

# Seasonal High Tunnel System for Crops

Interim Conservation Practice Job Sheet FL-798-JS

Natural Resources Conservation Service, Florida

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A seasonal high tunnel is a polyethylene covered structure used to provide cover for crops. The structure must be at least 6 feet in height, and be capable of modifying the climate inside the tunnel to create more favorable growing conditions for vegetables and other specialty crops grown within the covered space. All crops produced in a seasonal high tunnel must be grown in the natural soil profile, not on benches, tables, or in pots, or containers. The purposes of the seasonal high tunnels are to improve plant and soil quality, water quality from reduced nutrient and pesticide transport, increase air quality through reduced transportation inputs, and reducing transportation costs and energy use through local consumption. Seasonal high tunnels can be used anywhere crops are grown in open field conditions. Commercially available high tunnel structures are made in numerous widths and lengths. The seasonal high tunnels are constructed of metal or plastic bow frames that are covered with a single layer of polyethylene and are open on either end. The polyethylene cover shall have a minimum thickness of 6 mil. Ventilation is achieved by means of a combination of roll-up side vents, end vents, and occasionally, roof vents. 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 without disturbing the tunnel structure.

Water runoff from the seasonal high tunnels can cause erosion and drainage issues that may require the application of practices such as diversions, underground outlets, and critical area planting. Additional practices, such as nutrient and integrated pest management and crop rotation should be considered as a part of a conservation plan.

## Seasonal High Tunnel SITE SPECIFIC SHEET

Client:		County:	Date:
Farm #:	Tract #:	Field # (s):	Contract #:
<b>Purposes/Needs (check all that apply)</b>			
<input type="checkbox"/> Improve plant quality			
<input type="checkbox"/> Improve soil quality			
<input type="checkbox"/> Reduce nutrient and pesticide transport			
<input type="checkbox"/> Improve air quality through reduced transportation inputs			
<input type="checkbox"/> Reduce energy use through local consumption			
<input type="checkbox"/> Other: _____			

### Materials List

Seasonal High Tunnel Structure, outside dimensions (ft): \_\_\_\_\_

Polyethylene cover, 6 mil greenhouse grade or better, UV resistant; and a frame at least 6-feet high inside the tunnel

Height in Center (ft): \_\_\_\_\_

Structure Manufacturer: \_\_\_\_\_

### Supporting Practices Needed at Your Site for Runoff and/or Drainage Control:

Critical Area Planting (job sheet attached)

Diversion (construction plan attached)

Grassed Waterway (construction plan attached)

Underground Outlet (construction plan attached)

Surface Drainage, Field Ditch (construction plan attached)

Subsurface Drainage (construction plan attached)

Other \_\_\_\_\_

### Seasonal High Tunnel System Location and Construction

- Locate your seasonal high tunnel structure on cropland that provides the best available growing conditions for your desired crops.
- Select a seasonal high tunnel site after consideration of your land's slope, sun exposure, soil quality, soil fertility, water drainage, air movement, risk of herbicide carry-over, and risk of soil pests.
- The site must be relatively level and well drained, so the tunnel can be installed without grading or water ponding between the rows.
- Orient your tunnel in a direction that provides acceptable sunlight exposure for the crops to be grown; and good ventilation by the prevailing wind.
- The site should be located in an area with adequate space that is easily accessible to farm equipment, harvesting vehicles, etc., to avoid damage to the structure and enhance management activities.
- The site location must have access to enough clean irrigation water to meet your crop needs and allow you to carry out normal farming operations without damaging the structure.
- At least 2 working days before you start building, request marking of underground utilities in the construction area by telephoning 811. This is a free service.
- Prepare the site according to the manufacturer's instructions.
- Assemble the seasonal high tunnel structure according to the manufacturer's instructions.
- Install supporting practices as required, according to construction plans provided.
- Contact NRCS when your work is completed, or before you make changes to your planned installation.

