Extending the Season!

Background: Season Extension

Tents, tunnels, and a variety of other season extension tools function similarly to greenhouses. These tools extend the spring and fall growing season, can help reduce pest issues, and increase yields.

Tents

Tents are generally small paper covers that shelter individual plants, but they can also be created with plastic jugs or containers. Tents are placed over the individual plant and secured by mounding soil at the base of the cover. Tents can be purchased or made at home and should be large enough so that leaves do not touch them to avoid suffering heat or cold damage. Covers must be ventilated. Approaches to increase ventilation include cutting slits in the sides or removing lids from plastic jug tents.



"Hot Kap" Gardening Tent,
Photo Courtesy of Gurney's Seed and Nursery CO

Tunnels



Tunnel, Photo Courtesy of The Company Shed

Unlike tents, tunnels cover a row of plants. Tunnels consist of either a fabric or plastic row cover supported by a series of hoops. It is not always ideal to use clear plastic because it tends to overheat on sunny days and it is no warmer at night than fabric.

During the day, the heat from the sun usually warms the tunnel enough to keep the temperature above freezing at night, but such warmth-protection is not always the case. Winter crops such as spinach, kale, chard, certain types of lettuce, Asian greens such as mizuna and tatsoi, and radishes are adapted to colder temperatures and these layers allow them to persist within their range. Tunnels are very effective in helping warm the soil early in the season and can speed up the first harvest of all of the tender, warm season crops like melons, peppers, cucumbers, and squash.

Tunnels Step-by-Step

Materials Needed:

(Note: Measurements given are for a 6'x 4' foot tunnel. Adjust to meet your desired tunnel size and height.)

- Transplants or seeds

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- 5 6’ long pieces of either heavy gauge wire or 1/2” PVC piping
- 5’ wide x 9’ long clear plastic or fabric covering.
- Bricks, rocks or sand bags (enough to secure the tarp-covering)

FedCo and Johnny’s Seed Company (in addition to local hardware stores) sell a variety of row covers and plastics.



Row Covering Going over Wire Hoops, Photo Courtesy of *Fine Gardening* Magazine

How-To

1. Tents and tunnels can be placed over existing beds. If preparing a new bed, select a sunny spot and prepare as usual for planting.

2. Using 6-foot lengths from wire or PVC, make hoops and place the hoops over the crops at four-foot intervals along the length of your bed.

3. Unroll four-foot wide covering over hoops. Pull securely and weigh down edges with bricks, rocks or sand bags. Be sure to weight down and seal both ends of the tunnel too.

4. Removal: Transplants should never come into contact with the cover. Make sure the cover is large enough to allow approximately a month’s growth before leaves begin pressing against the cover. Tunnels are used on average about a month or two at the beginning of the season and the end, but will ultimately depend on the weather. If you make your hoop tall, you can always ventilate by lifting the sides up as needed. Remove hoops at the end of the growing season to prevent damage.



Tunnel Ventilation, Photo Courtesy of “Top Cool Tips”

Additional Tips:

1. Forming the soil into a bed improves drainage and allows it to warm sooner.

2. Fruit crops such as cucumber and tomatoes need pollination for fruit to set. Remove covers when plants blossom so that pollinators can get to flowers.

4. Do not rush the season by more than a few weeks. Tender crops will not do well if they are put out before the beginning of May, even if they are under tunnels. At best, tunnels offer 1 to 3 degrees F. of frost protection.

5. Row covers can be used to manage insects such as flea beetles.

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Other Season Extension Tools: Cloches and Cold Frames

Cloches



Soda Bottle Cloches, Photo Courtesy of Gardener

A cloche refers to a bell-shaped covering made of glass or plastic that is placed over individual plants to provide similar protection as row covers. These can be purchased or made by using 1-liter plastic bottles or gallon jugs. Cut out the bottom of the jug, press in the soil around the plant, and remove the cap.

Cold Frames

Cold frames are box-like structures with transparent lids that rest directly on the soil and modify temperatures within the frame, creating a climate that is 10 to 20 degrees Fahrenheit warmer than outside the frame. Cold frames protect tender plants in the early spring, late fall, and winter and extend the growing season.

"Cold season vegetables" such as beets, broccoli, cabbage, carrots, cauliflower, lettuce, parsley, peas, radishes, and spinach grow well in cold frames.



Cold Frames , Photo Courtesy of Green City Growers

Ventilation of cold frames is essential on sunny days to avoid overheating the plants. For tender seedlings, a light shade cover over the clear window is advised.

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Related Fact Sheets

Cornell Cooperative Extension. "The Use of Row Covers in the Home Garden." *Eco-Gardening Fact Sheet.* Spring 1993. http://counties.cce.cornell.edu/westchester/PDF/rowcovers.pdf

Disclaimers

This fact sheet recommends the usage of plastic for both protective coverings for tunnels and for tent materials. Plastic is not environmentally sustainable. Consult a local garden center or store for recommendations regarding alternative acceptable materials.

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