



Agribusiness 2016

Accelerating the agriculture and food agenda



The AgriTech Strategy – the answer to accelerating the agricultural agenda?

Dr Stephen Axford

Head of Agritech Strategy, BIS



Department
for Business
Innovation & Skills

Stephen Axford
Head of Agri-tech

Agricultural Technologies

The key to **feeding** and **fuelling** the planet



Image: Bs0u10e0

What's the problem?

2 Billion more people

The world's population is expected to rise from 7 to 9 billion by 2050... and could reach 11 billion by 2100



Diets are changing...

More **meat** and **dairy** products are being consumed



Image: Nick Nguyen

This means that there is an **increasing demand** for...



...land, energy, water, feed, fertilisers, and other resources

Agriculture is also competing for resources

Urbanisation and industrialisation put more pressure on land



Image: Jamie McCaffrey

There are also **environmental threats**
which means we need to adapt to...

Environmental change



Image: Mohamed Malik

Changes in water availability



Image: Kevin Dooley



Less predictable weather patterns

Image: OregonDOT

We need to produce more food,
with less land, and fewer resources



These **challenges** mean that **new** agricultural
science and **technology** is needed...

The Agri-Tech Strategy will make the UK a world leader in **agricultural technologies**



We are funding projects that will find solutions for global challenges whilst benefiting the UK economy

Agri-tech Catalyst – Organisations across the UK funded

98 projects funded to date
all across UK (only lead partner shown on map)

Projects worth £77 million

- £50 million funding from government
- £27 million funding from industry

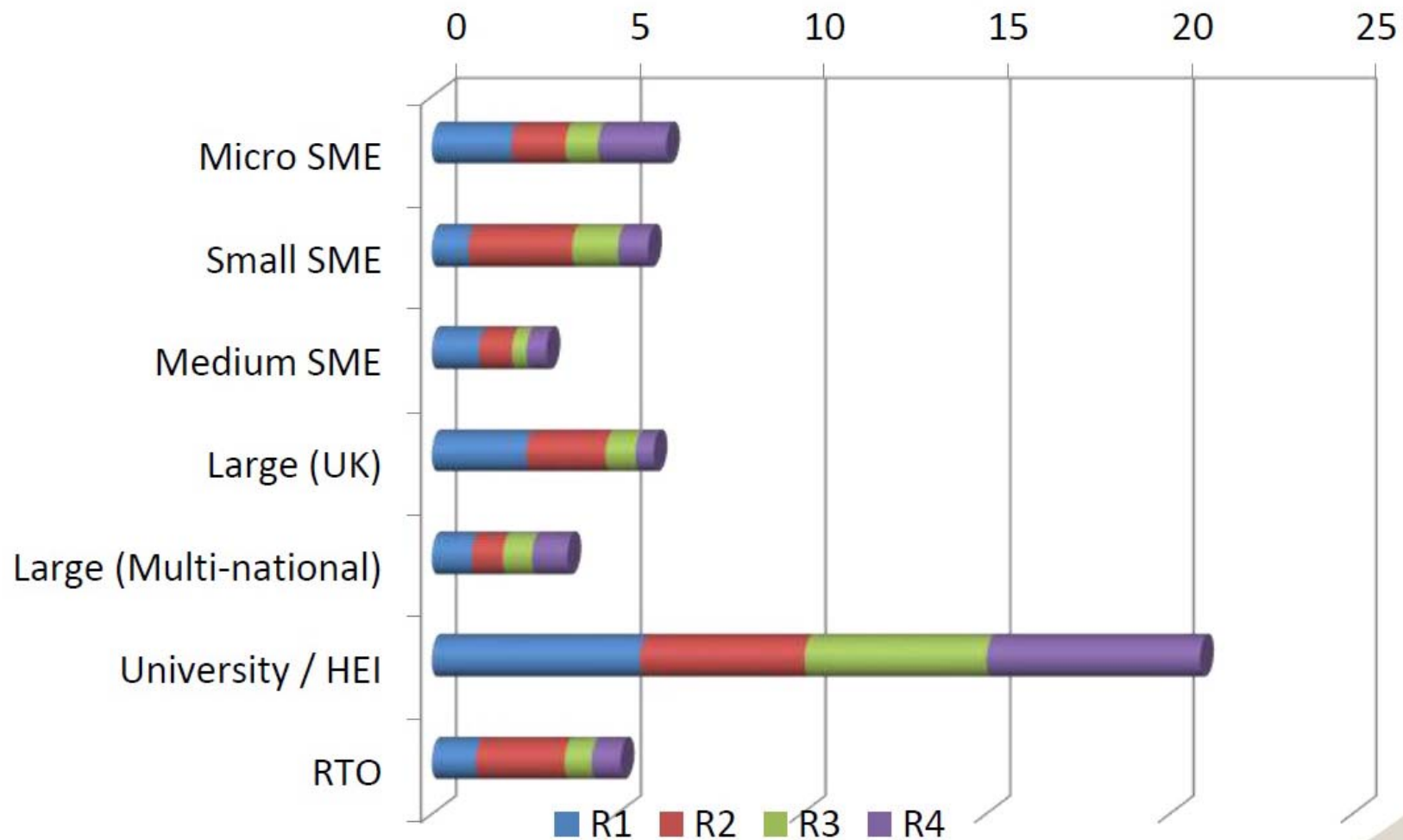
Round 5 still open (closes in January 2016)

