

ABSTRACT

Chili (*Capsicum annuum* L.) is a horticultural commodity with high economic value but vulnerable to various diseases caused by fungal pathogens, especially under monoculture cultivation systems. This study aimed to observe disease symptoms and identify fungal pathogens infecting chili plants in different soil types in Ulee Geudong Village, Sawang Sub-district, North Aceh Regency. The study was conducted on two types of chili cultivation land: organosol and litosol. The observation included disease incidence and severity, plant height, number of branches, and microscopic identification of pathogens. The results indicated that two main diseases were found: anthracnose caused by *Colletotrichum* sp. and leaf spot. Anthracnose symptoms appeared at 8 weeks after planting, with the highest incidence reaching 45% on organosol soil and 38.33% on litosol soil. Meanwhile, leaf spot symptoms appeared in the 9th week after planting with the highest incidence of 11.66% in organosol soil and the 10th week after planting was much lower at 8.33% in lithosol soil. Disease severity also remained relatively low, with a maximum of 12.08% for anthracnose and 2.91% for leaf spot. The low severity was influenced by environmental factors (dry season, optimal humidity and temperature), good cultivation practices (use of mulch, sanitation, spacing, and pest control), and the use of Farux F1 hybrid variety. These findings emphasize the importance of integrating environmental and cultivation management to minimize fungal disease impact on chili crops.

Keywords: anthracnose disease, chili cultivation,
Colletotrichum sp., fungal infection, leaf spot