

**TEST OF VARIOUS CONCENTRATIONS OF *Beauveria bassiana* ON THE
ATTACK INTENSITY OF MAJOR PESTS ON GREEN BEANS PLANTS
(*Phaseolus vulgaris* L.)**

Safira Tasya Andrianisa

Supervised by: RR. Rukmowati Brotodjojo and Mofit Eko Poerwanto

ABSTRACT

Cultivation of green beans is dealing with various types of pests. One alternative to control various types of pests in green beans is to use the *Beauvaeria bassiana* fungus. This study aims to identify the effect of the application of biological agent *Beauveria bassiana* on the attack intensity of the main pests of green beans, and determine the most optimal concentration of *Beauvaeria bassiana* to control the attack intensity of the main pests on green beans. This research was conducted at the Plant Protection Laboratory of the Universitas Pembangunan Nasional "Veteran" Yogyakarta, Depok, Sleman and Rajek Wetan, Tirtoadi, Sleman from June to August 2022. The research method used a one-factor Randomized Complete Block Design (RCBD) with 5 treatments + 1 control, which are *Beauvaeria bassiana* concentration 10g/L, *Beauvaeria bassiana* concentration 15g/L, *Beauvaeria bassiana* concentration 20g/L, *Beauvaeria bassiana* concentration 25g/L, *Beauvaeria bassiana* concentration 30g/L, and negative control without any treatment. Observation data were analyzed using analysis of variance and if there was a significant effect, it will be continued using DMRT (*Duncan Multiple Range Test*) at the 5% level. The results showed that *Beauvaeria bassiana* had a significant effect in reducing the intensity of pest attacks and the concentration of *Beauvaeria bassiana* 30g/L gave the most optimal results in suppressing the attack intensity caused by pests in green beans plants.

Keywords: Green beans, main pest, *Beauvaeria bassiana*, attack intensity.

**UJI BERBAGAI KONSENTRASI *Beauveria bassiana* TERHADAP
INTENSITAS SERANGAN HAMA UTAMA PADA TANAMAN BUNCIS
(*Phaseolus vulgaris* L.)**

Safira Tasya Andrianisa

Dibimbing oleh: RR. Rukmowati Brotodjojo and Mofit Eko Poerwanto

ABSTRAK

Budidaya tanaman buncis banyak dihadapkan dengan berbagai jenis hama. Salah satu alternatif untuk mengendalikan berbagai jenis hama pada tanaman buncis adalah dengan menggunakan jamur *Beauveria bassiana*. Penelitian ini bertujuan untuk mengidentifikasi pengaruh pemberian agen hayati *Beauveria bassiana* terhadap intensitas serangan hama utama tanaman buncis, dan menentukan konsentrasi *Beauveria bassiana* yang paling efektif untuk mengendalikan intensitas serangan hama utama pada tanaman buncis. Penelitian ini dilaksanakan di Laboratorium Proteksi Tanaman Universitas Pembangunan Nasional “Veteran” Yogyakarta, Depok, Sleman dan Rajek Wetan, Tirtoadi, Sleman dari bulan Juni sampai Agustus 2022. Metode penelitian menggunakan Rancangan Acak Kelompok Lengkap (RAKL) satu faktor dengan 5 perlakuan + 1 kontrol yaitu konsentrasi *Beauveria bassiana* 10g/L, konsentrasi *Beauveria bassiana* 15g/L, konsentrasi *Beauveria bassiana* 20g/L, konsentrasi *Beauveria bassiana* 25g/L, konsentrasi *Beauveria bassiana* 30g/L, dan kontrol negatif tanpa perlakuan apapun. Data hasil pengamatan dianalisis menggunakan analisis sidik ragam dan jika terdapat pengaruh nyata, dilanjutkan menggunakan DMRT (*Duncan Multiple Range Test*) dengan taraf 5%. Hasil penelitian menunjukkan bahwa *Beauveria bassiana* memberikan pengaruh nyata dalam menurunkan intensitas serangan hama dan konsentrasi *Beauveria bassiana* 30g/L memberikan hasil paling optimal dalam menekan intensitas serangan hama pada tanaman buncis.

Kata Kunci: Buncis, hama utama, *Beauveria bassiana*, intensitas serangan