

SintaUmul Fatimah. (170311100017). Effectiveness of Alang-alang (*Imperata cylindrical*. L) Rhizome Extract Against Various Types of Weeds. Supervised By: Dr. Ir. H. Ahmad Arsyadmunir, M.S and Ir. AchmadDjunaedy, M.P

ABSTRACT

The increase in the use of chemical herbicides causes negative impacts such as environmental pollution, residue left in agricultural products, and the death of several natural enemies. Therefore, it is necessary to have alternative control that is more environmentally friendly by exploring the potential of *Imperata cylindrica* L. rhizome which has allelopathic compounds that can be used as herbicides. This study aimed to test the rhizome extract of alang-alang (*Imperata cylindrica* L.) against the growth of purple mamon weeds (*Cleome rutidosperma* D.C), boroko (*Celosia argentea* L.), teki (*Cyperus rotundus* L.). This study used the RAL (Completely Randomized Design) method with concentrations of 5%, 10%, 15%, and 20% with 4 replications. The variables in this study were plant height, wet weight, dry weight, and phytotoxicity. Data were analyzed using ANOVA and further test DMRT (Duncan Multiple Range Test). The results of this study indicate that the parameter that has a significant effect is phytotoxicity. The concentration of alang-alang rhizome extract that was most effective in inhibiting the growth of Mamonungu, boroko, teki weeds was a concentration of 20%

Key words :*Imperata cylindrica* L, *Cleome rutidosperma* D.C, *Celosia argentea* L, *Cyperus rotundus*

