THE EFFECTIVENESS OF NEEM AND TOBACCO LEAVES EXTRACT AGAINST *Aphis gossypii* Glover ON RED OKRA PLANT (*Abelmoschus esculentus* L. Moench)

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ABSTRACT

Okra (*Abelmoschus esculentus* L.) is a plant that has economic value, namely in the fruit and seeds and many benefits. This study aimed to test the effectiveness of neem and tobacco leaves extract against *Aphis gossypii* Glover on red okra plants (*Abelmoschus esculentus* L. Moench). This research was conducted in April-June 2025 at Ardana Garden and Plant Protection Laboratory, Faculty of Agriculture, UPN "Veteran" Yogyakarta, Condongcatur, Depok District, Sleman Regency, Special Region of Yogyakarta. The experiment design was a Completely Randomized Block Design (CRBD) with 7 treatments and was repeated 3 times. The treatments tested were C1: control negative (aquadest), C2: control positive with the active ingredients Imidakloprid 100 g/L, M1: neem leaves extract 20%, M2: tobacco leaves extract 20%, M3: neem leaves extract 5% + neem leaves extract 15%, M4: neem leaves extract 15% + tobacco leaves extract 5%, M5: neem leaves extract 10% + tobacco leaves extract 10%. Data were analyzed using analysis of variance (ANOVA) at the 5% level. If it showed a significant effect, it is continued with the Duncan Multiple Range Test (DMRT) at the 5% level and contrast orthogonal at the 5% level. The results of the study showed that neem and tobacco leaf extracts, either singly or in combination, significantly affected the intensity of damage, mortality, population, lethal time, and effectiveness in controlling Aphis gossypii Glover. The 20% tobacco treatment and other combinations of neem and tobacco (5%+15%, 15%+5%, 10%+10%) provided equally good results seen in the parameters of the highest mortality rate, the lowest aphid population, lethal time, and comparable or even better control effectiveness compared to the synthetic insecticide Imidacloprid.

Key word: Okra, neem, tobacco, aphis, Imidacloprid