

Abstract:

Disease incidence of non-abscised aborted and healthy sweet cherry fruits was investigated during two growing seasons. Fruits from two cultivars ('Van' and 'Lapins') were assessed weekly during 4 to 6 weeks in June and July until 3 to 4 weeks prior to harvest. The fruits were either surface-sterilized (in 0.5% NaOCl) or dipped in distilled water, both for 1 min, prior to incubation at 20 °C for 7 days in saturated air. Visible symptoms of fungal diseases were recorded at 1, 2, 3, 4, and 7 days after incubation.

Aborted fruits had much higher disease incidence after incubation than healthy fruits. In 1999, the mean disease incidence was 56.3 and 15.8% in aborted and healthy 'Van' fruits, respectively. The following year, the mean disease incidence in 'Van' was 63.0 and 1.4% in aborted and healthy fruits, respectively. Corresponding numbers for 'Lapins' in 2000 were 80.6 and 9.0%. Surface-sterilized fruits were less decayed than non-sterilized fruit, but differences were not significant. After incubation commenced, symptoms always appeared earlier in aborted compared to healthy fruits. The most frequently observed fungal pathogens were *Monilinia laxa*, *Colletotrichum gloeosporioides*, and *Botrytis cinerea*. A higher disease incidence and more rapid disease development in aborted fruits indicated that these were more vulnerable to fungal colonization than healthy fruits early in fruit development. Thus, non-abscised aborted fruits may act as important hosts of secondary inoculum for healthy fruits.