

## **ABSTRACT**

*Rice is the main food crop in Indonesia, but the production in the last three years has decreased due to brown planthopper. An alternative to control brown planthopper which are safe for the environment is using organic pesticides from rubber seeds that contain active compound of HCN. The purpose of this study was to obtain the concentration of rubber seed extract that was effective for controlling brown planthopper and to determine the effect of rubber seed extract application on the growth of rice plants. The study was conducted at Plant Protection Laboratory and Green House of Agriculture Faculty, Universitas Muhammadiyah Yogyakarta, from January to April 2018. The study was conducted using a single factor and arranged using Completely Randomized Design (CRD) with 3 replications. The treatments were the concentration of rubber seed extract 2.5%, 5%, 10%, 15%; Imidacloprid pesticides; and without treatment as a control. The results showed that organic pesticide extract of rubber seed extract 10% concentration was effective in controlling brown planthopper with 83.33% mortality and 82.96% efficacy. Organic pesticides with rubber seed extract concentrations of 10% and 15% are able to reduce crop damage due to planthopper attacks is 25%.*

*Keywords: Concentration, Effective, Imidacloprid, Pesticide.*