ABSTRACT

Soybeans are food ingredients that are widely used in many kinds of processed foods. Particularly in Indonesia, soybeans is the main processed Indonesian food like tempeh and tofu, as well as the main ingredient of processed milk is soy milk. As a nation that is dependent on imports as much as 2 million tons of soybeans annually, Indonesian farmers only able to meet 60% of domestic needs. The factors that lead to decreased production is land and moisture. Soybean cultivation is divided into two, namely, dry cultivation and the cultivation of water-saturated. In this study, use a water-saturated way of cultivation. Since culture is saturated water has proven to be more efficient and produce higher production compared to dry farming. From the description above the author makes the solution that agro technology tools in the process of planting soybean-based embedded systems. To support the application of these tools created an expert system that can monitor and control the growth of soybean crops flooded when the water is processed using fuzzy logic. Water control is influenced from three linguistic variables such as temperature, humidity, and soil moisture. Display interface of this expert system application will only display the image data and chart the growth of soybeans. This agro technology tools and control systems as supporters expected to increase domestic soybean production.

Keywords: Soybean, Saturated Raising Water, expert systems, fuzzy logic.