Identification of Resistance to Anthracnose caused by Colletotrichum acutatum in Several Pepper Genotypes (Capsicum annuum L.) and Their Correlation with Capsaicin Content and Peroxidase


ABSTRACT

Anthracnose is one of the most destructive disease of pepper in Indonesia. Colletotrichum acutatum have been reported to be a predominant species in pepper fields of Asian countries including Indonesia. Forty green pepper fruits which divided into two replicates from each of 14 genotypes were inoculated with C. acutatum PYK 04, BGR 027, MJK 01 and PSG 07 isolate. Inoculation methods were performed according to the procedure by AVRDC and resistance score were performed according to the modified procedure by Yoon method. Symptoms were evaluated five days after inoculation. Disease incidence was evaluated using Yoon method with slight modifications. The experiments showed that C-15 genotype was more resistant to anthracnose than others; C-8 and C-49 genotypes were recorded as susceptible to anthracnose. Except the three genotypes, all other genotypes were recorded as highly susceptible to anthracnose. Capsaicin content and peroxidase activities were not correlated with resistance to anthracnose.

Key words: pepper, resistance, anthracnose, Colletotrichum acutatum