

Development of Prototype Infrared Sensors for Predicting Dormancy Breaking in Potato Tubers

Dr Kate Kemsley

Potatoes are the fourth largest agricultural crop worldwide: in the region of 400 million tonnes are produced each year. A large proportion of these are stored to provide a year round supply. Under optimum conditions in commercial warehouses, potatoes can be stored for up to twelve months. However, keeping tubers dormant is not straightforward, and the sector frequently suffers losses of up to 25% of the crop due to sprouting. Dormancy breaking can be temporarily halted by spraying with a sprout suppressant, but this needs to be done at the correct time and spraying when it may not be necessary is wasteful and adds to the chemical residue of the tubers.

Building on 2 years of lab-based research, Dr Kate Kemsley at the Institute for Food Research will use Norwich Research Park Translational Funding to build a selection of prototype infrared sensing devices aimed at early prediction of dormancy breaking in stored tubers, with the aim of assisting better crop management. Trials of these in commercial settings are planned for the 2016 harvest. This sensor would be a highly valuable tool for the industry, reducing waste and economic losses.