

Abstract

Dry-eye rot and gray mold of apple are important diseases caused by *Botrytis cinerea*. Fungicides available for their control are lacking, and this study was conducted to determine if cyprodinil (Vangard) could be used for this purpose. The mean EC(50) value of cyprodinil for 32 *Botrytis* spp. isolates (27 from apple) was 0.02 $\mu\text{g ml}^{-1}$, indicating that apple isolates are generally very sensitive. Some of the isolates (19%) were less sensitive and had EC(50) values greater than 0.03 $\mu\text{g ml}^{-1}$, and one isolate from 'Gala' apple was considerably less sensitive at 0.095 $\mu\text{g ml}^{-1}$. Bloom sprays of cyprodinil alone in 1998 and 1999 or in combination with myclobutanil or metiram in 1998 reduced *Botrytis* spp. infection on developing fruit. Postharvest application of cyprodinil in 1998 indicated that cyprodinil protected apples from gray mold for 3 months. Cyprodinil applied 2 to 3 weeks before harvest in 1999 reduced lesion diameters 68 and 62% on 'Jonagold' and 'Gala' apples, respectively, that had been wounded and inoculated with *B. cinerea* after storage at 1°C for 6 months. In similar trials on 'Gala' apples in 2000 and 2001, preharvest applications of cyprodinil consistently reduced gray mold incidence and lesion diameter on inoculated apples stored for 6 months. New preharvest use patterns for cyprodinil are discussed for control of postharvest diseases caused by *B. cinerea*.