INTISARI

Bawang merah (*Allium cepa* L. var. *aggregatum*) merupakan salah satu komoditas hortikultura unggulan yang ada di Indonesia. Hasil produksi bawang merah di tahun 2022 mengalami penurunan sebesar 40,51 ribu ton (5,12%) dari tahun 2021. Penurunan hasil produksi ini disebabkan oleh berbagai faktor, salah satunya adanya infeksi patogen *Colletotrichum* spp. Penurunan hasil produksi akibat infeksi *Colletotrichum* spp., mencapai 100%. Penelitian ini bertujuan untuk mengidentifikasi patogen penyebab antraknosa pada bawang merah di Jawa Tengah dan DI Yogyakarta serta mengetahui patogenesitasnya. Metode dalam penelitian ini meliputi identifikasi molekuler dengan multigen, karakterisasi *Colletotrichum* spp. dan mengetahui tingkat virulensi dari masing-masing isolat. Hasil dari penelitian didapatkan 11 isolat dari daun bawang merah bergejala antraknosa. Semua isolat menunjukkan variasi karakter morfologi. Lima isolat dipilih sebagai isolat representativ berdasarkan hasil dendogram UPGMA dengan koefisien kemiripan 80%. Lima isolat tersebut meliputi UGM_CBB_M, UGM_CKPJ_P, UGM_CBT_P, UGM_CSL_P dan UGM_CGK_M. Hasil identifikasi molekuler menunjukkan semua isolat identik dengan *C. siamense*. Hasil uji patogenesitas menunjukkan semua isolat bersifat patogenik, dengan isolat UGM_CBT_P menjadi isolat dengan nilai intensitas penyakit tertinggi. Uji aktivitas enzim yang dilakukan secara invitro meliputi enzim selulase, amilase, laccase dan protease. Keseluruhan isolat mampu menunjukkan aktivitas enzim selulase, dengan aktivitas tertinggi terdapat pada isolat UGM_CBT_P.

Kata Kunci: antraknosa, bawang merah, multigen, *C. siamense*

Abstract

Shallots (*Allium cepa* L. var. *aggregatum*) is one of the leading horticultural commodities in Indonesia. Shallot production results in 2022 decreased by 40.51 thousand tons (5.12%) from 2021. This decrease in production results was caused by various factors, including infection with the pathogen *Colletotrichum* spp. The decrease in production results due to infection with *Colletotrichum* spp. reached 100%. This research aims to identify the pathogen that causes anthracnose in shallots in Central Java and DI Yogyakarta and determine its pathogenicity. The methods in this research include molecular identification using multigenes, characterization of Colletotrichum spp., and determination of each isolate's virulence level. The research results showed that 11 isolates from shallot leaves had anthracnose symptoms. All isolates showed variations in morphological characters. Five isolates were selected as representative isolates based on the results of the UPGMA dendrogram with a similarity coefficient of 80%. The five isolates include UGM_CBB_M, UGM_CKPJ_P, UGM_CBT_P, UGM_CSL_P and UGM_CGK_M. Molecular identification results showed that all isolates were identical to C. siamense. Pathogenicity test results showed that all isolates were pathogenic, with the UGM_CBT_P isolate having the highest disease intensity value. Enzyme activity tests in vitro include cellulase, amylase, laccase and protease enzymes. All isolates were able to show cellulase enzyme activity, with the highest activity found in isolate UGM_CBT_P.

Keywords: anthracnose, shallots, multigene, *C. siamense*