DESIGN OF IOT-BASED AUTOMATIC FISH SPAWN COUNTING DEVICE

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ABSTRACT

Catfish farming represents a highly promising commercial endeavor with the potential to contribute to the community's economic development. However, the activity is still encumbered by obstacles, particularly in fish seed calculation. Sellers continue to utilize manual tools, such as cups, for this purpose. This practice persists despite the prevalence of automated systems for fish seed calculation. This study addresses these challenges by designing an automatic catfish seed counter based on the Internet of Things (IoT) to enhance efficiency and accuracy in calculating fish seeds. The system utilizes the E18-D80NK proximity sensor to detect fish seeds as they traverse the flow path. The sensor's outputs are then displayed on the LCD and Blynk applications. The integration of the IoT facilitates the real-time storage and monitoring of seed calculation data and total prices on mobile devices. The system's efficacy was validated through experimental trials, which yielded an average calculation error of 3.53%, signifying the system's precision. This system is anticipated to contribute to enhanced productivity and efficiency in catfish farming operations.

Keywords: IoT, fish seed counter, proximity sensor, Blynk, efficiency.