

**ALLELOPATHIC EFFECTS OF TURMERIC LEAVES
(*Curcuma longa*) EXTRACT AGAINST JUNGLE RICE
(*Echinochloa colona*)**

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**DEGREE OF BACHELOR OF SCIENCE (Hons.) BIOLOGY
IN THE FACULTY OF APPLIED SCIENCE
UNIVERSITY TEKNOLOGI MARA**

JULY 2019

This Final Year Project Report entitled “**Allelopathic Effect of Turmeric Leaves (*Curcuma longa*) Extract Against Jungle Rice (*Echinochloa colona*)**” was submitted by Noor Syaliameera Binti Ramly, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

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ABSTRACT

ALLELOPATHIC EFFECT OF TURMERIC LEAVES (*Curcuma longa*) EXTRACT AGAINST JUNGLE RICE (*Echinochloa colona*)

Echinochloa colona or jungle rice is an invasive weed species and the type of common weeds of rice in many Asian countries. From the impact of uncontrollable growth of jungle rice has leads to over usage of chemical herbicides that has created certain problems and indirectly contribute to several environmental pollution. Hence, allelochemicals compound has been used as the feasible option in weed control treatment as the alternative of chemical herbicides. Allelopathic plant materials are widely study for their suppressing activity, and also being discovered in turmeric leaf which contained secondary metabolites compound of alkaloid, tannins and polyphenols. The aim of this study is to identify the allelopathic activity of turmeric leaf against jungle rice and the optimum concentration that inhibit the growth of jungle rice weeds. Aqueous extraction of turmeric leaf was used in this study at 5%, 7.5%, 8.5% and 10% concentration. Based on the results of this study, turmeric leaf extracts are able to inhibit the germination and growth of jungle rice optimally at 5% concentration. This study helps to determine and identify the effectiveness of using natural herbicides to treat the jungle rice.

For future study, it is suggested to test the effect turmeric leaves extract on the other types of weeds since in this study shows that turmeric leaf positively inhibits the growth of jungle rice weeds which a type of weeds that already build a greater resistance towards a number of chemical herbicides.