

ABSTRAK

Egilang Muhammad Abdilah. 2024. Respons Ulat Grayak (*Spodoptera frugiperda*) Dan Tanaman Sawi Pagoda (*Brassica narinosa*) Terhadap Konsentrasi Ekstrak Daun Sirsak (*Annona muricata*). Dibawah Bimbingan Efrin Firmansyah dan Jajang Supriatna.

Budidaya tanaman sawi pagoda tidak terlepas dari serangan OPT, salah satunya ulat grayak (*Spodoptera frugiperda*). Pengendalian alternatif dapat menggunakan pestisida nabati yaitu ekstrak daun sirsak. Daun sirsak mengandung senyawa kimia yang dapat mengendalikan *Spodoptera frugiperda*. Tujuan dari penelitian ini yaitu untuk mengetahui pengaruh ekstrak daun sirsak terhadap *Spodoptera frugiperda* dan pertumbuhan tanaman sawi pagoda. Penelitian ini terdiri dari 2 tahap. Pada uji pendahuluan menggunakan Rancangan Acak Lengkap (RAL) yang terdiri dari 8 perlakuan dengan 3 ulangan yaitu A = Tanpa diberi ekstrak daun sirsak; B = Ekstrak daun sirsak konsentrasi 50% lama simpan 1 hari; C = Ekstrak daun sirsak konsentrasi 50% lama simpan 2 hari; D = Ekstrak daun sirsak konsentrasi 50% lama simpan 3 hari; E = Ekstrak daun sirsak konsentrasi 50% lama simpan 4 hari; F = Ekstrak daun sirsak konsentrasi 50% lama simpan 5 hari; G = Ekstrak daun sirsak konsentrasi 50% lama simpan 6 hari; dan H = Ekstrak daun sirsak konsentrasi 50% lama simpan 7 hari. Pada uji lapangan menggunakan Rancangan Acak Kelompok (RAK) yang terdiri dari 5 perlakuan dengan 5 ulangan yaitu A = Ekstrak daun sirsak 0% tanpa diberi ulat grayak; B = Ekstrak daun sirsak 0% + diberi ulat grayak; C = Ekstrak daun sirsak 25% + diberi ulat grayak; D = Ekstrak daun sirsak 50% + diberi ulat grayak; dan E = Ekstrak daun sirsak 75% + diberi ulat grayak. Hasil penelitian pada uji pendahuluan lama simpan pestisida berpengaruh terhadap mortalitas *Spodoptera frugiperda*, dan pada uji lapangan konsentrasi ekstrak daun sirsak berpengaruh terhadap mortalitas dan intensitas serangan tetapi tidak berpengaruh terhadap pertumbuhan sawi pagoda. Konsentrasi terbaik yaitu perlakuan D (Ekstrak daun sirsak 50% + diberi ulat grayak) yang dapat mengendalikan *Spodoptera frugiperda*.

Kata kunci : Daun Sirsak, Estrak, Konsentrasi, Sawi Pagoda, *Spodoptera frugiperda*

ABSTRACT

Egilang Muhammad Abdilah. 2024. Response of Corn Armyworm (*Spodoptera frugiperda*) and Pagoda Mustard Plants (*Brassica narinosa*) to Soursop Leaf Extract Concentration (*Annona muricata*). Under the guidance of Efrin Firmansyah and Jajang Supriatna.

The cultivation of pagoda mustard greens cannot be separated from pest attacks, one of which is the armyworm (*Spodoptera frugiperda*). Alternative control can use vegetable pesticides, namely soursop leaf extract. Soursop leaves contain chemical compounds that can control *Spodoptera frugiperda*. The aim of this research is to determine the effect of soursop leaf extract on *Spodoptera frugiperda* and growth of pagoda mustard plants. This research consists of 2 stages. In the preliminary test, a Completely Randomized Design (CRD) was used, consisting of 8 treatments with 3 replications, namely A = Without giving soursop leaf extract; B = 50% concentration of soursop leaf extract, shelf life 1 day; C = 50% concentration of soursop leaf extract, storage time 2 days; D = 50% concentration of soursop leaf extract, shelf life 3 days; E = 50% concentration of soursop leaf extract, shelf life 4 days; F = 50% concentration of soursop leaf extract, shelf life 5 days; G = 50% concentration of soursop leaf extract, shelf life 6 days; and H = Soursop leaf extract with a concentration of 50% and a shelf life of 7 days. In the field test, a Randomized Block Design (RAK) was used, consisting of 5 treatments with 5 replications, namely A = 0% soursop leaf extract without armyworms; B = 0% soursop leaf extract + given armyworms; C = 25% soursop leaf extract + added armyworms; D = 50% soursop leaf extract + added armyworms; and E = 75% soursop leaf extract + given armyworms. The results of research on preliminary tests on the length of pesticide storage have an effect on mortality *Spodoptera frugiperda*, and in field tests the concentration of soursop leaf extract affected mortality and attack intensity but had no effect on the growth of pagoda mustard greens. The best concentrations are treatment D (50% soursop leaf extract + given armyworms) which can control *Spodoptera frugiperda*.

Keywords : Concentration, Extract, Pagoda Mustard, Soursop Leaf, *Spodoptera frugiperda*