

One of the UK's leading soft fruit growers has replaced a troublesome irrigation and feeding system with state-of-the-art technology from Priva, a move that has introduced reliability, cost savings and improved fruit quality.

The grower in question specialises in supplying soft fruit to selected major retailers and Michelin star restaurants. Its strawberry crop is grown under multi-bay and telescopic poly tunnels, and last year the company decided to automate its feeding and irrigation, which would help take care of processes such as electro-conductivity (EC) dosing of fertiliser and acid dosing of irrigation water to correct pH levels - but things didn't go to plan. In a matter of weeks it was evident that all was not well, there was an acid leak and the dosing was not functioning properly, all of which was leading to unacceptable levels of fruit 'pulping' between picking and packaging due to a lack of reliable feed.

Preston-based Arden Lea Group, an irrigation specialist and Priva dealer, was on site attending to another project when it was consulted about the strawberry issue. With an important crop season ahead, the company wasted no time in asking Priva UK to help develop a potential solution for the grower to consider.

Full assessment

"In theory the existing system was looking at factors such as EC and pH, but wasn't capable of doing the necessary calculations for correct control," says Nick Field, Commercial Manager at Priva UK. "Also, the fertiliser dosing pumps weren't man enough for the job."

Having just made substantial investment in its hydroponic soft fruit production, Priva recognised the need to reuse existing system components where possible, and this included most of the filtration side of the system along with the main irrigation pump. As for the new Priva components, on the feed/fertiliser side, two Priva NutriJet dosing systems were recommended for dosing at 45m³/hr (into a closed mixing chamber) for outgoing water. Priva NutriJet is a packaged unit for feed and acid dosing. It normally offers an integrated pump but can optionally be supplied without, where there is an existing customer pump, as in this case.

Regarding irrigation water, a Priva Neutralizer automatic pre-treatment and dosing system was proposed to take care of the possibility that the bicarbonate content of irrigation water may be too high.

Reducing bicarbonate levels allows growers to reliably control subsequent EC and pH levels. This results in a stable pH from the fertiliser dosing unit down to the roots and enables plants to absorb fertilisers more efficiently. The Priva Neutralizer removes bicarbonate from borehole, surface (rain) and mains water.

From a control perspective, Priva proposed for all equipment to be linked using a PC with data logging capability and long term data storage. This could provide a plethora of useful information in graphical

format, such as measured EC and pH flow rates, and the daily quantities going out on each valve. It would also be possible to log in remotely from anywhere with an internet connection, including smart phones. The proposal by Priva and Arden Lea used the existing wireless control system, and this would turn out to be the first UK installation where Priva linked to the valves via a (third party) wireless control system, demonstrating important market capability.

Sweet success

Suitably impressed, installed two systems in July 2010, with the upshot being considerable benefits, such as savings in both water and fertiliser - prices for the latter have risen dramatically in recent times.

Reliable feed and irrigation has also led to less fruit pulping, and potentially, improved fruit flavour and shelf life.

But ultimately, reliability is the key advantage for the grower, which is currently considering quotations to add two further systems.

"Unlike the previous system, the Priva set-up does what we want it to do, all of the time, reliably," states a spokesperson at the grower's farm. "Since it was installed last year it's been as good as gold - all of our previous hassles have disappeared."

Any questions?

Contact our expert on soft fruit solutions!



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