- Apply on Innovate UK website



Agri-tech Catalyst – All business types funded

Rounds 1 – 4 Project grant by organisation type (£m)

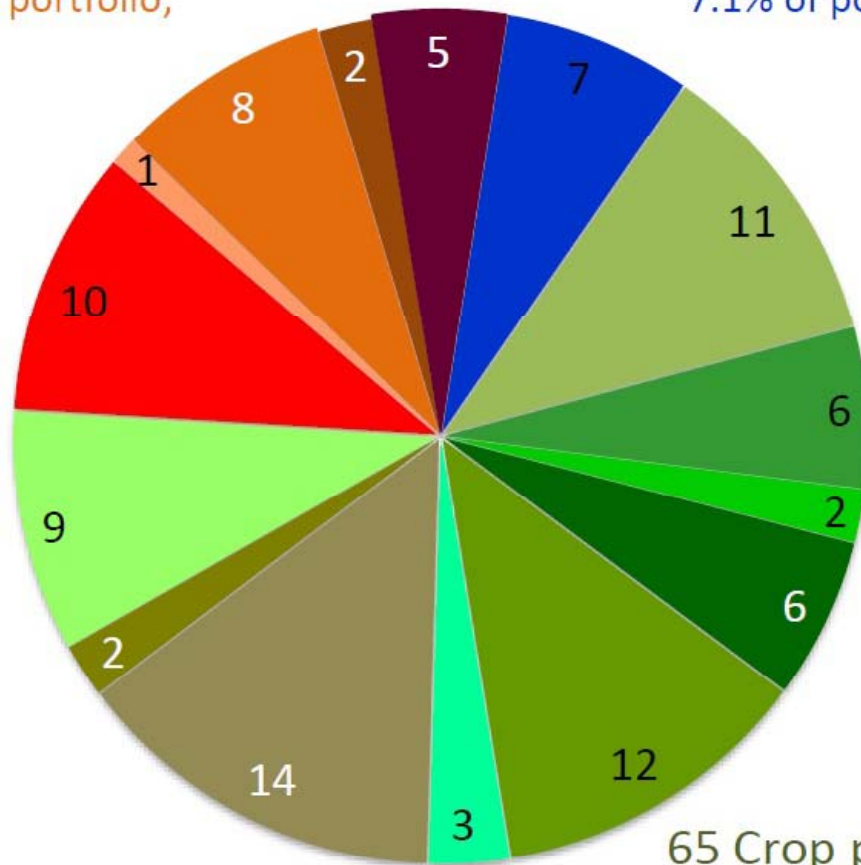


Agri-tech Catalyst – full spectrum of agriculture funded

Rounds 1-4 number of projects by challenge area

26 Livestock projects
26.5% of portfolio;

7 Aquaculture projects
7.1% of portfolio;



- Aquaculture
- Crop: Plant Breeding and Genomics
- Crop: Soil water & nutrition management
- Crop: Weed Control
- Crop: Disease Control
- Crop: Pest Control
- Crop: Storage and management
- Crop: Engineering Solutions & Precision Ag
- Crop: Non-food applications
- Crop: Other
- Livestock: Animal Breeding and genomics
- Livestock: Nutrition
- Livestock: Health
- Livestock: Housing and management
- Livestock: Engineering Solutions & Precision Ag

