



Photo Source: [www.hightunnels.org](http://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 specialty commodity 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.

## Conservation 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 – Job Sheet

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

Field Office \_\_\_\_\_ Conservation Contract \_\_\_\_\_

### Materials List

- High Tunnel Structure size(s) \_\_\_\_\_
- Polyethylene cover, 6 mil greenhouse grade or better, UV resistant
  - 4 year cover warranty
  - 1 year cover warranty, to be replaced annually by producer

#### **Supporting Practices Required:**

- Manufactured Gutter System (included with high tunnel kit)
- Critical Area Planting (job sheet attached)
- Infiltration Trench along each side (construction plan attached)
- Subsurface Drain (construction plan attached)
- Diversion (construction plan attached)
- Other \_\_\_\_\_

### High Tunnel System Construction

- Contact the Illinois OneCall System (JULIE) at 1-800-892-0123 at least 2 working days in advance of construction, for location of underground utilities.
- Obtain any required permits.
- Prepare site according to manufacturer's instructions.
- Lay out building location according to site plan.
- Assemble high tunnel structure according to manufacturer's instructions.
- Install supporting practices as required, according to construction plans provided.

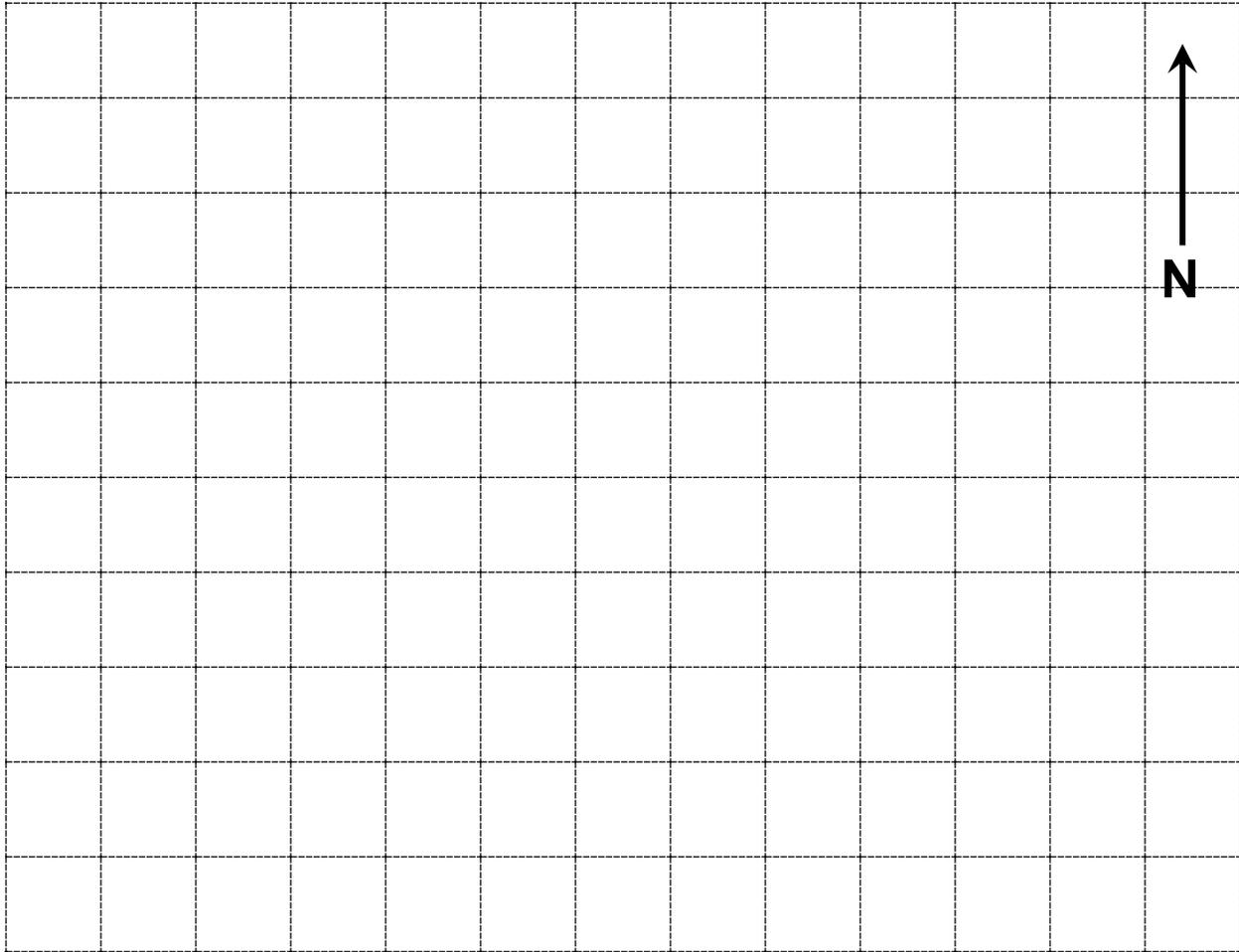
### Operation and Maintenance

- 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.
- 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.

## 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")



Additional Specifications and Notes:

**Seasonal High Tunnel System – Construction Checkout**

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

<b>Supporting Practices Installed</b>	
<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.

CERTIFICATIONS
<p><b>LANDOWNER / OPERATOR</b></p> <p>I agree to implement this practice as outlined by the specification provided. I will contact NRCS prior to any changes in planning and installation. I acknowledge the maintenance necessary for proper performance during the _____ year life of the practice.</p> <p>Signature: _____ Date: _____</p>
<p><b>PLANNER</b></p> <p>With the appropriate NRCS planning level, I certify this practice has been designed with specifications to meet the conservation practice standard.</p> <p>Signature: _____ Date: _____</p>