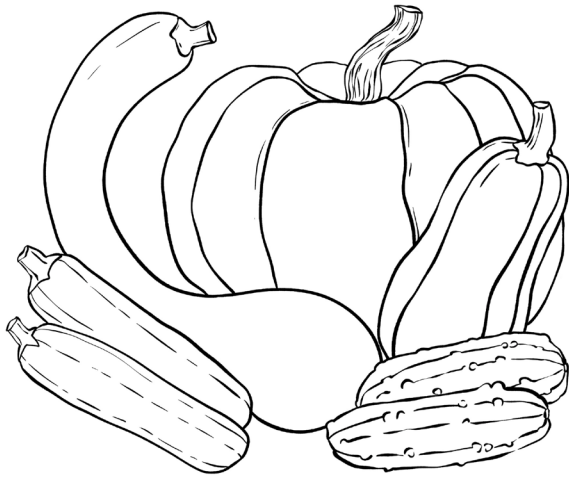


LOCAL GROWING & SEED SAVING ADVICE

Cucurbits



This guide provides growing and seed saving instructions specifically for gardeners of the Fox Valley in Wisconsin.

Seed from “open pollinated” or “heirloom” varieties can be saved and replanted to produce offspring like the parents, as long as they have not crossed with plants of a different variety. Seed from hybrid varieties is not usually worth saving, since the offspring will differ noticeably from the parents. Hybrid seed packets are usually labeled “hybrid” or “F1.” Some species require isolation and/or hand pollination to prevent crossing with another variety.

Overview of saving cucurbit seeds

Members of the Cucurbitaceae family include cucumbers, melons, winter and summer squashes, pumpkins, and zucchini. They produce two types of flowers, one that makes pollen and another with the potential to make a fruit. Insects can carry pollen between plants growing within half a mile of each other, including between different varieties. Insect pollination rewards gardeners with abundant produce, but it complicates seed saving.

- ▶ Because of the high likelihood of cross pollination, saving seed from cucurbits requires some special measures.

If urban/suburban gardeners want to save cucurbit seeds that will grow true-to-type fruits, they must isolate and hand pollinate the flowers that will develop into seed

fruits. This process controls which plants cross. It is not difficult and doesn't require special equipment, but it is a little fussy and the timing has to be right.

Planting cucurbit seeds

- ▶ Cucurbits do best when sown directly into garden soil in early June, once it has warmed and there is no danger of frost.

At the time of planting, fencing out rabbits will be necessary for cucumbers and melons. Rabbits seem less interested in squash plants. Chicken wire/poultry netting that is at least three feet tall with one-inch holes or smaller is generally adequate. Many products marketed as “rabbit” fencing have holes large enough for bunnies to get through.

Most cucurbit plants are vining. They can be left to sprawl on the ground without support or trained up onto a trellis or fence. It is easiest to install trellis structures before sowing seeds.

Plant seeds about as deep as they are long, which will range from half an inch for cucumbers and small melons to an inch for pumpkins and large melons. Cucumbers and small melons should be spaced about eight inches apart in rows or slightly closer if clustered in hills spaced several feet apart. Plant large-fruited, vining squash varieties at least two feet apart with six feet between rows or hills.

Sow two seeds for every plant you eventually want. Several weeks after germination, thin to the desired plant density by removing the least vigorous seedlings.

Watch for pests

SLUGS

If there are a lot of slugs early in the season, withhold mulch from the ground surrounding newly germinated seedlings. Once plants are established, they can be mulched. Mulch suppresses weeds, moderates soil temperature, and maintains soil moisture.

CUCUMBER BEETLES

Two species of cucumber beetle (spotted and striped) will feed on cucurbits in the Fox Valley, especially cucumbers and melons. These beetles can transmit bacteria and viruses that cause additional damage to plants. As soon as seedlings appear, start monitoring for adult beetles. They are about one-third of an inch long with black spots or stripes on a bright yellow background. Transfer the beetles to a bucket of soapy water or crush them. Floating row cover (a fine mesh fabric) can be used to protect seedlings and young plants, but the plants often outgrow

the fabric by midsummer. Early season protection is most important, since well-established plants can usually withstand some beetle damage.

SQUASH BUG AND VINE BORER

The most damaging pests on squash/pumpkin/zucchini are squash bug and vine borer. The easiest way to prevent damage is to remove eggs before they hatch. For both of these insects, the eggs appear brownish red/rust in color and are about the size of poppy seeds. Adult squash bugs lay eggs in small, tight clusters, often on the lower surface of leaves. Adult vine borers deposit eggs individually, usually on stems or leaf bases.

- ▶ Beginning in early July, start looking for adult insects and their eggs.

Eggs are difficult to crush; use masking tape to peel them off and discard them. Crush adult bugs or borers if you can catch them.

SQUIRRELS

Squirrels will attack winter squashes/pumpkins as they are maturing, which often ruins the fruit. You can cage the fruits with poultry netting. Since squirrels are less likely to bother fruits that develop two or more feet off the ground, giving your plants a trellis to climb may yield a better crop.

Observe and plan for seed saving

Identify the varieties you want to save and study the flowers of those plants, paying attention to what they look like in the evening. You need to notice when the petals are almost full-sized, showing some orange-yellow color, but are still closed. These petals will open into flowers the next day for one day only—or possibly just for the morning.

You also need to identify the two types of flowers: pollen-producing flowers and those with ovaries (resembling tiny fruits between petals and stem).

- ▶ A good time to set up for hand pollination would be midsummer, when you see at least three pollen-producing flowers from different plants (of the same variety) and at least one flower with an ovary (also of the same variety). These all need to be in the advanced bud stage ready to open the next day.

The night before hand pollination

Late in the evening, identify the flowers that will open the next morning.

- ▶ The goal will be to prevent them from opening to pollinators so that you have complete control over pollination.

Once identified in the evening, gently wrap and cover the flower(s) with the ovary with cloth and tie or tape shut. The petals must be kept intact so the flower can be wrapped back up after the morning hand pollination.

Wrap and tape or tie at least three pollen-producing flowers for each fruit-producing one. Try to find flowers from several plants of the same variety so you get pollen from multiple individuals.

Hand pollination in the morning

- 1 Find the pollen-producing flowers that you wrapped the night before and cut them off at the stem. Tear off the petals to expose the pollen-holding anthers (protruding centers of flower). The pollen will look like bright orange dust.
- 2 Identify the fruit-producing flowers and, leaving them attached to the stem, gently open the petals. Be careful because you'll need to seal the petals back up.
- 3 Brush pollen from several pollen-producers on the stigma of the fruit-producing flower still attached to the plant. Target the center part of the flower that sticks out.

