

RINGKASAN

Keong mas (*Pomacea canaliculata*) merupakan salah satu hama utama pada tanaman padi. Penggunaan pestisida kimia untuk mengendalikan hama ini berdampak negatif terhadap lingkungan, sehingga diperlukan alternatif pengendalian yang lebih ramah lingkungan. Penelitian ini bertujuan untuk mengetahui potensi ekstrak daun sirih terhadap mortalitas keong mas, mengetahui konsentrasi efektif ekstrak daun sirih terhadap keong mas, mengetahui efektivitas ekstrak daun sirih dalam menekan kerusakan tanaman padi akibat keong mas, serta mengetahui fitotoksisitas ekstrak daun sirih terhadap tanaman padi.

Penelitian dilaksanakan di *screen house* Fakultas Pertanian Universitas Jenderal Soedirman dengan empat tahap pengujian, yaitu uji potensi ekstrak daun sirih terhadap mortalitas keong mas, uji ekstrak daun sirih terhadap mortalitas keong mas, uji kemampuan ekstrak daun sirih untuk menekan intensitas serangan keong mas, dan uji fitotoksisitas ekstrak daun sirih pada tanaman padi. Rancangan percobaan yang digunakan adalah Rancangan Acak Kelompok (RAK) dengan beberapa perlakuan konsentrasi ekstrak daun sirih. Parameter yang diamati meliputi mortalitas keong mas, intensitas serangan keong mas terhadap tanaman padi, serta gejala fitotoksisitas pada tanaman padi.

Hasil penelitian menunjukkan bahwa ekstrak daun sirih mampu menyebabkan mortalitas pada keong mas. Ekstrak daun sirih 44,05% merupakan konsentrasi efektif yang mampu menyebabkan mortalitas sebesar 75% pada keong mas. Ekstrak daun sirih konsentrasi 18,95%, 30,74%, dan 43,39% mampu menekan intensitas serangan keong mas hingga 100%, dan efektivitasnya setara dengan pestisida kimia. Ekstrak daun sirih tidak menyebabkan fitotoksik pada tanaman padi.

SUMMARY

Golden apple snail (Pomacea canaliculata) is one of the major pests of rice crops. The use of chemical pesticides to control this pest has negative impacts on the environment, thus necessitating environmentally friendly alternatives. This study aimed to determine the potential of betel leaf (Piper betle) extract on the mortality of golden apple snails, identify the effective concentration of the extract, evaluate its effectiveness in suppressing rice plant damage caused by the pest, and assess the phytotoxic of the extract on rice plants.

The research was conducted in a screen house at the Faculty of Agriculture, Jenderal Soedirman University, using four stages of testing: preliminary test of betel leaf extract on snail mortality, test on snail mortality using varying extract concentrations, test on the extract's ability to suppress snail attack intensity, and phytotoxicity test on rice plants. The experiment used a Randomized Complete Block Design (RCBD) with several concentration treatments of betel leaf extract. The observed parameters included snail mortality, intensity of snail attack on rice plants, and phytotoxic symptoms on rice.

The results showed that betel leaf extract was able to caused mortality in golden apple snails. The extract at 44.05% was identified as the effective concentration, causing 75% mortality. Betel leaf extract at 18.95%, 30.74%, and 43.39% were able to suppress snail attack intensity by up to 100%, with effectiveness comparable to that of chemical pesticides. Betel leaf extract did not cause phytotoxic effects on rice plants.