

Industry: Agriculture /// Water
Products Used: FX PLCs

PLCs develop green fingers

Watering plants is often seen as a simple task. However, when the plants are contained in 9.5 acres of greenhouses, the task becomes a little more difficult. This was the situation the engineers at Stratford Industrial Controls recently faced, when they were asked to supply a control system to Westland Nurseries.



For some time, Westland were using a customised control system for the irrigation and dosing of its glasshouses. This consisted of discrete components, such as relays, timers and switches. However, as this became more unreliable, and the number of glasshouses was to be increased, Martin Boers, the Managing Director, decided to obtain a replacement.

This was not just a matter of watering a few plants. In each glasshouse there are ten motor driven irrigation gantries. The gantries traverse the length of the glasshouse, spraying the seedling trays on the ground below as they pass. After completing one length, they return to the starting point and repeat the process

A control system was needed that had the capabilities to control exactly the movements of all ten gantries, yet was simple for anyone to operate. With this in mind, Stratford Industrial Controls designed and built a control panel based on a Mitsubishi F1 PLC.

As Martin Boers comments, "The control system is very simple. Just by pressing a button we can irrigate our plants exactly as we require."

Since the F1 proved so reliable, Westland has decided to use Mitsubishi PLCs to control two new dosing systems. In this case though, it is the latest Mitsubishi FX PLC that is used which gives them a much faster system reaction time than the original irrigation solution. The extended programming commands of the FX PLC also allow greater flexibility and a much shorter programme development time over the previously installed PLCs. A major advantage of using FX PLCs is their broad extension and communications capabilities that ensure there is plenty of scope for system expansion.

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Westland Nurseries Ltd

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"The FX provides a reliable method of automatically dosing the irrigation water. Since it was installed, there have been no problems", states Martin Boers.

Application story first released August 1994 by Mitsubishi Electric UK