

- Conservation Benefits
- Interim Practice Standard
- Financial Assistance
- Guidance





# Financial Assistance

## Environmental Quality Incentives Program (EQIP)

Today's  
Focus





# Conservation Benefits

Natural Resources  
Conservation Service



*“Helping People Help the Land”*



## ...of a High Tunnel?

- ? Reduced soil erosion
- ? Better water quality through less chemical use or transport
- ? Improved plant quality
- ? Others



## How will we find out?

- Build some high tunnels
- Monitor over a 3 year period
- Ask producers' opinions and observations





# Interim Practice Standard

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD  
SEASONAL HIGH TUNNEL SYSTEM FOR CROPS  
(ft<sup>2</sup>)**

**CODE 798**

**DEFINITION**

A seasonal polyethylene covered structure that is used to cover crops to extend the growing season in an environmentally safe manner.

**PURPOSES**

- Improve plant quality
- Improve soil quality
- Reduced nutrient and pesticide transport
- Improve air quality through reduced transportation inputs
- Reduce energy use through local consumption

Seasonal tunnel structures shall be selected and applied over the crop area. The material shall be of a significant thickness to withstand the temperature modification for the period required. As a minimum, a 6-mil greenhouse-grade, UV resistant polyethylene cover will be used.

In climate conditions where snow loads may damage the structure, the tunnel cover shall be removed or rolled up at the end of the growing season unless the structure is designed to withstand expected snow loads.

Runoff shall be directed away from the tunnel structure to avoid ponding. Runoff may be captured and used for irrigation purposes. The minimum design capacity for runoff structures



# Interim Practice Standard

## Modified definition for 2011:

**DEFINITION** *(Updated from 2010)*

A seasonal polyethylene covered structure ~~with no electrical, heating, and/or mechanical ventilation systems~~ that is used to cover crops to extend the growing season in an environmentally safe manner.



## **CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to cropland where extension of growing season is needed due to climate conditions and crops can be grown in the natural soil profile. Permanently raised beds may be installed to improve soil condition, fertility, and agri-ability access, but does not apply to crops not grown in the natural soil profile (i.e. tables/benches, portable pots, etc.).

The practice does not include greenhouses or low tunnel systems that may cover single crop rows.







# Interim Practice Standard

- Design & construction according to manufacturer's recommendation
- At least 6 ft in height
- Polyethylene cover – minimum 6 mil UV resistant
- Remove or roll up cover in winter unless structure is designed to handle expected snow loads



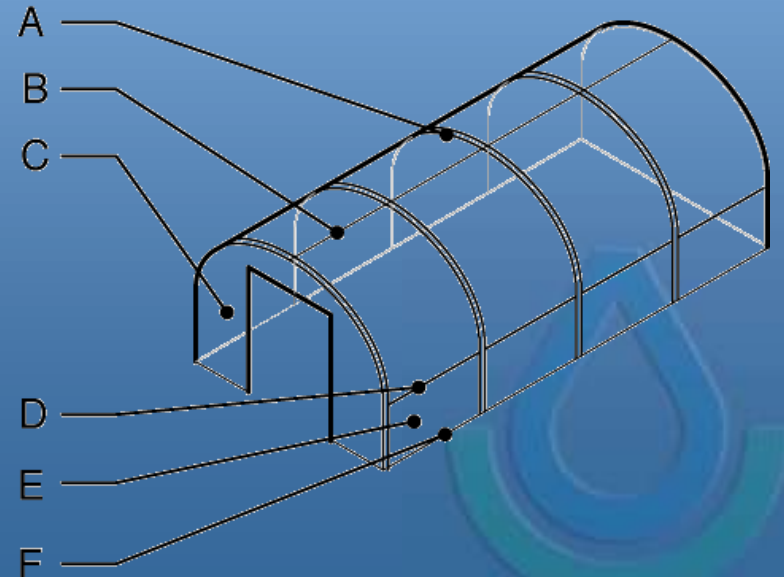
## Runoff issues

- Select accompanying practices to prevent erosion or ponding
  - Infiltration trenches
  - Underground outlet
  - Vegetation
  - Diversion
- May capture runoff to use for irrigation



## Considerations

- Locate for convenient movement of plant materials
- Manipulate side covers to control internal temperature
- Rotate tunnel location to minimize disease buildup
- Have a reliable source of water
- Irrigation water management
- Nutrient management
- Pest management





# Interim Practice Standard

## REFERENCES

Community Garden Guide Season Extension - High Tunnel, NRCS <http://plant-materials.nrcs.usda.gov/mipmc>

Community Garden Guide Season Extension – Hoophouses, NRCS. <http://plant-materials.nrcs.usda.gov/mipmc/communitygardens.html>

University of Minnesota,  
<http://hightunnels.cfans.umn.edu/resources.htm>  
“Part I: Introduction to High Tunnels”. Spaw, M. and William, K.  
<http://www.hightunnels.org/foreducators.htm>

