

NRCS Funding for Kwik Hoops

Good news!

The NRCS department of the USDA has funding available to help you pay for your purchase of a Kwik Hoops low tunnel system!

Many U.S. farmers know the NRCS (National Resources Conservation Service) reimbursement program for high tunnels called EQIP (Environmental Quality Incentives Program).

Did you know that EQIP has recently launched an initiative to help cover the cost of low tunnels?

It's true!

Kwik Hoops meet and exceed the NRCS quality requirements for the low tunnels cost-share program.

Funds are available now, and there is still time to apply for fiscal year 2024, so contact your local rep ASAP!

How Much Could You Get?

The NRCS could contribute between four to five dollars per square foot in reimbursements towards a Kwik Hoops low tunnel system that is 1000 square feet or less. For 1000-5000 square feet, the reimbursement rate drops to one to two dollars per square foot.

To find out your state's reimbursement rate, visit their website [HERE](#), scroll down to your state, and then click the EQIP link (Environmental Quality Incentives Program).

Next, scroll down to the very bottom of the document to find the Low Tunnels System (code 821). This section will tell you how much money the NRCS will contribute per square foot to your Kwik Hoops system purchase.

Note: "HU" stands for [Historically Underserved](#). HU participants receive a higher reimbursement rate. If you think you might qualify, mention it to your local rep.

Note: The NRCS reimbursement amounts and requirements vary slightly from state to state, so it's essential to contact your local NRCS rep for the most accurate information. To do this, [CLICK HERE](#), select your state, and then select your county.

How Does It Work?

Example 1: Small Order for <1000 Square Feet (non-HU participants) in Washington State

For the fiscal year 2023 in Washington State, the NRCS will contribute \$5.12/square foot towards your low tunnel system for set-ups covering bed space less than 1000 square feet (\$6.14/ square foot for HU participants).

Four beds (30" x 100') = 1000 square feet.

At \$5.12/square foot, the NRCS would reimburse you \$5,120 towards low tunnel supplies for this 1000 square feet of growing space.

Let's say you purchased:

- [Kwik Hoops](#) for four 100' beds (\$600)
- Four rolls of [Clear Poly](#) (\$360)
- Four rolls of [FrostFighter](#) row cover (\$150)
- Four rolls of [Insectanet](#) insect netting (\$380)

Your total order comes to \$1490.

Your cost after the NRCS reimbursement: **\$0** (a savings of \$1490, plus extra funds to support your farm!)

Example 2: Large Order for 1000-5000 Square Feet (non-HU participants) in Washington State

For the fiscal year 2023 in Washington State, the NRCS will contribute \$1.33/square foot towards your low tunnel system for set-ups covering bed space between 1000 and 5000 square feet (\$1.60/ square foot for HU participants).

20 beds (30' x 100') = 5000 square feet.

At \$1.33/square foot, the NRCS would reimburse you \$6,650 towards low tunnel supplies for this 5000 square feet of growing space.

Let's say you purchased:

- [Kwik Hoops](#) for 20 beds (\$3000)
- 20 rolls of [Clear Poly](#) (\$1800)
- 20 rolls of [FrostFighter](#) row cover (\$600)
- 20 rolls of [Insectanet](#) insect netting (\$1900)

Your total order comes to \$7,300

Your cost after the NRCS reimbursement: **\$650** (a savings of \$6650)

Which states offer the Low Tunnel program?

The Low Tunnel program is available in most states, and funding is available right now to pay for your Kwik Hoops low tunnels.

The following states have NOT yet added the Low Tunnels program:

1. California
2. Delaware
3. Hawaii
4. Iowa
5. Kentucky
6. Maryland
7. Michigan
8. Minnesota
9. Nebraska
10. Nevada
11. North Carolina
12. North Dakota
13. Oklahoma
14. Rhode Island

15. South Dakota
16. Virginia
17. Wisconsin
18. Wyoming

If your state is on this list, then the low tunnel program may be adopted this coming year, so contact your local NRCS rep regardless.

How to Apply

The best advice we have to offer is to start by contacting your local rep and let them navigate the technicalities for you.

[Find your local NRCS service center.](#)

We've heard from multiple customers that applying for the Low Tunnel program was very easy, and their local rep walked them through the process - [Get Started with NRCS.](#)

If you or your representative have questions, please contact us at hello@paperpot.co or 877.850.1555.

Support Documentation

Attached is the tech sheet showing all the specs on our Kwik Hoops and various coverings. This sheet should be submitted to your rep when you apply.

