

## ABSTRACT

One of the analyzes of the growth of kale plants planted with a floating raft planting system is by manipulating the air temperature in the greenhouse with the help of a microcontroller and using a UV lamp as a light source. This method applies the forced convection of heat that is in greenhose to get out by using a microcontroller and a relay as a control for the flow of electricity connected to the fan. The sistem used as a comparison is the conventional greenhouse which is often used by farmers to grow vegetables. The results of this study explain that the air temperature that exceeds the ideal limit of a plant to grow can affect the growth of the plant itself, thus affecting the harvest time. The temperature in the ultraviolet lamp greenhouse is controlled using a fan. The difference in stem height in this study reached 1.5 centimeters, the difference was obtained from the measurement results every 6 hours using a ruler.

***Keywords:*** *Hydroponics, control, temperature, microcontroller.*