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Detection of benomyl-resistant *Glomerella cingulata* from latently infected strawberry plants and infested nursery medium using a semiselective medium.

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ABSTRACT

A semiselective medium for isolating benomyl-resistant strains of strawberry anthracnose fungus *Glomerella cingulata* (Stoneman) Spaulding et Schrenk was developed, and the infection site and habitat of the fungus were investigated. Potato sucrose agar was used for basic medium and supplemented with 50 mg/l benomyl, 30 mg/l triflumizole, 100 mg/l oxgall and 50 mg/l streptomycin sulphate. The growth of benomyl-resistant strains was not inhibited with semiselective medium, but the growth of other fungi and bacteria was inhibited. *G. cingulata* was isolated from leaflets, petioles, crowns of latently infected plants, and dead plants at high frequency. The fungus was also isolated from the potting medium of diseased plants. Isolation frequency from leaflets, petioles and bases of petioles in the outer leaf position on latently infected plants was higher than from those on inner leaves. Nursery plants inoculated by drenching discolored, wilted and died without black leaf spots symptom. When drench-inoculated with the conidia suspensions (10^5 – 10^6 /ml), whole plants wilted and died. Wilt symptom was still observed when plants were inoculated with the suspensions ($<10^2$ /ml). The fungus was isolated from roots at high frequency. After conidia suspensions (10^5 /ml) of *G. cingulata* were poured on peat-vermiculite, sawdust and sand for nursery medium, the fungus was consistently isolated from those media over a one-month period. These results showed that *G. cingulata* had latently infected leaflets, petioles, bases of petioles and crowns of strawberry plants, and had survived in nursery media over a one-month period in the absence of plants.

Key words: Infection source, *Glomerella cingulata*, Anthracnose, semiselective medium, *Fragaria*×*ananassa*

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