Uncommon Disease Problems in Tree Fruit: A Brief Look Back at 2013.

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Two unusual disease observations were made on tree fruit in southern New Jersey counties this past season. The first, White Rot (*B.dothididea*) appeared on newly planted trees this past spring in several orchards. While white rot is a common fruit and scaffold disease it is not commonly seen attacking newly planted trees. The second, Black Pox (*H papulosum*) was widespread, mostly at low levels, in Golden Delicious at harvest.

Figure 1. White Rot Trunk Canker on Gingergold apple.

White rot is commonly seen on fruit of susceptible varieties in summer. We have observed severe limb infections on Rome which resemble fire blight in drought stressed years. We have also observed trunk cankers on ginger gold in high density systems (Figure 1).

In the spring of 2013 a new high density planting of mixed varieties on a M9/M111 interstem began to exhibit symptoms of root problems. New shoots were wilting on hot days and eventually showed signs of stress (Figure 2). Initially it was thought phytopthera root rot might be the cause. Upon examination the roots were found to be slimy, orange in color and many of the fine roots were dead. In addition the discoloration was moving from the roots up into the trunk (Figure 3). Phytophthera lost favor as a cause after Dr. Lalancette was not able to culture it from samples.

Trees continued to collapse throughout the spring and by summer were exhibiting classic sypmtoms of white rot canker : sunken margins; orange, papery, peeling bark;and black picnidia (Figures 4 and 5). It's impossible to say how these trees were infected and nothing could be done to prevent the infections from

Figure 2. Trees showing water stress.

Figure 3. Root symptoms of White Rot.

Figure 4. White Rot Trunk Canker.

Figure 5. White Rot bark lesion showing picnidia.

Figure 6. Black Pox on Golden Delicious.

progressing once symptoms appeared. Sanitation of infected twigs and rogueing of dead trees, along with applications of effective fungicides were the only option to prevent further spread of the disease.

Black Pox is considered a minor disease of apple caused by the organism *Helminthospoirum papulosum*. It occurs in the Mid-Atlantic but is more commonly observed in the south. It is a wet weather disease. Infections can occur as early as mid-May and have an incubation period of 3-6 months. Symptoms can appear on wood, leaves and fruit. The most obvious symptoms appear on fruit and consist of sunken, black lesions surrounded by a red halo (Figure 6). We observed this in many orchards especially where there were frequent rains in June (The weather station in South Harrison Twp., Gloucster County recorded 12.8" total rainfall for the month). Disease incidence in postharvest samples was mostly minimal, however up to 30% infected fruit were recorded in poorly sprayed orchards. Most of our typical summer fungicides are effective gainst this disease. Minor secondary pest outbreaks are often associated with changes production practices. In this case it was the result of too much rain, and not enough coverage.

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