SUPPRESSION POTENCY OF SECONDARY METABOLITES FROM WEED PATHOGENIC FUNGI TOWARDS NARROW LEAF WEEDS, CORN, AND RICE

Title	SUPPRESSION POTENCY OF SECONDARY METABOLITES FROM WEED PATHOGENIC FUNGI TOWARDS NARROW LEAF WEEDS, CORN, AND RICE
Author Order	4 of 4
Accreditation	
Abstract	This research aimed to determine the effect of secondary metabolites from weed pathogenic fungi (Fusarium oxysporum. Curvularia sp., and Chaetomium sp.) on narrow leaf weeds and on cultivated plants. The research was conducted at the Laboratory of Plant Protection and the experimental farm, Faculty of Agriculture, Jenderal Soedirman University for five months. Split plot design was used with main plot consisted of the pathogenic fungi Fusarium oxysporum, Curvularia sp., and Chaetomium sp. and subplots consisted of Imperata cylindrica, Cyperus kyllingia, and Cynodon dactylon, and maize, and rice. The variables observed were the incubation period, disease intensity, infection rate, disease area under progress curve (AUDPC), plant height, fresh plant weight, and dry plant weight. Results of the research showed that the secondary metabolites of three weed pathogenic fungi were able to infect narrow leaf weeds. From the single effect of the pathogen, the secondary metabolites of Curvularia sp. were the most virulence against narrow leaf weeds with increasing incubation period, disease intensity, infection rate, and AUDPC value as 79.90, 39.91, 14.4, and 99.69 %, respectively, compared to control. The secondary metabolites decreased plant height, fresh plant weight, dry plant weight as 26.66, 65.03, and 47.23 %, respectively, compared to control. From the single effect of weeds, the most susceptible weed was Cynodon dactylon indicated by a disease intensity of 28.08 %. From the combination effect, Fusarium oxysporum on Cynodon dactylon and Curvularia sp. on Cyperus kyllingia showed the highest disease intensity, respectively, as 53.08 and 48.14 %. The secondary metabolites of three weed pathogenic fungi were not virulence to rice and corn.
Publisher Name	Universitas Wiralodra
Publish Date	2022-07-15
Publish Year	2022
Doi	DOI: 10.31943/agrowiralodra.v5i2.84
Citation	
Source	Agro Wiralodra
Source Issue	Vol. 5 No. 2 (2022): Jurnal Agro Wiralodra
Source Page	46-53
Url	https://agrowiralodra.unwir.ac.id/index.php/agrowiralodra/article/view/84/56
Author	Dr ENDANG MUGIASTUTI, S.P, M.P