

INTISARI

Pemberian frekuensi dan konsentrasi pupuk nano abu sekam aplikasi *foliar* diharapkan mampu mengendalikan hama *Spodoptera exigua*, meningkatkan pertumbuhan dan hasil bawang merah varietas biru lancor. Penelitian telah dilakukan pada bulan Juni-Agustus 2019 di Lahan Percobaan, Laboratorium Penelitian, dan Laboratorium Proteksi tanaman Fakultas Pertanian Universitas Muhammadiyah Yogyakarta. Penelitian dilakukan dengan metode eksperimen menggunakan rancangan lingkungan RAL (Rancangan Acak Lengkap) faktor tunggal, terdiri dari 10 perlakuan yaitu : Tanpa Nano Abu Sekam, Frekuensi 3 Kali + Konsentrasi 0,2%, Frekuensi 3 Kali + Konsentrasi 0,4%, Frekuensi 3 Kali + Konsentrasi 0,6%, Frekuensi 4 Kali + Konsentrasi 0,2%, Frekuensi 4 Kali + Konsentrasi 0,4%, Frekuensi 4 Kali + Konsentrasi 0,6%, Frekuensi 5 Kali + Konsentrasi 0,2%, Frekuensi 5 Kali + Konsentrasi 0,4% dan Frekuensi 5 Kali + Konsentrasi 0,6%. Hasil penelitian menunjukkan bahwa frekuensi dan konsentrasi nano abu sekam tidak memberikan pengaruh nyata terhadap pertumbuhan tanaman dan hasil pada perlakuan hama *Spodoptera exigua*. Pemberian frekuensi dan konsentrasi nano abu sekam berpengaruh nyata terhadap presentase serangan, mortalitas, kecepatan kematian hama *Spodoptera exigua*, diameter umbi, dan hasil umbi. Frekuensi 3 kali dan konsentrasi 0,2% penyemprotan nano abu sekam menunjukkan hasil paling efektif pada presentase serangan hama *Spodoptera exigua* dengan hasil rerata presentase serangan hama *Sodoptera exigua* 12,69%. Perlakuan frekuensi 4 kali dan konsentrasi 0,2% penyemprotan nano abu sekam menunjukkan hasil paling efektif terhadap mortalitas dan kecepatan kematian dengan rerata 12,69% dan 10.83 ekor/hari.

Kata kunci: *Foliar*, nano, abu sekam, bawang merah, *Spodoptera exigua*.

ABSTRACT

Giving various frequency and concentration of nano fertilizer husk ash foliar application is expected to be able to control the Spodoptera exigua pest, increase the growth and yield of red lanchor blue onion varieties. Research aimed at proving these matters has been carried out in the Experimental Field, Research Laboratory, and Plant Protection Laboratory of the Faculty of Agriculture, Muhammadiyah University, Yogyakarta at June-August 2019. This study was conducted using an experimental method with a single factor complete randomized design consisting of 10 treatments: Without the nano chaff, three times frequency + concentration 0,2%, three times frequency + concentration 0,4%, three times frequency + concentration 0,6%, four times frequency + concentration 0,2%, four times frequency + concentration 0,4%, four times frequency + concentration 0,6%, five times frequency + concentration 0,2%, five times frequency + concentration 0,4%, five times frequency + concentration 0,6%. The results showed that the frequency and concentration of nano husk ash did not have a significant effect on plant growth and the yield on the treatment of Spodoptera exigua pests. The provision of various frequency and concentration of nano ash husk affected the percentage of the onset, mortality, the death rate of Spodoptera exigua pest, tuber diameter, and tuber yield significantly. The three times frequency + the concentration of 0.2% spraying of husk ash showed the most effective results on the percentage of Spodoptera exigua pests onset with the average rate of Spodoptera exigua pests onset by 12.69%. The four times frequency treatment and the concentration of 0.2% spraying nano husk ash showed the most effective results on mortality rate, with an average of 12.69% and 11 mortality/day.

Keywords: Frequency, concentration, nano, husk ash, onion, Spodoptera exigua.