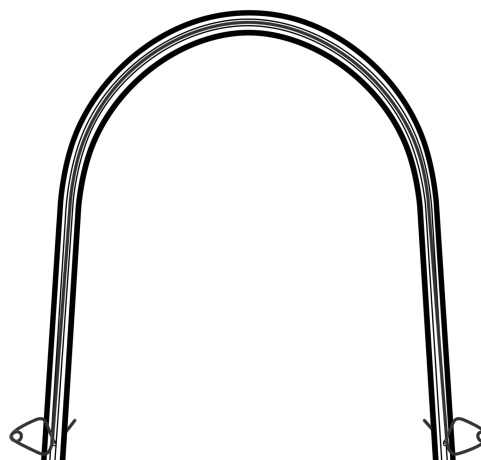
Kwik Hoops & Coverings

Kwik Hoops:

- Hoops: 24 gauge high-tensile galvanized steel, 30 in. wide, 23.5 in. tall
- Retaining wires: 14 gauge - 0.078 in.
- Compatible with all agriculture fabric coverings
- Manufactured by Redpath in New Zealand
- Kwik Hoops low tunnels work with insect netting, frost cloth, greenhouse plastic, and shade cloth
- For complete coverage, coverings must be a minimum of 69 in. wide (greater than 80 in. is ideal)
- Recommended to cut fabrics ten feet longer than bed length to allow for five feet of excess on each end for tying off

InsectaNet:

- Mesh size: 0.32 mm by 0.32 mm
- Material: Polyamide
- Weight: 25 gsm (grams per square meter)
- UV treated: Yes
- Porosity: 62%
- Light transmission: 91%
- Color: Clear
- Design: Knitted
- Protects against insects as small as thrips.
- Standard Roll: 83 in. wide by 120 ft. long
- Large Roll: 10 ft. wide by 900 ft. long



FrostFighter:

Option 1: 18 gsm (grams per square meter) - 0.55 oz./sq.ft.

- Dimensions: 83 in. wide by 120 ft. long (2.1 m by 36.5 m)
- Frost protection: 2-4°
- Light transmission: 85%
- Use: Frost protection and overwintering

Option 2: 15 gsm (grams per square meter) - 0.44 oz./sq.ft.

- Dimensions: 83 in. wide by 120 ft. long (2.1 m by 36.5 m)
- Frost protection: N/A
- Light transmission: 90%
- Use: Insect protection and favorable microclimate

Greenhouse Plastic:

- 6 mil thick, 5-layer, UV-stabilized polyolefin
- Lifespan: 4 years
- Light transmittance >90%
- 70 in. wide by 120 ft. long
- Anti-drip, anti-aging, anti-fog coating

Shade Net:

- Round wire knitted
- Black polyethylene knitted monofilament
- 16-year life expectancy
- 30% light transmission
- 70% shade
- Dimensions: 69 in. wide by 110 ft. long (1.75 m by 33.5 m)

**821 - LOW TUNNEL SYSTEMS
IMPLEMENTATION REQUIREMENTS**

**EXAMPLE PAPERWORK
FROM VERMONT**

Producer: _____
Location: _____
Farm Name: _____

Project or Contract: _____
County: _____
Tract Number: _____

Practice Lifespan – 1 year



Practice Purpose(s): (check all that apply)

- Improve plant productivity and health
- Reduce plant pest pressure

Definition:

An enclosed polyethylene, polycarbonate, plastic, or fabric covered structure that is used to cover and protect crops from sun, wind, excessive rainfall, or cold, and to extend the growing season or to reduce pest pressure.

This practice only applies to tunnel heights of 4 feet or less.

Use the High Tunnel System CPS (Code 325) when a tunnel height greater than 4 feet is needed.

Read and apply all applicable Criteria listed in the 821 Conservation Practice Standard.

A map(s) showing all planned layout and locations for Low Tunnels is attached.

Identify Planned Crops to be covered and growing season									
Crop	Spring	Summer	Fall	Winter	Crop	Spring	Summer	Fall	Winter
Vegetables	✓	✓	✓						

If you have questions about this planned **Low Tunnel System** practice contact:

Name: _____ **Telephone:** _____
Email: _____

For NRCS Use Only

Designed By: _____ **Date:** _____
Checked By: _____ **Date:** _____
Approved By: _____ **Date:** _____

821 – Low Tunnel Systems Implementation Requirements

Low Tunnel Installation Specifications:

Select fabric thickness and type that achieves the objectives (check all that apply)					
Select	Weight	Density	Light Transmittance	Degrees Protection (below freezing)	Best for:
✓	Heavy	1.5 - 2.2 oz/yd	30 - 50%	8° F	Spring/fall crops
✓	Medium	0.5 - 1.0 oz/yd	70 - 85%	4 -6° F	Spring/fall crops
	Light	0.45 oz/yd	90 - 95%	2° F	Light frost protection

Polyethylene (min 4 mil)

Shade Cloth

✓ Fine mesh pest netting

Frame Material Planned		
✓ 9 or 10 gauge wire	Electrical Conduit	PVC tubing
No Frame (Floating)	✓ Metal	

Low Tunnels are planned on Field# 1&2 . There will be 195 low tunnels installed on this site. The tunnels will be approximately 50 (L) x 4 (W) x 2 (H) feet.

