

### Abstract:

The effect of latent infection of anthracnose fungus (*Colletotrichum gloeosporioides* Penz.) on postharvest physiology of lychee fruits and the environmental conditions on the growth of the pathogenic fungus were studied. The results showed that respiration rate, ethylene production and malon dialdehyde (MDA) content of the fruits latently infected by anthracnose fungus were evidently increased. The mycelial growth, sporulation and conidial germination of lychee anthracnose fungus were primarily studied. For the mycelial growth of the fungus the range of temperature was 8-38°C, the optimum being 28-32°C, and the range of pH was 3-10, the optimum being 5-6. For the sporulation, the range of temperature was 12-36°C, the optimum being 28-32°C, and the range of pH was 3-10, the optimum being 3-4. For the conidial germination, the range of temperature was 8-38°C, the optimum being 28-32°C, and the range of pH was 3-10, the optimum being 6-7. When relative humidity reached 100%, or when in water, the percentage of conidial germination was highest. The lethal temperature for the spores was 50°C remaining 10 min, while the lethal temperature for the mycelium was 60°C remaining 30 min.