal High Tunnel System – Construction Checkout**

Seasonal High Tunnel Structure – <i>as-built measurements</i>	
Length (ft)	Height in Center (ft)
Width (ft)	Structure Manufacturer
	Installed by:

Supporting Practices Installed	
<input type="checkbox"/> Manufactured Gutter System <input type="checkbox"/> Critical Area Planting <input type="checkbox"/> Infiltration Trench along each side <input type="checkbox"/> Underground Outlets <input type="checkbox"/> Diversion <input type="checkbox"/> Other _____	Quantities and detailed checkout information for supporting practices shall be documented separately.

CHECK OUT:	
Amount Completed: _____ square feet.	Mark As-Built location on plan map.
Remarks _____	
This practice as constructed meets NRCS standards and specifications <input type="checkbox"/> Yes <input type="checkbox"/> No	
Check out by: _____	Date: _____

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