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News Release

Bitter cucumbers and squash

Question: Why would cucumbers and squash develop a bitter taste?

Answer: This question quickly moved to the top of the stack when my mom recently prepared a “mess” (enough to feed an average family) of squash and they were extremely bitter. When my mom asks me a question she gets an immediate response.

The bitter taste of squash and cucumbers comes from a natural organic compound called cucurbitacin. Just remember that many things in nature can be harmful and should be avoided for our safety. That is the case with this compound which can cause severe stomach pains. If the fruit are extremely bitter you might as well pull the plant up and start again because they will not likely become un-bitter.

If the fruit are only mildly bitter there may be hope. In cucumbers this problem is very common and can be caused by several factors. The most likely reason is plant stress. The problem tends to be worse when extremes exist. Extreme heat, cold, drought or excess water, lack of plant nutrients or even extreme pest and disease pressure can bring on a problem. If you can identify and correct the stress, the plant may stop producing excess amounts of the bitter compounds.

However, the problem may be linked to genetics as well which is especially true with summer squash. Many naturally occurring cucumber/squash relatives are weeds and can readily cross pollinate allowing the bitter genetics to be passed along to the next generation. If you save seed this may be the reason for the problem and this could even happen occasionally with purchased seed. If the problem is genetic and does not seem to be stress related these plants will not improve.

If you find you have some mildly bitter cucumbers it helps to know the bitter compound is usually more concentrated in the stem end rather than in the blossom end of the fruit. Also, the skin tends to accumulate these compounds more than the flesh. Therefore, if the fruit is only mildly bitter, peel the fruit by starting at the blossom end of the fruit and also cut off a couple inches near the stem end. Wash the knife frequently to avoid spreading the bitter compounds to other fruit.

You might be curious about potential uses of these bitter compounds. The bitterness is both a blessing and a curse for the plants themselves. Many insects find the plants and fruit as

unappetizing as we do but the worst pest of cucumbers, the aptly named cucumber beetle, finds these plants irresistible. Scientists are trying to take advantage of both this insect attracting and repelling quality of these compounds. One possible use would be to produce an attractant bait to lure the dreaded cucumber beetle away from your garden plants. I hope this bait works better than the Japanese beetle traps which seem to draw in more pests than they can trap.

For more information on this topic or other horticulture related questions, please contact Regional Extension Agent Tony Glover at the St. Clair County Extension office at (205) 338-9416 or email gloveta@aces.edu