

Application of Bio P60 and Bio T10 alone or in combination to control Fusarium wilt of Hydroponic Melon

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Abstract	<p>The research aimed to determine the effect of single and combined applications of Bio P60 and Bio T10 in suppressing stem base rot and its effect on the growth and production of hydroponic melon. This research was conducted at Flos Hydroponic Organic at Bansari Village, Bansari District, Temanggung Regency from February to June 2023. Randomized Block Design was used with 6 replicates. The treatments were control (propamocarb hydrochloride), Bio P60, Bio T10, and a combination of Bio P60 and Bio T10 (1:1, v/v). Variables observed were incubation period, disease intensity, infection rate, area under disease progress curve (AUDPC), control effectiveness, plant length, number of leaves, fresh weight, leaf color, first flowering date, first fruit formation, number of fruits per plant, fruit weight per plant, and phenolic compounds qualitatively. The results showed that the combined treatment of Bio P60 and Bio T10 had the best effect indicated by delaying the incubation period, reducing disease intensity, reducing infection rates, reducing AUDPC values, increasing the value of control effectiveness, increasing plant length, number of leaves, plant fresh weight, leaf color, time of first flower appearance, time of fruiting, and fruit weight respectively of 31.25, 41.19, 13.33, 65.31, 55.61, 17.25, 5.57, 36.44, 11.47, 8.55, 9.63, and 22.92 % compared to control. The application of Bio P60, Bio T10, and the combination could increase the phenolic compounds (tannins, saponins, and glycosides) qualitatively in melon leaves.</p>
Publisher Name	Universitas Lampung
Publish Date	2024-07-23
Publish Year	2024
Doi	DOI: 10.23960/jhptt.224199-211
Citation	
Source	Jurnal Hama dan Penyakit Tumbuhan Tropika
Source Issue	Vol. 24 No. 2 (2024): SEPTEMBER, JURNAL HAMA DAN PENYAKIT TUMBUHAN TROPIKA: JOURNAL OF TROPICAL PLAN
Source Page	199-211
Url	https://jhpttropika.fp.unila.ac.id/index.php/jhpttropika/article/view/768/622
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