

## Oxford Centre for Plant Science Innovation



The Oxford Centre for Plant Science Innovation is the University of Oxford's interconnected centre for research and development to address challenges in agriculture and forestry. As a county, Oxfordshire benefits from significant levels of farmland, with 74% of the county's land cover made-up of farmland, according to Wild Oxfordshire. The centre was set up using £1,909,144 of funding from the government's Local Growth Fund, secured by the Oxfordshire Local Enterprise Partnership (OxLEP), to establish a centre in Oxford city, delivering jobs and apprenticeships for Oxfordshire and providing support to spin-out companies.

To give context to this investment, Professor Chris Hawes (Honorary Fellow of the Royal Microscopy Society) had previously stated: "The importance of plants cannot be underestimated. We're going to reach a population in the world of around nine billion by 2050. With this, and the continued loss of agricultural land as a result of climate change, it is predicted that agricultural production will have to double. Plants are the primary producers of the majority of our food, so plant science research is vital."

With challenges such as weeds becoming resistant to traditional herbicides, the demand for farmers around the world to feed the growing population – but with less environmental impact – has never been higher, or more challenging. Herbicides with new modes of action (the way chemistry interacts with plant biology to inhibit weed growth) can break resistance and improve safety and sustainability.

Plant scientists at the Department of Biology within the University of Oxford also welcomed the introduction of the Genetic Technology (Precision Breeding) Bill to facilitate new approaches to increase crop production and food security and the launch of the Science for Sustainable Agriculture communications platform. This Bill is an important and necessary step towards achieving sustainable agricultural and land management practices in the UK. (Professor Jane Langdale – the University of Oxford).

### **Outputs and outcomes of the project:**

- The required outputs and outcomes have been achieved including the full refurbishment of a laboratory which now facilitates dedicated research into Agriculture Biotechnology.
- 31 jobs and apprenticeships were created against a target of 31 with more expected as the spin out companies expand.
- With the assistance provided by the Local Growth Fund, Oxford has become a centre of agricultural biotechnology innovation and established the expertise at the University of Oxford to commercialise in this sector.
- Since the completion of the centre in 2020, it has supported two spin-out organisations:
  - [Wild Bioscience](#), which utilises its platform to harness wild solutions to deliver radically enhanced crop yields. The bioscience company currently employs 10 people, with aims to double this by the end of 2022 and has a purpose-renovated building housing its laboratories and growth facilities at Milton Park.
    - Wild Science have raised in excess of £1,000,000 of investment.
  - [MoA \(Modes of Action\) Technology](#), whose work building on fundamental biology from Oxford's Department of Plant Sciences, with their headquarters located at Oxford Science Park, has seen the company set up the first systematic empirical search for new MoAs through three distinct discovery platforms.
    - MoA Technology have raised in excess of £42,000,000 of investment.

- Since receiving support from the University of Oxford through this project, MoA have significantly increased the number of staff employed and look to have 80 employees by mid-2023.
- At the end of 2021, MoA Technology opened a new facility at the Stockbridge Technology Centre (STC) situated at Cawood between Leeds and York (UK), utilising the pipeline of promising lead candidates flowing from the high throughput screening platforms at its Oxford headquarters, to be tested in state-of-the-art glasshouses and on into field trials within this 75-hectare site on prime arable land.