



Common Cucurbit Complaints

By Dawn Pettinelli, UCONN Home & Garden Education Center

Many home gardeners enjoy growing members of the cucurbit family including cucumbers, squash, melons, gourds, and pumpkins. Recently we've been getting calls about problems with cucumbers and summer squash most likely due to all the grey days, excessive rainfall and temperature fluctuations we have been experiencing lately.

Gardeners are asking why their cucumbers, squash and pumpkins produce many flowers and no fruits. This could be because many varieties of cukes are monoecious meaning both male and female flowers are produced on the same plant. Male flowers bloom first to ensure an adequate supply of pollen to fertilize the female blossoms. Female flowers can be identified by the miniature fruit, which is actually an ovary at the base of the blossom.

Other cucumber varieties are gynoecious, producing mostly female flowers. A few monoecious types are included to serve as a pollen source. These seeds are often color coded and it is important to plant at least one in each hill. Parthenocarpic cukes produce fruits without pollination so each flower should be female.

If the fruit is present and not developing, this can be due to cool, cloudy weather which decreases bee activity and hence pollination. Heavy rains can wash pollen off the anthers and damage flower parts. Another possibility is the use of pesticides during bloom which is very toxic to bees. Misshapen cucumbers are also caused by incomplete pollination, probably attributed to one of the above reasons or sometimes due to low nitrogen fertility.

Vine crops, in general, require moderately high fertility levels. Typically, the lower leaves of your plants will start to turn yellow if deficient in nitrogen. They may also turn yellow if receiving too much water. Well-drained soil has pore spaces that ideally should contain both air and water. Plant nutrients are dissolved in that soil water.

During periods of heavy rains, the air gets displaced by excess water. Plant roots require oxygen to take up water so if the soil is saturated plants can't take up water or nutrients and will often yellow. If this is happening to your plants, first wait to see if they green up

after the soil dries out. If plants are still yellow or light colored and if you have not sidedressed, scratch in 1 to 2 pounds of 5-10-10 per 100 square feet of bed or the natural/organic equivalent.



Healthy cucumber plants. Photo by dmp,UConn

Periods of prolonged leaf wetness because of all this rain, foster the development of cucurbit diseases such as anthracnose and angular leaf spot. Despite our best attempts at selecting disease resistant cucurbit varieties, crop rotation and good spacing, the constant rainy weather overrides our efforts and sometimes fungicides are needed. Even these may not be that effective if they get washed off by the rain. One disease to be on the lookout for according to the UConn Vegetable Pest Alert is cucurbit downy mildew, which usually rides up from the south on winds and rains. For organic growers, preventative sprays of copper fungicides may be effective.

A problem with no solution once it occurs is bacterial wilt. At first you will notice one or two leaves wilting and turning a dull green. The wilting spreads along the whole stem and eventually the entire plant shrivels and dies. This a bacterial disease spread by the striped or spotted cucumber beetle. Once affected, the diseased plants should be removed. To confirm the presence of bacterial wilt, slice a stem crosswise near the base of the plant and place a knife against it. Slowly pull the knife about one-quarter of an inch away. If you notice a stringy, white sap, bacterial wilt has caused the demise of your plant.

This disease is controlled by eliminating the cucumber beetles, which is not always an easy task. Seeds or young transplants can be covered with a row cover until they bloom. Plants can be sprayed with Surround which is a nontoxic clay coating, or an insecticide such as rotenone can be applied. You can also try resistant varieties such as County Fair. You may need several control strategies to keep this pest under control.

One point to remember is that cukes and summer squash are quick maturing crops so even if your first plantings are doing poorly because of the weather, one can replant seeds or transplants for a later crop once the soil dries a bit.

If you have questions about growing cucumbers, or on any other horticultural topic, call the UCONN Home and Garden Education Center, toll-free, at 877.486.6271, visit their website at www.ladybug.uconn.edu or contact your local Cooperative Extension Center.