ABSTRACT

Tea plants can optimally grow if they are planted on soil media with acidity between 4.5 – 5.5. But in Pusat Penelitian Teh dan Kina (PPTK), controlling the soil acidity is very difficult because farmers still control it manually. Therefore to overcome the problem, a soil acidity control system is needed.

In this study, the soil acidity control system was created by using the fuzzy logic as a control method, a soil pH sensor to read soil pH values, and chemical liquid sprays to the soil to purify and increase soil pH.

Based on the test results, the design of controls in the simulation and programming algorithm to control soil pH obtained an average accuracy value of 99.48%.

Keywords : *Control system of soil acidity, Fuzzy logic, Microkontroller*