

ABSTRACT

Hydroponics is the cultivation of plants without the use of soil but uses water and nutrient liquid as a plant medium. There are various methods in hydroponic nutrition irrigation, one of them is Nutrient Film Technique (NFT). In this study, designed 2 pieces of reservoir to accommodate the nutrient of the system on a level so that there is no deposition of nutrients. In the hydroponic system, the concentration of nutrient liquid is one of the parameters that determine the quality and yield of the crop. Therefore, there must be a system to control the concentration of the nutrient liquid so that the cultivation of the NFT technique can reach the maximum level. The concentration of the nutrient liquid is represented by the value electrical conductivity (EC). In this study will be monitoring and controlling of nutrient liquid on NFT hydroponics. The control system uses fuzzy logic to maintain range EC value of pak choi (Chinese cabbage) crops at 1.5-2 mS / cm during the planting process. From the experiment obtained fuzzy logic control system can maintain the range of EC values in accordance with the needs of pak choi (Chinese cabbage) plants.

Keywords : NFT Hydroponic; Electrical conductivity (EC); Fuzzy Logic Controller