

SEASONAL TUNNEL SYSTEM FOR CROPS



AKA: HOOP HOUSES, HIGH
TUNNELS, TUNDRA TUNNELS

SEASONAL TUNNEL SYSTEM FOR CROPS



Alaska NRCS will pilot project as
interim practice for a period of 3
years

DEFINITION

- A seasonal polyethylene covered structure with no electrical, ventilation, and heating system that is used to cover crops to extend the growing season in an environmentally safe manor.

PURPOSES:

- To extend the crop growing season
- To improve plant quality
 - Frost protection
 - Rain splash protection
 - Stabilize temperature
- To improve soil quality
 - Protection from water and wind erosion
- To improve water quality from reduced nutrient and pesticide transport
 - Containment of any applied pesticides and nutrients inside tunnel

APPLICABILITY:

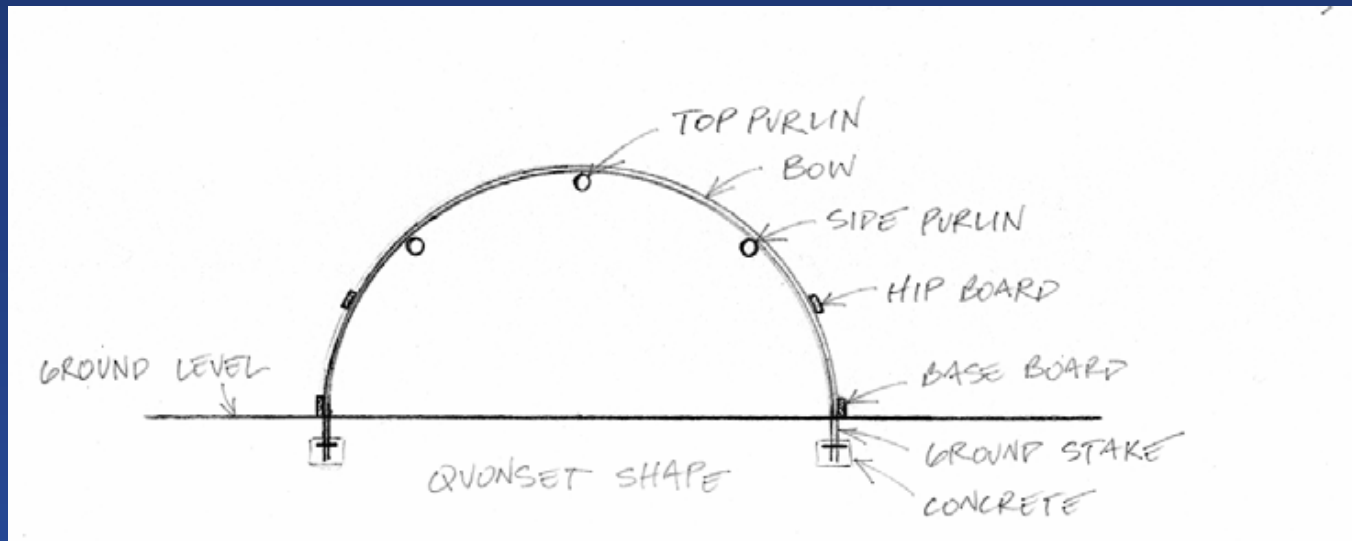
- This practice applies to existing cultivated cropland where extension of growing season is needed due to climate conditions and crops can be grown in the natural soil profile. This practice does not apply to crops grown above ground or in pots.

Quonset Style Tunnel



Quonset Style Tunnel

- Least expensive
- Easy to construct
- Available commercially in kits

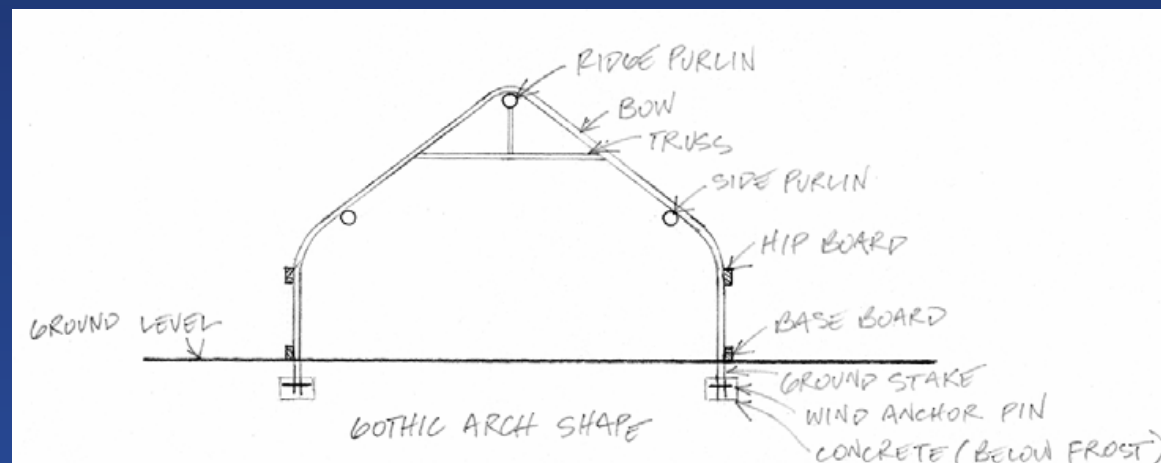


Gothic Style Tunnel



Gothic Style Tunnel

- Readily sheds snow because of steep roof pitch
- The taller sidewalls of Gothic tunnels offer more usable space along the sides for crop production and growth and for working comfort.
- Gothic tunnels allows for better ventilation through higher gable-end vents.
- Gothic arch roofs tend to have enough of an angle to help shed water that condenses on the interior, instead of dripping on the plants below.





Tomatoes



Cucumbers



Cut Flowers

Specifications:

- Size limited to 5% of one acre or 2,178 square feet
- Minimum 6-mil greenhouse grade, UV resistant polyethylene cover
- Cover should be removed in fall where heavy snow loads are expected
- Runoff will be directed away from the tunnel structure to avoid ponding

Specifications:

- Location of tunnel shall provide for convenient ingress/egress of plant materials
- Tunnel should be at least 6 feet in height
- Tunnel ventilation will be achieved through roll-up side vents, end vents, and/or roof vents.

Financial Assistance for Seasonal Tunnels:

- Available through the Environmental Quality Incentives Program (EQIP) beginning in 2010
- Maximum size under tunnel is 2,178 square feet, roughly 20 ft X 100 ft
- Cost-share is authorized at this time for only “manufactured structures” (kits)

Financial Assistance for Seasonal Tunnels:

- 50% Cost Share under EQIP will be paid by square foot
- Estimated installation cost of 20 ft X 100 ft “on road” is approximately \$12,000.00 or \$6.00 per square foot
- Estimated installation cost of 20 ft X 100 ft “off road” is approximately \$20,000.00 or \$10.00 per square foot

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