



How to Install a Floating Row Cover

WASHINGTON STATE UNIVERSITY EXTENSION FACT SHEET • FS089E

What is a floating row cover

Floating row covers are made of spun-bonded polypropylene or polyester. They are permeable to light, water, and air and are used to cover plants to create a physical barrier against pest insects. In addition, row covers can be used to extend the growing season by conserving heat.

Row cover weights and light transmission

Floating row covers are made in several different weights that vary in the amount of light transmission and heat retention they allow. Light weight row covers (0.45 oz/sq yd) allow 90% light transmission and are commonly advertised as insect barriers, but they generally do not provide any frost protection. Medium weight row covers (0.50–0.55 oz/sq yd) are the most common type of cover. They allow 85% light transmission and frost protection down to 28°F. Heavy weight row covers (0.90–2.0 oz/sq yd) allow 30%–50% light transmission and frost protection down to 24°F–28 °F. Light weight row covers tend to rip easily and thus have a short life span (up to a few months). Deer and other animals can damage row covers, so it may be useful to install fences to keep animals away from covered plants. Row covers can be reused for many years if they are carefully handled (Chasen 2010). Clean row covers may last longer since soil particles can abrade and tear these covers (Pleasant 2008). Dirty row covers can be hosed down with water, but it is important to let them dry completely before storing (Pleasant 2008).

Row cover size

Row covers are available in widths ranging from 5 to 50 feet and lengths up to 1,000 feet.



Figure 1. Row covers are used to protect crops from insect pests by being placed directly over the crop and secured with soil. (Photo provided by C.A. Miles)

Protecting against crop pests

To protect a crop from pest insects, lay the row cover over the plants before pest insects become evident in the area. It is important to protect seedlings in early spring when most adult pest insects become active and again in late July and early August. Check seedlings before transplanting to be sure there are no insects in the soil or on the transplants. Also, rotate crops to avoid laying row covers over plants harboring pest insect eggs that may have been laid the preceding year. Periodically check under the row cover for pest problems. If pests are found, treat the infested plants with an approved insecticide, or remove and discard the infested plant material.

Table 1. Summary of row cover weights, percentage of light transmission, and ability to protect against frost.

Weight	Light Transmission	Frost Protection	Frost Protection Range
Light	90%	No	N/A
Medium	85%	Yes	Down to 28°F
Heavy	30%–50%	Yes	Down to 24–28°F

This Fact Sheet is part of the WSU Extension Home Garden Series



Figure 2. Row covers can be placed over hoops and secured with clips and rocks. (Photo provided by C.A. Miles)

Effect of row cover on crop growth

For information on effects of row covers on crop growth, see WSU Community Horticulture Factsheet #19 (Kendal 1998).

Installing a row cover:

1. Select a row cover of at least medium weight (0.50–0.55 oz/sq yd) in order to provide a durable cover for several years.
2. Determine what length and width of row cover you will need. Remember, you will need enough row cover to:
 - Completely cover your crop on all sides
 - Leave some extra room for crop growth
 - Have enough material so that the row cover edges can be secured with soil, rocks, or other heavy objects

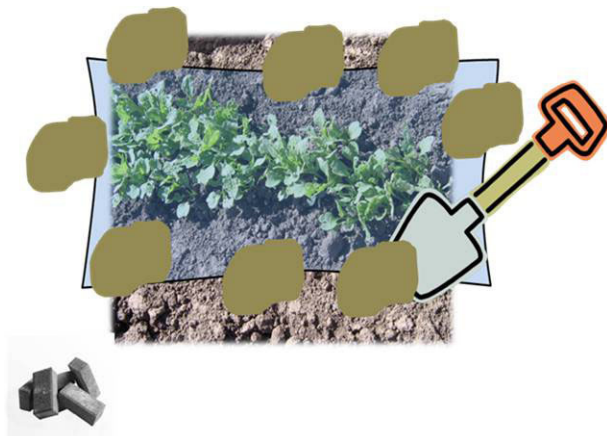
For example, a 6-foot-wide roll can cover a 3-foot-wide plant bed, while providing enough room for seedlings to grow upright.

3. Lay the row cover loosely over the plants, keeping in mind that the edges must be secured. Tractor equipment similar to that used to lay plastic mulch or a fumigation tarp can also be used to lay row



covers over large areas. Trim the row cover to fit the area being covered, or fold the row cover sides under.

4. Secure the row cover edges with soil, rocks, or other heavy objects. Deposit a shovel full of soil or a rock every 3 feet or so along each side of the row cover to exclude insect pests and to keep the wind from pulling up the cover (Dickerson 2010). Metal staples are available to help secure row covers along the edges; however, they have the potential to rip the row cover.



References and Further Reading

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All photos are by J.E. Parker, unless noted.

Use pesticides with care. Apply them only to plants, animals, or sites as listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

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