

# Tomato Pith Necrosis

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In the last week tomatoes from different counties in Maryland were found with the same unusual disease symptoms, called tomato pith necrosis. All the problem tomatoes were from early planted fields. Tomato pith necrosis is caused by the soilborne bacterium *Pseudomonas corrugata*. It has occurred infrequently in Maryland over the past few decades. The disease usually is found in early planted tomatoes when night temperatures are cool, but the humidity is high, and plants are growing too rapidly because of excessive nitrogen application. We have had a spring with some cool nights in May and high humidity with all the rain we had. In the field, diseased plants occur randomly with initial symptoms often being seen as the first fruit clusters reach the mature green stage. Symptoms include chlorosis (yellowing) of lower, middle and even younger leaves (fig. 1) followed by wilting of the infected shoots in the upper part of the plant canopy. This wilting is usually associated with internal necrosis at the base of the stem and black streaking may be apparent on the surface of the main stem, which often splits (fig. 2). When the stem is cut open along its length or cross-wise (fig. 3) the pith will be discolored and may have hollow areas. There is often prolific growth of adventitious roots in the stems with discolored pith, and the stems may appear swollen (fig. 4).

There is little that can be done for control of pith necrosis. The best practice is prevention by avoiding the use of excessive amounts of nitrogen in tomato, especially early in the season when nights are still cool. There is some evidence that the pathogen may be seedborne, but more research is needed on the epidemiology and management of this disease.



Fig. 1 Beginning of pith necrosis- leaves turn yellow



Fig. 2 Tomato stem with dark streak and lesions on its surface



Fig. 3 Darkened pith of tomato stem



Fig. 4 Prolific growth of adventitious roots on stem