

ABSTRACT

THE USE OF TEMPEH WASTEWATER AS ORGANIC FERTILIZER TO
INCREASE THE HEIGHT AND NUMBER OF LEAVES OF RED CHILI
(*Capsicum annuum L.*)

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This research investigates the effectiveness of tempeh wastewater as an organic fertilizer in enhancing the growth of red chili (*Capsicum annuum L.*). The study aims to determine the impact of tempeh wastewater on plant height and leaf count, as well as identify the optimal volume for plant growth. This research utilized quantitative experimental approach by involving two treatments groups: one receiving 150 ml of tempeh wastewater and a control group receiving none, with 10 replications per treatment. The results indicate that plants treated with 150 ml of tempeh wastewater exhibited an average height of 11 cm and 3,2 leaves, whereas the control group showed an average height of 6 cm and 2,3 leaves. These findings suggest that tempeh wastewater significantly improves chili plant growth, likely due to its nutrient content, which includes nitrogen (N), phosphorus (P), and potassium (K). This study highlights the potential of tempeh wastewater as an eco-friendly and sustainable organic fertilizer, contributing to waste management and agricultural productivity.

Keywords: *tempeh wastewater, liquid organic fertilizer, growth, red chili*
(*Capsicum annuum l.*)