



## WHY BLOSSOMS OF SOME VEGETABLES FAIL TO SET FRUIT

There are plenty of flowers on your plants, but you're not getting any fruit.... no tomatoes, no squash, no full ears of corn, no pumpkins, no melons. What's going on? The flowers have not been pollinated properly. They have either not been pollinated at all, have been pollinated under the wrong conditions, or pollination has been insufficient. Read on to find out why and what you can do about it.

**CORN:** Corn must be pollinated to produce corn kernels. Wind is the main method of pollination. It blows pollen from the tassels (male flowers) to the silks (female flower stigmas). If plants are not producing well-filled ears of corn with many closely-packed kernels, they probably were not adequately pollinated.

Always plant corn in at least three to four row blocks so that the wind can pollinate them. When tassels and silks have both formed, it helps to walk through corn patch and gently shake tassels so that pollen drops onto silk.

**TOMATOES:** Tomato flowers have both male and female organs and are self-fertilizing. Pollen is shed in greatest abundance between 10 am and 4 pm on dry sunny days. Normally the wind will pollinate sufficiently. Optimum fruit set occurs within a narrow range of night temperatures, 60-70°F. When night temperatures drop below 55° or rise above 75°, interference with the growth of pollen tubes prevents normal fertilization. The pollen may even become sterile, causing blossoms to drop. High daytime temperatures, rain, or prolonged periods of high humidity also hamper good fruit set. If the humidity is too low, the pollen will be too dry and will not adhere to the stigma. But if the humidity is too high, the pollen will not shed from the stamens.

You can't control the weather but there are things you can do that will help. To aid pollination, gently shake or vibrate the entire tomato plant. Do this at midday when temperatures are warm and humidity is somewhat low. If you have only a few plants, you can hand pollinate with a Q-tip or small, soft paintbrush, moving from flower to flower.

**PEPPERS** and **EGGPLANT** experience pollination problems similar to tomatoes.

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**CUCUMBERS, MELON, PUMPKINS AND SQUASH:** These are all vine crops and they usually have both male and female blossoms on the same plant. The exceptions are the all-female blossom cucumber hybrid varieties. The first blossoms that open on the plant are usually male. Female blossoms appear later and further out on the vine. Male blossoms have a thin straight stem. Female blossoms are larger and have a small, undeveloped fruit at their base. The female blossoms **must** be pollinated by the male blossoms. This is usually accomplished by bees.

If you have plenty of blossoms, but little or no fruit is developing, you probably have poor pollination. You can be patient and hope for the best, or you can hand pollinate. To hand pollinate vine crops, locate the male blossoms. Break off several from the plant and peel back the petals. Note the pollen on the inside of the blossom. Gently push the pollen into the female blossoms with a paintbrush, a feather, or the male blossom itself. This should insure a good crop.

### **THE IMPORTANCE OF BEES**

As you can imagine, it's much easier to let bees do the pollinating for you. They pollinate most plants and crops. In fact, without bees there would be few plants to eat and no plants to feed to the animals that we eat. Their importance in our lives cannot be over-emphasized. We need to protect bees and encourage their presence in our yards and gardens. Use insecticides only as a last resort, and when you do use them follow label instructions *carefully*. Apply insecticides in the evening whenever possible when bees are less likely to be out. Plant flowers throughout your yard and especially among your vegetables to attract bees.