Additional planned specifics (number of individual types of coverings, etc.)

Planned to cover the landowner' crop beds, which measure 4' x 50'.

There will not site prep needed for the low tunnel installation. Site prep is described below, if applicable:

No land leveling or earth moving required.

Additional conservation practices that will be installed with this practice include:

- | | |
|---|--|
| ✓ Mulching (484) | ✓ Cover Crop (340) |
| Pest Management Conservation System (595) | Soil Carbon Amendment (808) |
| Nutrient Management (590) | Irrigation System, Microirrigation (441) |
| ✓ High Tunnel System (325) | Conservation Cover (327) |
| Other: | |

Additional management and/or mitigation required for the low tunnels:

Low Tunnel Operation and Maintenance:

- Properly clean and store the cover material when not in use.
- Plan for proper disposal of the system cover at the end of its useful life.
- Check low tunnels and repair as needed after wind, rain and snow events.
- Periodically inspect the low tunnel and repair, reinstall, or replace, as needed to accomplish the intended purpose.
- Manage the structure in a manner that limits wind and/or snow damage.
- If needed, vegetate all disturbed earth surfaces outside of the high tunnel and maintain the vegetation throughout the structure's life.
- Removal of cover materials shall be consistent with the intended purpose and site conditions.
- Operation of equipment near and on the site shall not compromise the intended purpose of the low tunnel structure or its cover.



Natural Resources Conservation Service
CONSERVATION PRACTICE STANDARD
LOW TUNNEL SYSTEMS

CODE 821

(sf)

DEFINITION

An enclosed polyethylene, polycarbonate, plastic, or fabric covered structure that is used to cover and protect crops from sun, wind, excessive rainfall, or cold, and to extend the growing season or to reduce pest pressure.

PURPOSE

This practice is used to accomplish one or more of the following purposes:

- Improve plant productivity and health
- Reduce plant pest pressure

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to land capable of producing crops. This practice applies where sun or wind intensity, frost, or insect pests may damage crops, or where an extension of the growing season is needed due to climatic conditions.

Use the High Tunnel System CPS (Code 325) when a tunnel height greater than 4 feet is needed.

CRITERIA

General Criteria Applicable to All Purposes

Plan supportive conservation practices to address all resource concerns associated with the installation and use of the low tunnel system such as erosion, irrigation, and runoff.

Low tunnel systems may be applied over crops grown inside of a high tunnel system.

Tunnels may be used prior to planting or over already established crops, raised beds, and containers.

Locate structures to avoid buried public utilities.

Locate the tunnels near a viable water source when irrigation is needed.

Low Tunnel Systems may be floating row covers or hoop-supported covers with one or more planting rows or cover over individual plants.

Supported systems must have frames or hoops constructed of metal, 9 to 10-gauge wire, electrical conduit, or durable plastic such as polyvinylchloride (PVC) tubing; and be less than 4 feet in height at the peak.

Select the low tunnel covering material of a significant thickness to withstand the temperature change for the period required and to sustain the 1-year-minimum lifespan. For polyethylene covers, use a minimum 4 mil greenhouse grade material.

For organic producers, it will be the responsibility of the producer to make sure that all permissible activities, design, material used, and material specifications are consistent with the USDA Agricultural Marketing Service National Organic Program, National Standards on Organic Agricultural Production and Handling.

Construct low tunnel structures on level grade where possible.

Remove snow accumulation from the cover soon after the snow event to prevent damage to plants.

Select the tunnel cover and anchoring for the cover to withstand expected wind loads

Outside the low tunnel, control soil erosion when appropriate with vegetation or mulch

Where the intensity or duration of sunlight can shorten the growing season, the appropriate thickness of shade cloth may be used in place of, or in addition to other covers.

Low tunnels can collect and shed water. Remove or drain water that has ponded on the cover. When covers are in place for long periods of time, they can create drainage and ponding issues where none previously existed. Direct runoff away from the low tunnel to avoid ponding.

Complete groundwork and tillage, if needed, prior to installation of a low tunnel.

Additional Criteria to Extend the Growing Season

Early season extension by selecting the covering material of a significant thickness to facilitate warming of the soil temperature.

For polyethylene covers, use a minimum 4-mil greenhouse grade material.

