RINGKASAN

Keong mas (*Pomacea canaliculata* L.) merupakan salah satu hama penting tanaman padi. Pengendalian hama ini lebih menekankan pada penggunaan pestisida kimia sintetik yang terbukti banyak menimbulkan dampak negatif. Oleh karena itu, perlu alternatif pengendalian yang efektif dan ramah lingkungan salah satunya yaitu dengan menggunakan pestisida nabati ekstrak daun mimba (*Azadirachta indica* A. Juss). Mimba berpotensi sebagai moluskisida nabati karena mengandung beberapa senyawa aktif antara lain *azadirachtin*, nimbin, salanin, meliantriol, flavonoid, alkaloid, steroid, tanin, dan saponin. Penelitian ini bertujuan untuk mengetahui potensi dan konsentrasi efektif ekstrak daun mimba untuk mengendalikan keong mas, mengetahui kemampuan ekstrak daun mimba dalam menekan intensitas serangan keong mas, dan mengetahui fitotoksisitasnya terhadap tanaman padi.

Penelitian dilaksanakan di rumah kaca Fakultas Pertanian Universitas Jenderal Soedirman pada bulan Juni sampai dengan Desember 2024. Penelitian ini terdiri dari 4 tahap pengujian, dengan rancangan percobaan yang digunakan pada semua tahap pengujian tersebut adalah Rancangan Acak Kelompok (RAK). Pada uji pendahuluan terdiri dari 6 konsentrasi perlakuan ekstrak daun mimba yaitu 0% (kontrol), 20%, 40%, 60%, 80%, 100% diulang 6 kali, variabel yang diamati adalah mortalitas keong mas. Pada uji efektivitas konsentrasi ekstrak daun mimba terhadap keong mas terdiri dari 5 konsentrasi perlakuan ekstrak daun mimba yaitu 0% (kontrol), 10%, 20%, 30%, 40% diulang 5 kali, variabel yang diamati adalah mortalitas keong mas. Pada uji kemampuan ekstrak daun mimba dalam menekan intensitas serangan keong mas dan uji fitotoksisitas ekstrak daun mimba terhadap tanaman padi terdiri dari 5 perlakuan yaitu kontrol, *Lethal Concentration* $(LC)_{50}$, LC_{75}, LC_{95} ekstrak daun mimba, dan moluskisida kimia diulang 5 kali, variabel yang diamati adalah intensitas serangan keong mas, gejala fitotoksisitas, dan tinggi tanaman padi.

Hasil penelitian menunjukkan bahwa ekstrak daun mimba mempunyai potensi dalam mengendalikan keong mas yang ditunjukkan pada perlakuan konsentrasi 40% ekstrak daun mimba mampu menyebabkan mortalitas keong mas sebesar 98%. Konsentrasi efektif ekstrak daun mimba yaitu sebesar 22,168%. dan mampu menekan intensitas serangan keong mas hingga 100%, serta tidak menimbulkan fitotoksisitas terhadap tanaman padi.

SUMMARY

The golden snail (Pomacea canaliculata L.) is one of the important pests of rice plants. Control of this pest emphasizes the use of synthetic chemical pesticides which have proven to have many negative impacts. Therefore, an effective and environmentally friendly alternative control is needed, one of which is by using neem leaf extract (Azadirachta indica A. Juss) as a botanical pesticide. Neem has the potential as a botanical molluscicide because it contains several active compounds including azadirachtin, nimbin, salanin, meliantriol, flavonoids, alkaloids, steroids, tannins, and saponins. This study aims to determine the potential and effective concentration of neem leaf extract to control golden snail, determine the ability of neem leaf extract in suppressing the intensity of golden snail attack, and determine its phytotoxicity to rice plants.

The research was conducted in the greenhouse of the Faculty of Agriculture, Jenderal Soedirman University from June to December 2024. This experiment consisted of 4 stages of testing, with the experimental design used in all stages of the test is a Randomized Block Design (RAK). The preliminary test consisted of 6 concentrations of neem leaf extract treatment, namely 0%, 20%, 40%, 60%, 80%, 100% repeated 6 times, the variable observed was the mortality of golden snail. In the effectiveness test, the concentration of neem leaf extract against golden snail consisted of 5 concentrations of neem leaf extract treatment, namely 0%, 10%, 20%, 30%, 40% repeated 5 times, the variable observed was golden snail mortality. In the neem leaf extract ability test in suppressing the intensity of the attack of the golden snail and the phytotoxicity test of neem leaf extract on rice plants consisted of 5 treatments, namely control, Lethal Concentration $(LC)_{50}$, LC_{75}, LC_{95} neem leaf extract, and chemical molluscicides repeated 5 times, the variables observed were the intensity of the golden snail attack, phytotoxicity symptoms, and the height of the rice plant.

The results showed that neem leaf extract has the potential to control the golden snail which is shown in the treatment of 40% concentration of neem leaf extract was able to cause 98% mortality of golden snail. The effective concentration of neem leaf extract was 22.168% and was able to suppress the intensity of the carp attack by 100%, and did not cause phytotoxicity to rice plants.