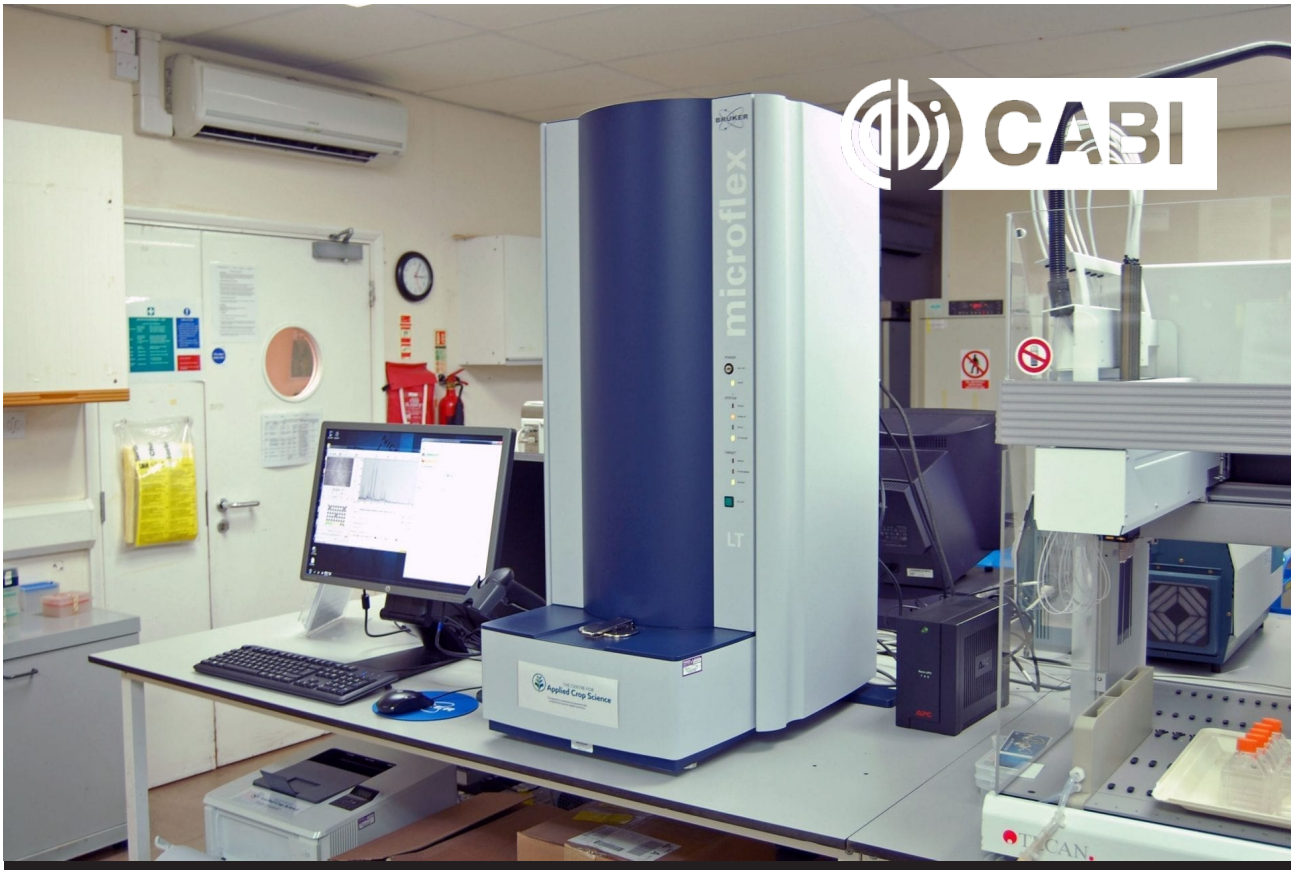


ESTABLISHING A CENTRE FOR CROP HEALTH AND PROTECTION IN THE UK

Locations	Ghana, United Kingdom
Dates	01/03/2016 - 31/03/2020

Summary

Breakthroughs in science and technology are helping overcome global food production challenges and changing the worlds' agriculture. A new Centre for Applied Crop Science is ensuring the UK has the necessary capital needed to deliver a cutting edge platform to support agriculture in the UK and beyond. CABI is the lead partner in three main work strands namely: Novel control discovery and implementation, Collection of biotic crop pests, and Horizon scanning and international development.

The problem

The UK has traditionally been a leader in agricultural science and is constantly developing new approaches to food and farming systems through agricultural research. In order to ensure its agricultural investment delivers material benefits, the UK Government initiated an Agri-Tech strategy in 2013. To help accomplish this, a new Centre for Applied Crop Science has been launched.

The centre, with £21.3 million of government investment over four years, is being headquartered at the National Agri-Food Innovation campus at Sand Hutton near York. It will enable partner organizations, retailers, processors, agronomists and manufacturers, to share resources, optimize return on research and development costs, reduce waste and accelerate the registration process for new products.

The centre will lead the way in developing solutions to the challenges facing world agriculture and is bringing together the best expertise, knowledge and insight from leading research organizations and industries in the sector. This collaboration between academia and industry will, for the first time, give farmers access to the best and most sustainable technologies, strategies and protocols to improve crop performance, and make a real difference at the farm gate.

What we are doing

As the centre's mission fits closely with CABI's, we are involved in a number of aspects of the initiative. These include horizon scanning for potential new threats to the UK food supply chain. Funding is also being used to launch Plantwise eClinics in key countries that supply food to UK supermarkets. The first eClinics supported by the centre were launched in Ghana in 2016 – a country that provides the UK with cocoa.

CABI is also looking for opportunities to use the next generation of natural pesticides – or biopesticides – to treat existing and emerging pests and diseases affecting crops grown by farmers in the UK and beyond. CABI will screen its Genetic Resources Collection, as well as utilize new fungal and insect or plant samples from partners' field collections, in search of the next biopesticide product. CABI will also build a reference collection of pathogens from the key crops grown in the UK. This reference collection, stored in liquid nitrogen, along with an associated database will be fully searchable by project partners and potential customers Selected samples will also be subjected to our new Matrix Assisted Laser Desorption Ionisation – Time of Flight (MALDI-TOF) mass spectrometer which will generate unique profiles of the assessed isolates allowing for rapid identification in the future.

Results so far

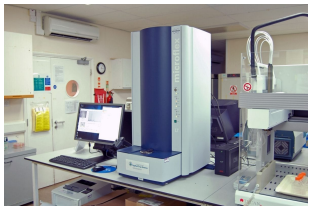
The first tranche of plant doctor tablets for the eClinics have been purchased and are already providing support in Ghana. The cryopreservation tank, MALDI-TOF and shaker unit have all been installed and commissioned at our labs in Egham and selected strains from our Genetic Resources Collection are being screened, associated data captured and this is being integrated into the centre's new resource.

It is anticipated that much more material will be received from the monitoring and sampling activities, as well as samples from targeted field surveys.

Donors Innovate UK

Partners Tesco, UK Government, Rothamsted Research, Newcastle University, Frontier Agriculture, Fera, Farmcare, Cranfield University, Bayer, Agriculture and Horticulture Development Board (AHDB)

CABI Project Manager Richard (Dick) Shaw







https://www.cabi.org/what-we-do/cabi-projects/