High Tunnel Production Manual”. Penn State University College of Agriculture, Department of Horticulture. White, L. and Orzolek, M. 2003  
[http://www.nasga.org/publications/pubs\\_hightunnel.htm](http://www.nasga.org/publications/pubs_hightunnel.htm)

“High Tunnels”. Ted Blomgren of Cornell Cooperative Extension and Tracy Frisch of the Regional Farm and Food Project.  
<http://www.uvm.edu/sustainableagriculture/hightunnels.html>





# Financial Assistance

In general, EQIP is intended to provide producers with financial assistance to help implement conservation practices that address identified resource concerns on the farm.





# Financial Assistance

- ❑ The Environmental Quality Incentives Program (EQIP) is a voluntary conservation program administered and carried out through the USDA Natural Resources Conservation Service.
- ❑ EQIP was originally established under the 1996 Farm Bill and continues to be reauthorized with the 2008 Farm Bill.
- ❑ EQIP supports ag production and environmental quality as compatible goals.





# Financial Assistance

## EQIP is not just high tunnels...

Conservation practices eligible to receive financial assistance are listed in the EQIP payment schedule and contained in the NRCS Field Office Technical Guide.

A yellow starburst callout with a black outline, containing italicized text.

*NRCS can help plan a complete conservation system on the farm!*

[www.il.nrcs.usda.gov](http://www.il.nrcs.usda.gov)



- To be eligible, applicants must be an individual, entity or joint operation who meets the definition of an agricultural producer engaged in livestock or agricultural production.
- There must be an annual minimum of \$1,000 of agricultural products produced/sold from the operation two out of the last five years.







# Applying for EQIP

If applying for the first time, producers will need to fill out forms providing USDA with information that confirms eligibility to participate in public-funded programs.

NRCS staff will be available in the USDA Service Center to help!





# Applying for EQIP

AD 1026 for HEL/WC compliance

AGI Certification

Member Information (for entity and joint operations)

Signature authority



## High Tunnels through EQIP:

- General EQIP
- Organic Initiative



## Administered via a Conservation Contract (not a grant)





# Financial Assistance

**\$300,000 payment limitation for regular EQIP**

**\$80,000 for Organic Initiative  
(\$20,000/yr)**



**Payment scenarios based on 75%  
Historically underserved and limited  
Resource based on 90%**



- ❑ EQIP's Organic Initiative focuses on currently certified organic producers & those transitioning to organic production.
- ❑ Applications are ranked & funded from a special funding pool for organic producers.
- ❑ Applications compete only against others in this special fund pool.



- ❑ Each state has a payment schedule...the high tunnel rate is in dollars per square foot
  
- ❑ Conditions of the contract:
  - Construct in accordance with NRCS standard
  - Operate and maintain for 4 years





## High Tunnel Program Limits

- Financial assistance maximum: 5% of one acre per farming operation (2,178 sq.ft.)
- Equivalent structure size about 30' x 72'
- Can be more than one high tunnel structure
- Producer can build larger high tunnels at their own expense





