

## **Abstract**

*Colletotrichum musae*, the causal agent of banana anthracnose, forms quiescent infections on the surface of the fruit that lead to necrosis at maturity. This work was conducted to determine a practical way to quantify the inoculum level that is economically practicable for routine use and applicable to immature fruit, so that it can be used as a method of early prediction and subsequent decision support. The method that has been developed is based on treating the fruit with 1,200  $\mu\text{l}$  of ethylene per liter for 24 h at 25°C. The fruit are then kept at 32°C for 5 days, maintaining the ethylene concentration, so that conditions are optimal for revealing the disease. The technique can be used on fruit whose age is 5 to 6 weeks after inflorescence emergence. A high CO<sub>2</sub> concentration has an inhibitory effect on the development of lesions. The importance of the ethylene treatment on fruit maturation and breaking of appressorium dormancy is discussed, together with potential applications.