

## **Allelopathic Efficacy of Mango (*Mangifera indica* L.) Leaf Extract on the Growth of *Ageratum conyzoides* L. Weed**

By : Pangestu Harits Pratama  
Supervised by : Abdul Rizal AZ

### **ABSTRACT**

Bandotan (*Ageratum conyzoides* L.) is an annual weed with rapid growth and prolific seed production. Manalagi mango leaf extract contains allelochemicals like tannins that inhibit growth and gibberellin activity, and flavonoids that suppress enzymes and cell division, impacting *A. conyzoides* growth. This study aimed to determine the effect of mango (*Mangifera indica* L.) leaf extract at various concentrations on *A. conyzoides* weed growth. Methanol was chosen as the maceration solvent for optimal phenolic compound extraction due to its high polarity. The research was conducted April-May 2024 at the Plant Protection Laboratory and Greenhouse, Agriculture Faculty, UPN "Veteran" Yogyakarta, using a single-factor completely randomized design with 9 treatments and 3 replications: control (no treatment), and 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80% mango leaf extract concentrations. Observation parameters on weeds include height, dry weight, root length, phytotoxicity, percentage of mortality, leaf area, flowering age, and growth rate. Data were analyzed using ANOVA and Scott-Knott tests. The application of mango leaf extract provides a significant influence in inhibiting weed growth and the concentration of 80% provides the best control compared to other treatments.

**Keywords** : *Ageratum conyzoides* L., Mango leaf extract, Weed growth, Concentration