Row Covers and Pollination

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Early cabbage protected from frost and insect pests
Why use row covers?

• Retain heat to enhance plant growth and extend the growing season
  – Protect delicate crops from light frosts

• Reduce wind damage

• Exclude Pests
  – Protect crops from insect-borne diseases
Extra layer of frost protection for early tomatoes in a high tunnel
Pest exclusion

- Cabbageworms
- Flea beetles
- Squash bugs
- Colorado potato beetles
- Root maggots
- Leaf miners
- Deer

- Rabbits
- Birds
- Cucumber beetles
- Army worms
- Grasshoppers
- Squash vine borers
Row cover weight

• Light
  – Excellent light and water transmission
  – Pest exclusion
  – Little frost protection
  – Tear easily (single season use)

• Medium
  – Good light transmission (75-85%)
  – Good frost protection
  – Durable (several seasons)

• Heavy
  – Poor light transmission (50%)
  – Excellent frost protection
  – Very durable (4+ years)
Heavier row covers protect cool-season crops well into winter.
Row covers can be anchored with bricks, boards, rebar, soil...
Pollination

• Many vegetables do not require pollination because the fruit (seed-bearing body) is not harvested. Row can be left on until harvest.
  – Leafy vegetables (e.g. lettuce, cabbage, kale)
  – Root vegetables (e.g. carrots, potatoes)
  – Stem vegetables (e.g. celery, rhubarb, chard)

• Some cucumber varieties produce seedless fruit without pollination. (Pollination of these degrades quality.) They can be grown under row covers, where they are safe from wilts vectored by cucumber beetle.

• Honeybees will forage under row covers that are open at the ends. Some other pollinators, like muscid flies, will not.

• Research is being conducted at the University of Kentucky to test small bumblebee hives under row covers for pollination.

• Row covers are usually removed at flowering for insect and wind-pollinated crops, such as melons and squash. They can be replaced after fruit set.