

Secondary Metabolites Application of Two Pseudomonas fluorescens isolates and Two Trichoderma Harzianum Isolates in Combination Against Postharvest Anthracnose in Papaya

Title	Secondary Metabolites Application of Two Pseudomonas fluorescens isolates and Two Trichoderma Harzianum Isolates in Combination Against Postharvest Anthracnose in Papaya
Author Order	5 of 5
Accreditation	2
Abstract	The occurrence of papaya anthracnose is a significant post-harvest ailment, necessitating the effective disease management. The aim was to determine the ability of secondary metabolites combination of Pseudomonas fluorescens and Trichoderma harzianum isolates against the disease. A completely randomized design was used for in vitro experiments and a randomized block design for in vivo experiments. The treatments consisted of P. fluorescens P60 and T. harzianum T10, P. fluorescens P60 and T. harzianum T213, P. fluorescens P32 and T. harzianum T10, P. fluorescens P32 and T. harzianum T213 secondary metabolites and fungicides (a.i. maneb). The observed variables included the pathosystem component and papaya character and organoleptic test. The in vitro test results showed that P. fluorescens P60 and T. harzianum T10 and P. fluorescens P60 and T. harzianum T213 secondary metabolites inhibited the pathogen growth by 48.1075 and 43.4625%, respectively. The secondary metabolites of P. fluorescens P60 and T. harzianum T10 in vivo test results could delay the germination time by 12.63% and reduce the invasion area by 44.29%. All secondary metabolites had no effect on sugar content, hardness and sensory test. The combined secondary metabolites of P. fluorescens and T. harzianum are safe and does not affect papaya fruit quality.
Publisher Name	Department of Agrotechnology, Universitas Muhammadiyah Yogyakarta
Publish Date	2023-09-18
Publish Year	2023
Doi	DOI: 10.18196/pt.v11i2.14594
Citation	
Source	PLANTA TROPIKA
Source Issue	Vol 11, No 2 (2023)
Source Page	115-124
Url	https://journal.umy.ac.id/index.php/pt/article/view/14594/8602
Author	Dr Ir NOOR FARID, M.Si