When using polyethylene ensure plants do not come in direct contact with the cover.

During colder temperatures, a second layer of row cover or a heavier weight row cover or cover blanket can be used to provide greater protection. Additional hoops or frames may be added to support the double layer.

For spun-bound covers, use the fabric thickness that achieves the objectives:

Weight	Density	Light Transmittance	Degrees Protection (below freezing)	Best for:
Heavy	1.5-2.2 oz/yd	30-50%	8°F	Overwintering
Medium	0.5-1.0 oz/yd	70-85%	4-6°F	Spring/fall crops, overwintering
Light	0.45 oz/yd	90-95%	2° F	Light frost protection.

Remove cover or roll up the cover sides at the appropriate time to facilitate pollination and improve air movement.

Insect netting with a fine mesh may be used as a cover to reduce plant pest pressure or damage to plants.

Properly clean and store the cover material when not in use.

Additional Criteria to Protect from Sun

Apply shade cloth appropriate to treat the objectives and site conditions. 10% - 60% shade cloth exists; selection will depend on crops grown, climate, and other site-specific conditions.

When using as protection from direct sunlight, leave airspace between the fabric and your plants to improve air circulation and keep the plants cooler. Use hoops or plant stakes to elevate the row cover above plant tops.

Additional Criteria to Reduce Plant Pressure

Utilize fine mesh pest netting to protect plants from insect damage during the critical period for the target pest.

For pest pressure not addressed by pest netting, use Conservation Practice Standard Pest Management Conservation System (595) to identify target pests (plants, insects and pathogens) and implement control measures.

When the crop height is greater than the tunnel height, use Conservation Practice Standard Pest Management Conservation System (595) to identify target pests (plants, insects and pathogens) and implement control measures.

CONSIDERATIONS

Leave rows uncovered during periods of rest to prevent accumulation of salts and other minerals in the soil.

For polypropylene or polyethylene covers, weigh down the edges of the covering with soil, wood, sandbags, bricks, or other materials that will not damage the covering. The material at the ends of the rows can be tied to rods driven into the ground. Anchor more sturdy structures (PVC) with rods.

In high wind areas consider keeping row cover length short (50')

Row cover may trap moisture; sides may need to be lifted to facilitate ventilation to reduce plant damage.

Low tunnels used to extend the season and protect overwintering crops from frost damage require regular maintenance, especially during periods of fluctuating temperatures. Growers may need to ventilate the tunnel during the daytime to avoid overheating the crop. Options for ventilating include utilizing pre-cut slits in the covering material, a "seam" running down the center top of the tunnel that can be opened on hot days or raising one side of the tunnel covering. The cover is returned to its original position to provide nighttime frost protection.

Use during winter can assist by increasing soil temperature for spring planting. Perform soil tests regularly to monitor nutrients and to monitor salt build-up. The soils may require periodic "flushing" to remove salt build-up. This is accomplished by removing the cover to allow natural precipitation to infiltrate, or by artificially flooding the ground under cover.

Consider managing the low tunnel system to maintain or improve soil health by following a soil management system that creates a favorable habitat for soil microbes by:

- minimizing soil disturbance
- maintaining plant diversity throughout the rotation to increase diversity below ground
- keeping a living root growing year-round
- keeping the soil covered with residue and growing plants year-round

PLANS AND SPECIFICATIONS

Specifications for establishment and operation of this practice will be prepared for each field or treatment unit. Record the specifications using the implementation requirements document. The specifications will identify at a minimum the following:

- Identify purpose.
- Document the planned growing season and crops to be covered.
- Identify the type and quality of cover required.
- Layout and location(s) of the low tunnel system.
- Any required site preparations.
- Planned type and size of the system (e.g., length and width of covering, number of individual coverings, etc.)
- Actions and management needed to operate the cover to achieve the desired objective.
- Identify required supporting practices.

OPERATION AND MAINTENANCE

Prepare an operation and maintenance (O&M) plan for the operator responsible for the practice. As a minimum include:

- Properly clean and store the cover material when not in use.
- Plan for proper disposal of the system cover at the end of its useful life.
- Check low tunnels and repair as needed after wind, rain and snow events.
- Periodically inspect the low tunnel and repair, reinstall, or replace, as needed to accomplish the intended purpose.
- Manage the structure in a manner that limits wind and/or snow damage.
- If needed, vegetate all disturbed earth surfaces outside of the high tunnel and maintain the vegetation throughout the structure's life.
- Removal of cover materials shall be consistent with the intended purpose and site conditions.
- Operation of equipment near and on the site shall not compromise the intended purpose of the low tunnel structure or its cover.

REFERENCES

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