Efficiency of Shallot Irrigation Using a Remote Control Sytem

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ABSTRACT

Shallot are a horticulture commodity with high market value. Optimal production of shallots is influenced by factors such as humidity and soil temperature, which are regulated through the watering procces. Currently, Shallot watering predominantly relies on traditional methods that require significant energy and time. This research explores the use of a remote-controlled shallot watering system utilizing FS GT3B remote control, aiming to enhance the effectiveness and efficiency of time and labor in shallot watering procces and to enable long-range control of the watering device. The test parameters include the watering device velocityt at various servo end points (100%, 75%, and 50%) and pusher pipe positions (100%, 50% and 25%), additionally, the distance achievable by the remote control was tested. The result indicate that the optimal servo endpoints position is 100%, while the optimal pusher pipe position is 50%, with an average velocity od 0.1590 m/s. The average distance that can be reached by the remote control is 143.33 meters.

Key words: *Shallot irrigation device, long range control**,** Remote Control*