

ROW COVERS

Row covers have been used for many years in Europe, Asia and Israel and their use is gaining popularity in the U.S. You may have used the technology yourself when covering your crops with plastic for frost protection or weed control. These days, more advanced materials such as spun-bonded polypropylene-cotton and polyvinyl alcohol (PVA) are available, providing insect control and enhanced growing environments for vegetables and ornamental plants. Some lightweight materials, referred to as 'floating row covers', are laid directly on the crop and lift as the plant grows, while other materials require hoops to hold the fabric off the plants. The type of plants, your desired benefit and your budget should all be considered when selecting the row cover material.

A number of benefits are experienced from the use of row covers:

- **Extended Growing Season** - Crops may be planted 1-2 weeks earlier than usual and the season can be equally extended in the fall. The greenhouse effect warms the soil and speeds up germination, root growth and nutrient uptake.
- **Frost Protection** - The amount of frost protection provided varies by the material used. For better frost protection, heavier weight materials are used. Hoops are needed to support the heavier fabric since plant material touching the cover material could be damaged by frost.
- **Pest Protection** - A floating row cover placed over seedlings before they emerge prevents pests like aphids, loopers, beetles, root maggots, cabbage worms, cabbage maggots, leafhoppers and whiteflies from reaching tender seedlings. It is important that the edges of the row cover remain sealed by either burying or weighting the edges.
- **Moisture Retention** - Rather than evaporating away, water condenses on the underside of the row cover and returns to the soil. Protection from the wind also aids the plant in retaining moisture. It is important that the row cover be securely fastened so the material won't flap in the wind and damage the plants.

There are some other details that should be considered when using row covers.

- The environment under the cover is pretty 'cozy' for insects, so it is important that all transplants that are to be covered are free of insects at transplanting. For added protection, placing sticky traps under the cover will help capture any uninvited pests.

- The covers need to be removed about a week before flowers start blooming so that pollinators can perform their function. The row covers can be replaced after pollination but the area should first be checked carefully for insects.
- Row covers do not work well if it snows after they are applied. The weight of the snow pushes down the fabric, possibly breaking branches on plants.
- Out of sight, out of mind. It is easy to not check plantings under the row cover as often as one should. Set up a schedule for looking under the covers and checking for insect presence and weed growth.
- Watch for warnings about using row covers when air temperatures are above 80 degrees.

Despite the drawbacks, the benefits of using row covers have proven to be an important technique in obtaining higher quality and higher yield plants.

See C185 Pest Traps for additional pest control information.