ABSTRACT

Hydroponic system is a farming sytem using water to grow root. In this research, a system has been made that can control pH in hydroponic NFT (Nutrient Film Tehnique) system using arduino with fuzzy logic PID. System can stabilize pH. Tomatoes was chosen because it's was horticultural commodity with high value and quality. There are 2 hydroponicNFT system as a comparison, hydroponic NFT system with pH control and hydroponic NFT system without pH control. In hydroponic system with pH control, stabilized in pH 6 with average stem height each plant 69.99 cm, roots length 49.15 cm, and fruits quantity 173 fruits with average each plant 10.81 fruits. In hydrponic NFT system without pH control in 7.84 pH has average stem height each plant 75.76 cm, roots length 46.24 cm, and fruits quantity 288 with average each plan 22.15 fruits.

Keywords : Hydroponic System, Fuzzy, PID, Cherry Tomatoes, pH