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Ohio State University Extension Vegetable Crops
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Fusarium Fruit Rot in Pumpkins

Hard to believe in such a dry year, but Fusarium Fruit rot has popped up rapidly on many farms in central OH in just the past 2 to 3 weeks. In some cases, fruit loss is as high as 60%. Several growers reported the problem starting around the arrival of Katrina. While the remnants of the hurricane didnt blow in any diseases organisms, the rains that accompanied this storm and subsequent rains afterwards created ideal soil moisture conditions for rapid development of this disease. Another key factor was the very warm temperatures during this period which was just perfect for Fusarium fruit rot. Fruit rots caused by various Fusarium spp. are some of the most common pre- and postharvest diseases of cucurbit fruits. Fusarium rots have been reported on cucumber, melon, honeydew, watermelon, squash, and pumpkin. In past years, in Ohio, yield loss due to Fusarium fruit rot can be as high as 100%. Fusarium fruit rot can be a major disease on small farms where pumpkin rotations are non-existent or infrequent.

Fusarium fruit rot is not effectively controlled with fungicide applications because it is difficult to completely cover the fruit with spray material especially the portion of the fruit in contact with the soil. A minimum, 3 year pumpkin rotation is recommended but the disease has been observed even on virgin soil this year. The most effective method for controlling this disease is to prevent fruit from coming in direct contact with the soil. This can be accomplished by using cultural practices such as cover crops, living mulches and strip tillage. Refer to the research of Dr. Andy Wyenandt which can be found in the The Library section of the VegNet website. Look under Research Reports for more information on the use of cover crops: http://vegnet.osu.edu

Growers with this problem in their fields will need to pay close attention to harvested fruit being placed into bins or other bulk containers since fruit breakdown may not occur until 7 to 10 days after harvest, thus spoiling the whole container. At harvest, look for small moldy spots that have a white, to pinkish color on the skin where it was in contact with the ground. These spots quickly develop into the symptoms illustrated below.

Large area of mold on bottom. As the fruit is lifted from the ground, the mold and infected areas will stick to the soil surface.

Closeup view of advanced stage of mold development.

A pumpkin fruit with fusarium sticks to the ground. Notice all the fungal growth on the ground and fruit when it is pulled away.

Another Pest in the Pumpkin Patch

Deep scarring or eating on fruit thought to be mice damage.

Jim Jasinski finds corn ear worm doing the damage.

Notice the orange frass from the CEW on the ground

All pictures from Jim Jasinski, SW IPM agent.