

ASSISTING POLLINATION IN THE GARDEN

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Many people are starting vegetable gardens these days to help supply fresh produce and save some money. Vegetables such as squash are favorites in many backyard gardens, but may suffer from poor pollination due to the lack of an established population of the proper insects. Let's look at two pollination issues and how you as a gardener can improve this essential activity.

Preservation of pollinating insects is always the best course of action in a sustainable garden. However, a lack of bees visiting your backyard is a fairly common problem. When natural pollinating agents are sporadic or lacking, you can step in and be a fair substitute. One crop in our area that often needs help is squash. Squash produce both separate male and female flowers on the same plant. They look similar, but are very different when you take a closer look. The male flowers have a plain stem and the male parts or

anthers which release the orange pollen. Female flowers in contrast, have a small, miniature fruit located just under the flower. The female flower has the stigma on which the pollen would ordinarily be deposited. Sometimes squash plants will produce only male flowers or female flowers. This may sound troubling, but the condition will generally change as the plant matures, temperatures change, or day length changes. Often the first flowers to open on a squash are all male.

Morning is the time of day that both male and female squash flowers are open. Once the flowers have been properly identified, simply collect and then touch the male flower anther to the female flower's stigma. You can also use a paint brush to make the pollen transfer. In addition to almost guaranteed pollination, you can also en-

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Hand pollinating squash

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sure crop varieties on open pollinated, non-hybrid types where seed-saving is important. Keep in mind that non-hand pollinated squash is open to cross-pollination from other squash, pumpkins, and gourds that may be in the area. As a consequence, resulting seed will most likely produce fruit that does not resemble the parents.

Another common garden vegetable that often experiences pollination problems is corn. Corn is mostly pollinated by wind which can be variable. For best chance of pollination by the wind, corn is usually planted in blocks of at least four rows so that the pollen can be distributed more evenly. The male part in this grass family plant is the tassel at the top of the corn stalk. The pol-

len from the tassel is very small which makes it easier for the wind to carry. The female portion of the corn plant is the ear. The silks or stigmas in this case, emerge from the top of the ear. Each silk strand is connected to a corn kernel and must receive a grain of pollen to ensure the development of that kernel. To increase the possibility of good pollination, you can either cut a ripe tassel and shake it over the silks dusting the pollen in this manner, or strip the tassel and sprinkle the pollen right on the silks. A good thorough dusting will help the ears develop to their fullest potential.

So, if your squash or corn crops have been less than spectacular, and barring any other cultural or biological problems, these hand-pollination methods may be helpful to you.

Resources:

- Thralls, E. & Treadwell, D. (2008) *Home Vegetable Garden Techniques: Hand Pollination of Squash and Corn in Small Gardens*. UF/IFAS Extension Service.

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