Irrigation Paper

Generally scheduling of drip irrigation system in greenhouse is done manually that caused significant losses in water and nutrient. The objective of this paper is to determine drip irrigation schedule using Artificial Intelligence approach that was consist Artificial Neural Network (ANN) and Genetic Algorithms (GA). ANN model was used to predict losses number of water and nutrient; while GA model was used to optimize drip irrigation schedule that is consist of duration and interval of water and nutrient supply. ANN model consists of three layers, they were input teyer, hidden layer and output layer. As input parameters were micro environment and plant condition while as output parameter was losses number of water and nutrient. The objective of GA model was to determine duration and interval of water and nutrient supply with minimize of losses number of water and nutrient supply. From the study case showed that on 24 day after planting, the optimal duration of water and nutrient supply was 300 second with the interval of water and nutrient supply was 4 hours.

Keywords: drip irrigation, greenhouse, artificial intelligence. To download Full paper please sent email to: chusnul_ar[at]yahoo.com