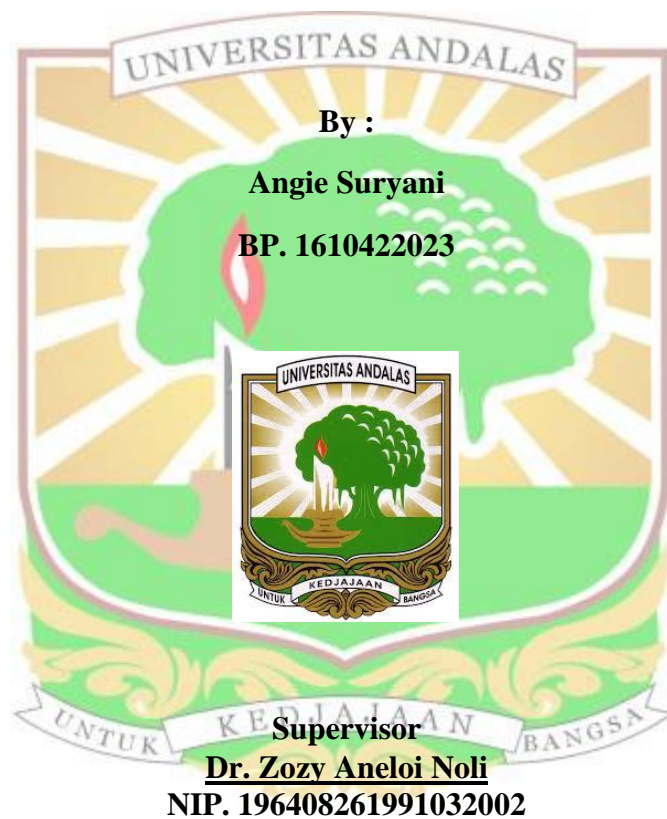


**EFFECT OF KELOR (*Moringa oleifera* L.) EXTRACT ON GROWTH,
BIOCHEMICAL CONTENT, AND REDUCING INORGANIC FERTILIZER
OF KALE (*Brassica oleracea* L. var. *acephala*) CULTIVATED UNDER
HYDROPONIC SYSTEM**

UNDERGRADUATE THESIS



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ABSTRACT

Organic farming using natural supplementations for improving plant performances are highly seeking. Kelor extract was considered as bio-stimulant and has gained more attention. The research was conducted to investigate the effect of kelor (*Moringa oleifera* L.) extract on the growth, biochemical content and reducing inorganic fertilizers on kale (*Brassica oleracea* L. var. *acephala*) cultivated under hydroponic system. The research used a complete randomized factorial design with 2 factors and 4 replication each. The first factor was foliar applied with and without kelor extract and the second factor was variation of Ab Mix concentrations (v/v) at 100% (0.02:1), 75% (0.015:1), and 50% (0.01:1). The result on growth parameter showed the application with kelor extract and 75% Ab Mix concentration has significant effect to enhanced the plant height, leaf area, fresh and dry weight in kale plant. Also in biochemical content showed the application with kelor extract has not significant effect on chlorophyll content but application with kelor extract and 50% Ab Mix concentration showed higher amounts of water (9.34%) and crude fiber (9.70%) and decreased heavy metal content. The research concluded that kelor extract was effective to enhanced the growth and biochemical content also reduced 25% inorganic fertilizers on kale cultivated under hydroponic system.

Keyword: *Biostimulant, Hydroponic, Kelor extract, Reduced inorganic fertilizers*