## Where to find technical information about:

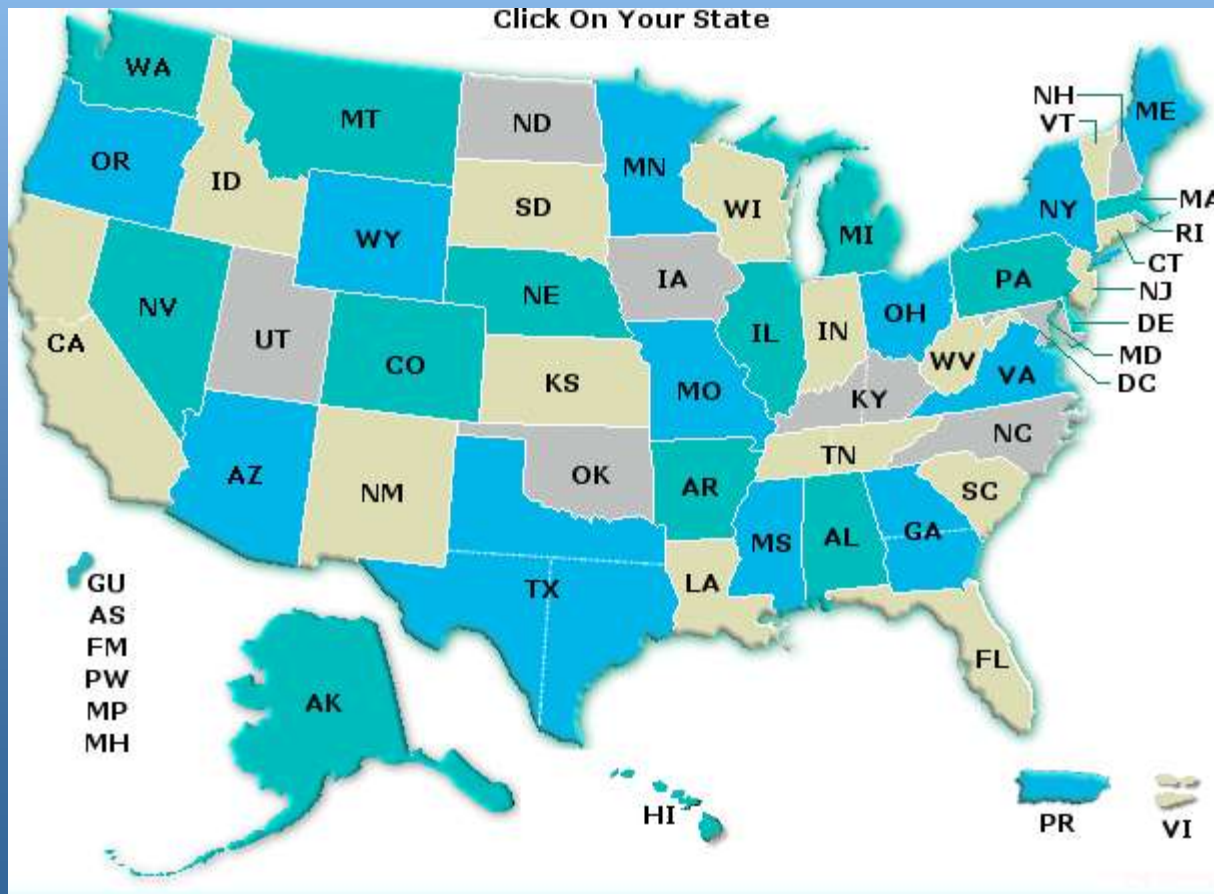
- High tunnels
- All NRCS conservation practices
- And much more...





## Field Office Technical Guide

[http://efotg.sc.egov.usda.gov/efotg\\_locator.aspx?map](http://efotg.sc.egov.usda.gov/efotg_locator.aspx?map)



## **Field Office Technical Guide has:**

- I. References, Maps, Tech Notes
- II. Natural Resources Information (Climatic Data, etc)
- III. Quality Criteria (resource concerns, how to assess them, what to include in a conservation plan, etc)
- IV. Practice Standards and Specifications**
- V. Conservation Practice Physical Effects



## Section IV → Conservation Practices

- Seasonal High Tunnel System for Crops (sq ft) (798) Interim Standard and Specification
  - Seasonal High Tunnel System for Crops (sq ft) (798) Interim Standard and Specification
  - Seasonal High Tunnel System for Crops (sq ft) (798) Job Sheet
  - Seasonal High Tunnel System for Crops (sq ft) (798) Statement of Work



## Seasonal High Tunnel System for Crops

**INTERIM ILLINOIS JOB SHEET – 798      NOVEMBER 2010**



## Summary of what will be built

- High tunnel kit (manufacturer, size)
- Type of cover (4 year, or annual replacement)
- Supporting practices (infiltration trench, etc)
- Utility safety
- Obtain any required permits
- Operation and maintenance instructions



- Sketch of site layout**
- Design specifications**
- Construction checkout**  
*(does it meet NRCS standards and specifications?)*





## Reporting Data

### First Year

- Actual cost
- Maintenance needs
- Cropping history (2 years, prior to high tunnel)
- Comparison of nutrient and pesticide use with/without high tunnel
- Growing season comparisons
- Perceived benefits for plant, soil, water quality
- Producer's recommendations and observations



## Reporting Data

### Second and Third Years

- Maintenance needs
- Crop(s) grown
- Nutrients and pesticides used
- Growing season dates
- Perceived benefits for plant, soil, water quality
- Producer's recommendations and observations





- ❑ Your local NRCS field office can help
- ❑ Illinois has a list of approved high tunnel manufacturers *(14 so far)*



## □ NRCS Plant Materials Program

<http://plant-materials.nrcs.usda.gov/pubs/mipmcarcggghightunnel.pdf>



### COMMUNITY GARDEN GUIDE SEASON EXTENSION

#### HIGH TUNNEL

Extending the growing season in many Great Lakes States' gardens is essential so seed can be saved and vegetables can be successfully grown. A number of season extension techniques are available to the gardener. Costs for season extension range from tens of dollars to tens of thousands of dollars, depending on the type of season extension employed.

A High Tunnel is a greenhouse-like structure which modifies the climate to create more favorable growing conditions for vegetable plants. Many commercially available High Tunnels



NRCS ~  
Helping People Help the Land

*To learn more, visit [www.nrcs.usda.gov](http://www.nrcs.usda.gov)  
or visit your County NRCS office.*

***QUESTIONS?***





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