

Sinclair iQ wins firm praise from Zespri Europe

A high tech firmness testing system has enabled Zespri Europe to make substantial cost savings by sorting and trading kiwifruit on-line.

Zespri Europe manages the import, re-packing and distribution of Zespri marketed New Zealand kiwifruit across Europe. The operation is based at the Belgian New Fruit Wharf facility in Zeebrugge, Belgium.

Zespri Europe previously sorted kiwifruit by removing soft and damaged produce by hand. The company was looking to sort fruit more efficiently and reduce costs. Following successful trials, UK-based fruit testing technology specialise Sinclair was commissioned to install an on-line firmness testing system.

The Sinclair iQ firmness tester is a non-destructive system that operates on-line at high speed. The Sinclair iQ measures the firmness of every individual fruit on-line at a rate of up to 10 fruit per second. The system predicts the ripeness level of each fruit and sorts produce into up to six firmness bands.

Sinclair purpose-designed a two-lane firmness testing system for Zespri Europe. The system segregates fruit of a specified firmness and removes any unevenly ripened, soft or bruised produce. The system has the capacity to test and sort up to 32 pallets of fruit (320,000 kiwifruit) per shift. The Sinclair iQ firmness tester has now completed its second commercial season at Zespri Europe's Zeebrugge facility. As a result of its success, a long-term commercial contract with Sinclair has been agreed.



The Sinclair iQ firmness tester, a non-destructive high speed system for measuring the firmness of individual fruit on-line.

As a non-destructive testing system, the Sinclair iQ offers considerable savings on the waste and labour costs associated with the penetrometer, the industry standard destructive pressure measure. Sensors within the Sinclair iQ system's patented air bellows touch the surface of each fruit at four separate locations to measure the electrical response. These readings are then used to predict the elastic property of the fruit which reflects its ripeness level.

Norwich-based labelling company Sinclair International developed the Sinclair iQ firmness tester for use by fruit distributors and packhouses worldwide. The system enables suppliers to provide consistent quality fruit of a specified firmness. It also helps eliminate the costly rejection of fruit considered too hard or too soft.

In addition, the Sinclair iQ can separate 'Ripe and Ready to Eat' fruit for retail marketing programmes. The system operates at lane speeds of up to 10 fruits per second and is compatible with most major sizing and grading equipment.

Sinclair iQ systems are now installed at commercial fruit operations worldwide including the USA, UK Europe, Chile, New Zealand and South Africa. Product applications include avocado, kiwifruit,

Philip Marechal, Zespri Europe Operations Manager says: “The kiwifruit season is unpredictable and so our labour requirements varied significantly. It was always difficult to plan resources and sorting fruit by hand was both labour intensive and costly.”

He adds: “The iQ system has proved that it can do its job well and we are very pleased with its performance. It has enabled us to make significant time and cost savings. The flexibility of the system allows us to work quickly and meet demands immediately.”

stonefruit, apples and mango. Sinclair has also launched a bench-top iQ unit to complement the online system. The bench-top unit enables quality testing to be undertaken at various points in the packing and distribution chain.