

Abstract

PT.Sister Ponik is a revolution in the world of agriculture that allows indoor cultivation. The Sister Ponik device is equipped with artificial lighting, Light control system and planting tray. The advantages of Sister Ponik are able to adjust the light intensity to the type of plant being planted. Various sister ponik planting applications such as microgreens, cultivation nurseries, and indoor planting can be done indoors. Indonesia is dubbed as an agrarian country because most of the livelihoods of the Indonesian population are farmers. However, recently the area of agricultural land is very worrying due to the decline in the area of agricultural land, namely the increase in development in the form of housing and also companies. Therefore, the Central Statistics Agency (BPS) states that the area of agricultural land continues to decline by around +110,000 ha/year. Therefore, one way to increase the productivity of farmers from the lack of agricultural land for cultivating microgreen plants, the solution to overcome the lack of agricultural land for cultivating kale is to use a Microgreen Plant Factory with Artificial Lighting or commonly referred to as PFAL is a cultivation system with using artificial lighting using lamps. Plant Factory microgreen with Artificial Lighting usually uses artificial lighting that uses a type of Light Emitting Diode lamp commonly called an LED lamp. The concept of Plant Factory With Artificial Lighting is to create an environment that is good for plant growth and is very easy to control and regulate.

Keywords: *Kangkung, Plant Factory, Artificial Lighting, LED Lamp, Microgreen.*