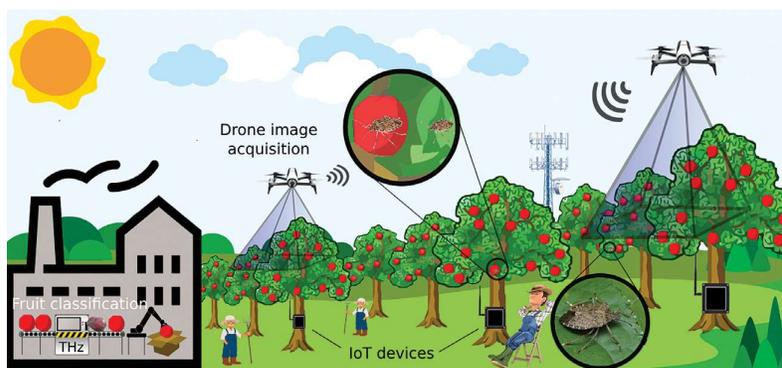




AUTOMATED MONITORING OF INSECT PESTS

Monitoring for insects and insect damage is time consuming and, while an important part of IPM programmes, it is a task that needs to be simplified and automated. A new EU ERA-NET project, HALY ID, funded by the Department of Agriculture, Food and the Marine and Teagasc, and involving Teagasc and the Tyndall Institute in Cork, looks to simplify and automate this process. The project will seek to utilise machine learning to develop artificial intelligence solutions to monitor for pests and to utilise technologies such as unmanned aerial vehicles and static cameras to conduct pest monitoring and to report directly to growers on pest populations and crop damage. Initially, the project will focus on *Halyomorpha halys*, the Brown Marmorated Stink Bug,



which is an invasive Asiatic shield bug pest of fruit trees, vegetables and amenity trees in Europe. It was recently recorded in the UK. The Irish component of the project will focus on two prominent insect pests, Spotted Wing Drosophila and Carrot Root Fly,

as model pests to test and develop the technology. If successful, it will serve as a model for the development of automated pest monitoring systems. For further information, please contact Dr Michael Gaffney, Michael.Gaffney@Teagasc.ie. *

GRIPPING MUSHROOM RESEARCH

Teagasc has started an exciting research project called SoftGrip. This is a three year, EU-funded project that could revolutionise the harvesting of mushrooms, addressing the severe labour shortage issues facing the sector. The project aims to develop a soft robotic 'gripper' designed specifically for harvesting delicate produce. The gripper would be integrated with end-to-end picking automation systems for mushrooms and wider applications to harvesting other delicate produce is envisaged.

The gripper will 'learn' how to harvest mushrooms by imitating the harvesting process performed by human harvesters. Novel, 'intelligent' materials will be developed for the surfaces of the gripper that are food-safe, self-repairable and recyclable so they are more environmentally sustainable. Engineers and scientists from five countries are involved and Teagasc's role is to ensure that all elements of SoftGrip are compatible with current mushroom growing systems. Over 80% of Irish mushrooms are exported to the fresh market in Britain where the demand is for high quality, blemish-free mushrooms. Robot grippers which have been developed to date tend to leave pressure marks on the mushroom which is unacceptable in the demanding

British market. In due course, the SoftGrip prototype will be demonstrated on Teagasc's mushroom research unit. For more information contact Dr. Helen Grogan - helen.grogan@teagasc.ie. *

