ABSTRAK

Sawi hijau (*Brassica juncea* L.) merupakan salah satu tanaman hortikultura yang mempunyai nilai ekonomis tinggi. Salah satu masalah berat bagi petani tanaman sawi (*Brassica juncea* L.) adalah serangan hama. Pengendalian organisme pengganggu tanaman (OPT) memiliki beberapa cara, salah satunya adalah menggunakan pestisida nabati. Daun pepaya (*Carica papaya*) dan kenikir (*Cosmos caudatus*) merupakan salah satu bahan alam yang dapat dijadikan pestisida nabati. Tujuan untuk mengetahui pengaruh jenis dan konsentrasi ekstrak daun pepaya dan daun kenikir terhadap tingkat intensitas serangan *Spodoptera litura* dan hasil tanaman sawi. Serta interaksi perlakuan jenis dan konsentrasi ekstrak pestisida nabati yang paling efektif terhadap intensitas serangan hama *Spodoptera litura* dan hasil tanaman sawi. Penelitian ini dilaksanakan di kebun percobaan Universitas Muhammadiyah Jember Kecamatan Sumbersari, Kabupaten Jember. Pelaksanaan penelitian dimulai pada bulan Juli sampai September 2021 dengan ketinggian 89 mdpl. Rancangan yang digunakan RAK faktorial dengan 3 kali ulangan meliputi: faktor pertama jenis ekstrak: D1: Ekstrak Daun Pepaya, D2: Ekstrak Daun Kenikir, D3: Ekstrak Daun Papaya Dan Kenikir, faktor kedua konsentrasi ekstrak: K1: 20%, K2: 40%, K3: 60%. Berdasarkan hasil analisis menunjukkan bahwa Pemberian perlakuan jenis ekstrak pestisida nabati daun pepaya dan kenikir berpengaruh terhadap intensitas serangan dan hasil tanaman sawi, perlakuan D3 (ekstrak daun pepaya dan kenikir) memiliki efektifitas terbaik terhadap intensitas serangan hama dan hasil tanaman sawi. Sedangkan konsentrasi ekstrak pestisida nabati daun pepaya dan kenikir berpengaruh terhadap intensitas dan hasil tanaman sawi, perlakuan K3 (60%) memiliki efektifitas terbaik terhadap intensitas serangan hama hasil tanaman sawi. Interaksi jenis dan konsentrasi ekstrak tidak berpengaruh terhadap intensitas serangan hama. Namun, berpengaruh terhadap hasil tanaman sawi dan perlakuan D1K3 (ekstrak daun pepaya 60%) merupakan perlakuan dengan efektifitas terbaik terhadap hasil tanaman sawi.

Kata Kunci: Sawi, Pestisida Nabati, Ulat Grayak

ABSTRACT

Green mustard (*Brassica juncea* L.) is a horticultural crop that has high economic value. One of the serious problems for mustard (*Brassica juncea* L.) farmers is pest attack. There are several ways to control plant pest organisms (OPT), one of which is the use of vegetable pesticides. Papaya leaves (*Carica papaya*) are also used as a natural insecticide against the development of Crocidolomia binotalis on mustard plants. Kenikir leaf (*Cosmos caudatus*) is one of the natural ingredients that can be used as a vegetable pesticide. The purpose of this study was to determine the effect of the type and concentration of papaya leaf extract and kenikir leaf extract on the intensity of Spodoptera litura attack and mustard plant yields. As well as the interaction of the most effective type and concentration of botanical pesticide extract treatment on the intensity of Spodoptera litura pest attack and mustard plant yields. This research was conducted in the experimental garden of the Muhammadiyah University of Jember, Sumbersari District, Jember Regency. The research will start from March to June 2021 with an altitude of 89 meters above sea level. The design used factorial RAK with 3 replications including: the first factor was the type of extract: D1: Papaya Leaf Extract, D2: Kenikir Leaf Extract, D3: Papaya and Kenikir Leaf Extract, K1: 20%, K2: 40%, K3: 60% . Based on the results of the analysis, it was shown that the treatment of papaya leaf extract and kenikir had an effect on the intensity of attack and yield of mustard greens, the D3 treatment (papaya leaf extract and kenikir) had the best effectiveness on the intensity of pest attack and mustard plant yields. While the concentration of pesticide extracts of papaya and kenikir leaves had an effect on the intensity and yield of mustard plants, K3 treatment (60%) had the best effectiveness on the intensity of pest attacks on mustard plants. The interaction of species and extract concentration did not affect the intensity of pest attack. However, it had an effect on the yield of mustard greens and the D1K3 treatment (60% papaya leaf extract) was the treatment with the best effectiveness on the yield of mustard.

Keywords: Mustard, Vegetable Pesticide, Grayak Caterpillar