

Rain check in tomatoes

Jerry Brust, UME, August 2017

This has been a very wet period for most of us in the mid-Atlantic. Some fields have received repeated downpours of rain and have standing water while others have not gotten as much. But in almost all of the tomato fields I have found rain check (fig 1). Rain check is the many, tiny concentric cracks that form on the shoulder of the fruit and these small cracks can expand over time (fig 1). The cracks feel rough to the touch, and affected areas can take on a leathery appearance and do not develop proper color as fruit ripens. Damage will be most visible on exposed, mature green, and possibly breaker fruit after rains; but at times even small, immature green fruit can be affected. This problem is mostly observed on large, fresh-market tomatoes, rather than on smaller cultivars. The exact cause is not known, but appears to be related to exposure of the fruit to rain. The problem is more severe when heavy rains occur after a long dry period with high humidity. The rain might alter the fruit temperature or water uptake, which may impede the development of the shoulder epidermis. Cultivars can vary in their susceptibility to rain check. Those tomato cultivars that have good leaf coverage that protect the fruit and good epidermal characteristics seem to be more tolerant of rain check. Glossy fruit tends to have less of a problem with rain check than dull fruit. I have mentioned this before about using a 30% shade cloth to reduce quality problems with tomato fruit, and in my studies this year not a single fruit under any of the shade canopies had a fruit with rain check while the other uncovered tomatoes (same cultivars) had 10-20% rain check. If a grower has a cultivar that is prone to rain check they may want to pick-off any exposed green fruit as they harvest because unfortunately, the next few weeks look similar to the past few weeks as far as rainfall amounts go. Also with all the rain we have had the foliar diseases are going to reduce the amount of foliage coverage, exposing fruit to even more sun and rain.

Fig. 1 Rain check on tomatoes. Tomatoes on left have milder symptoms compared with the ones on the right.

