

Seasonal High Tunnel System for Crops

Interim Conservation Practice Job Sheet **798**



Photo Source: www.hightunnels.org

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. The high tunnels are constructed of metal or plastic bow frames that are covered with a single layer of 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 harvest to occur with the tunnel intact. The lifespan of the practice is 4 years.

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 a part of a conservation plan, such as nutrient and pest management and crop rotation.

Seasonal High Tunnel System for Crops – Job Sheet

Participant
Program

County
Contract Number

Materials List

High Tunnel Structure maintained for 4 year lifespan, size(s)

Supporting Practices Required:

- Manufactured Gutter System
- Critical Area Planting (job sheet attached)
- Infiltration Trench along each side (construction plan attached)
- Underground Outlet (construction plan attached)
- Diversion (construction plan attached)
- Other: _____

High Tunnel System Construction

- Contact New Jersey One Call at 1-800-272-1000, or by dialing 811 at least 3 working days in advance of construction, for location of underground utilities.
- Prepare site according to manufacturer's instructions / specifications.
- Lay out building location according to site plan.
- Assemble high tunnel structure according to manufacturer's instructions / specifications.
- Install supporting practices as required, according to construction plans provided.

Operation and Maintenance

- Periodically inspect structure and cover for damage. Reinstall or repair promptly.
- Follow manufacturer's instructions for operation and maintenance of the high tunnel structure.
- Avoid damage to structure from equipment operated in and around the seasonal high tunnel.
- Inspect runoff control measures after every significant rainfall event. Repair promptly.
- Winter use of the seasonal high tunnel system is allowed, if the manufacturer's specifications account for snow loads and winter conditions. All program participants must maintain a functional seasonal high tunnel system, including the polyethylene cover, for the 4 year lifespan of the practice. Any operation or maintenance needed is at the expense of the participant. This may include, but is not limited too, repairs or replacement.
- Remove and store high tunnel cover at the end of each growing season, if the tunnel will not be used during the winter. Replace cover prior to use in the spring.

Other _____

Design Certification

This Seasonal High Tunnel System plan meets the requirements of NRCS Practice Standard 798.

Signature

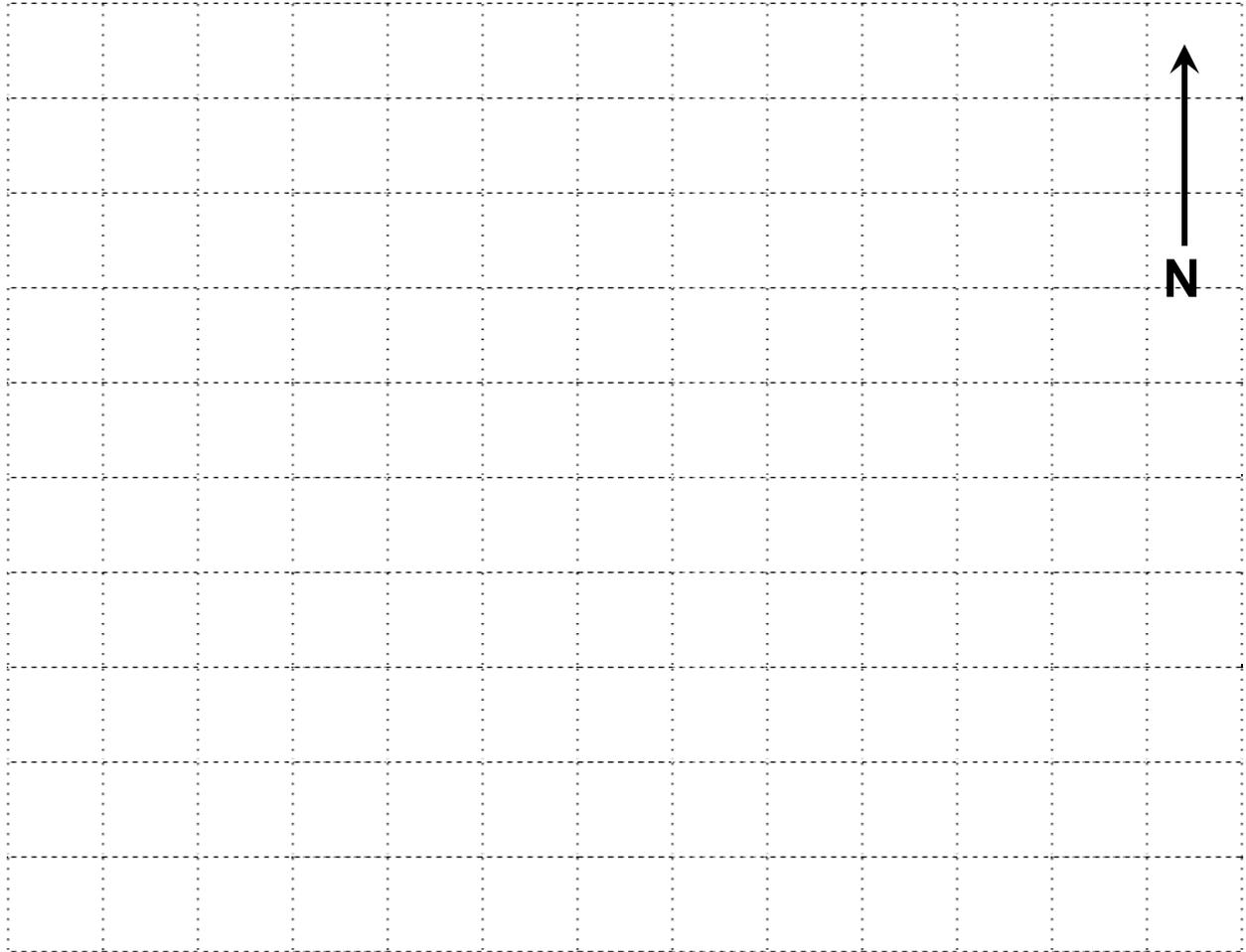
Title

Date

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")



Soil Type where High Tunnel is located _____

Additional Specifications and Notes:

Seasonal High Tunnel System – Construction Checkout

Seasonal High Tunnel Structure – as-built measurements	
Length (ft)	Height in Center (ft)
Width (ft)	Structure Manufacturer

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 meets NRCS standards and specifications	<input type="checkbox"/> Yes <input type="checkbox"/> No
Check out by: _____	Date: _____

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