Dramatic Improvements Have Been Made with Fungicides in Preventing Peach Losses to Rot

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It has been estimated that brown rot fungi infect 100% of U.S. acres of peaches with the potential to reduce yield by 75% [1],[2]. The first symptom of the disease on the fruit is the appearance of a tiny brown speck that rapidly develops into a large spot beneath which the flesh is deeply invaded [3]. The invasion of the fruit by the fungus is quite rapid; the entire fruit may become completely rotten and soft within a few days as a result of a rapidly spreading brown decay [4]. Appearing on the surface of the fruit are ash colored masses of millions of spores, which serve in turn to spread the disease further [5]. The invaded fruit that remains attached to the tree slowly becomes dried and shriveled, harboring 40,000 spores that can infect fruit the following year [6]. Spores are also released from fruit that falls to the ground.

Brown rot caused substantial fruit loss in field and during transport before the development of fungicides. In 1852, it was estimated that Georgia peach growers expected to lose 50% to 75% of the crop [7]. Southeastern peach growers began widespread spraying to control brown rot in 1912 with the development of finely powdered sulfur [3]. The average yield on the sprayed trees was two and one half times higher than on the unsprayed trees [8]. While unsprayed trees showed 95% brown rot incidence, sprayed orchards demonstrated 25% incidence [8]. Peach losses due to brown rot averaged 13% in Georgia in the 1920s [9].

More effective brown rot control became possible after introduction of synthetic chemical fungicides in the 1950s [10]. Experiments have shown reductions in the incidence of brown rot from 69% to 1% [11]. The use of synthetic fungicides has virtually eliminated losses due to brown rot [12].

References