65 Crop projects
66.3% of portfolio

Σ=98

New technology for precision application of nitrogen



Partners



University of Manchester

ADAS UK Ltd

J Sainsbury PLC

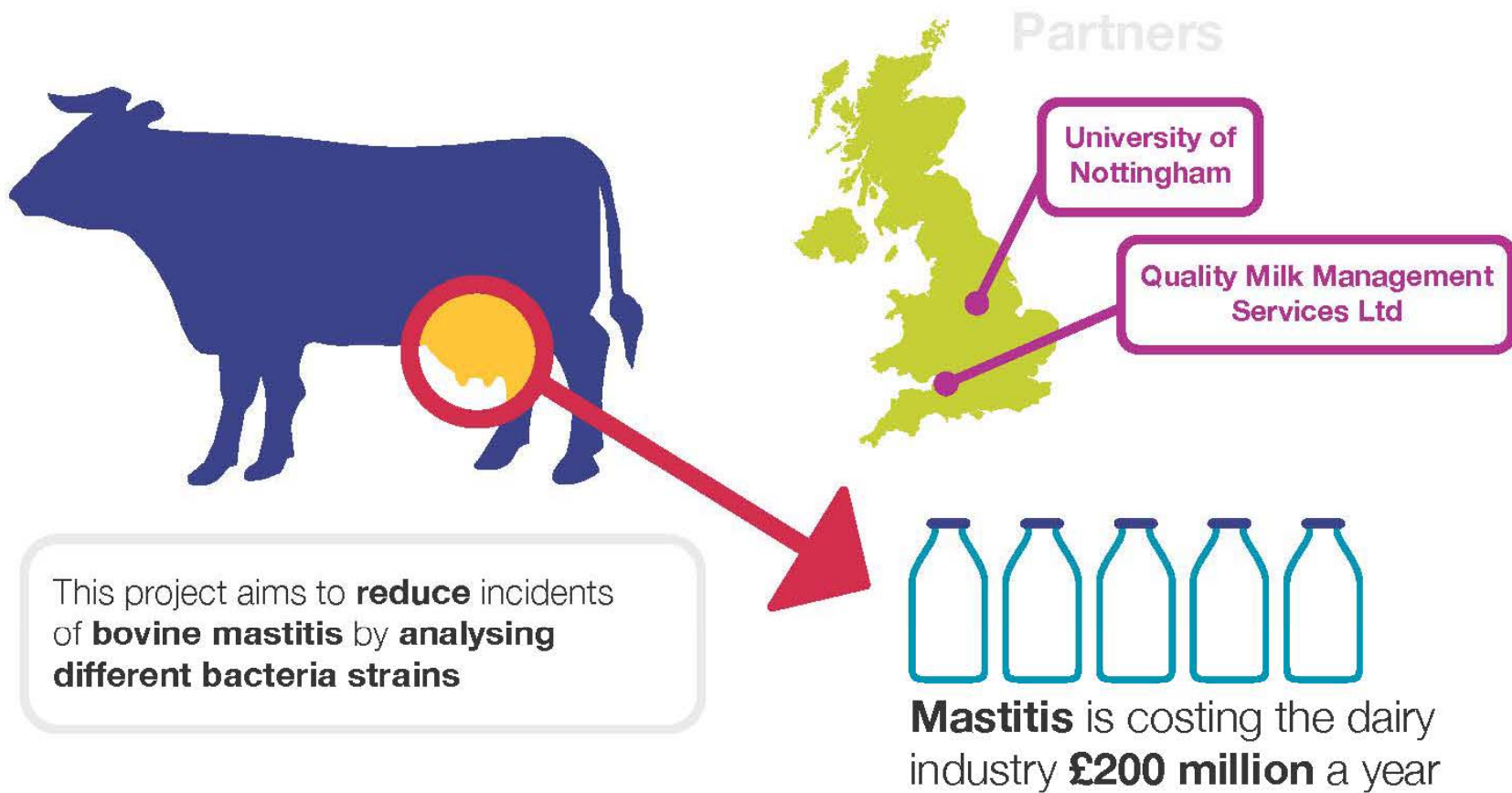
This project aims to develop a **tractor-mounted scanning** unit for precision application of nitrogen, in order to **reduce the cost** and **carbon footprint** of **wheat production**

#agritech

**Industrial
Strategy**

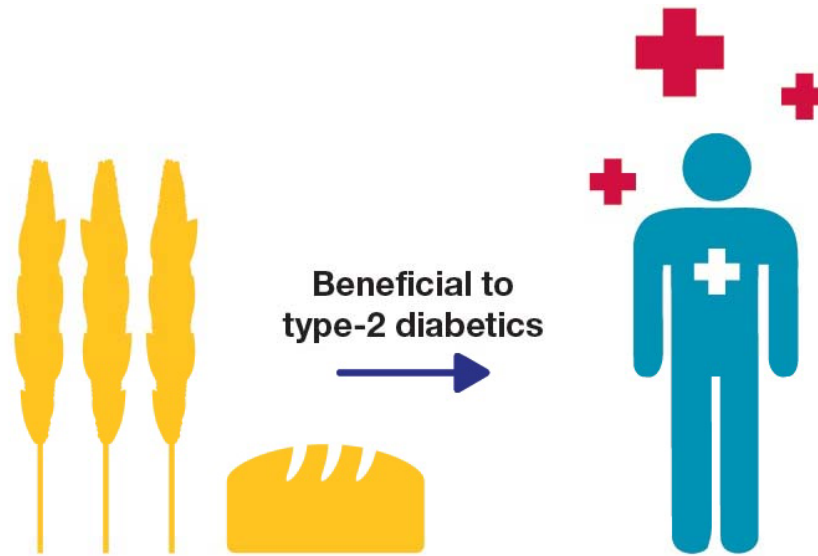
Securing jobs and a
stronger economy

Analysing bacteria strains to reduce mastitis



Exploring crop variation to develop products that will benefit type-2 diabetics

Exploring **pearl millet variation** to ultimately produce **improved bread products for type-2 diabetics**.



Partners

Aberystwyth University

Unilever Research & Development

International Partners

1. Hindustan Unilever, India

5 million type-2 diabetics in the UK by 2025



40 million type-2 diabetics in India

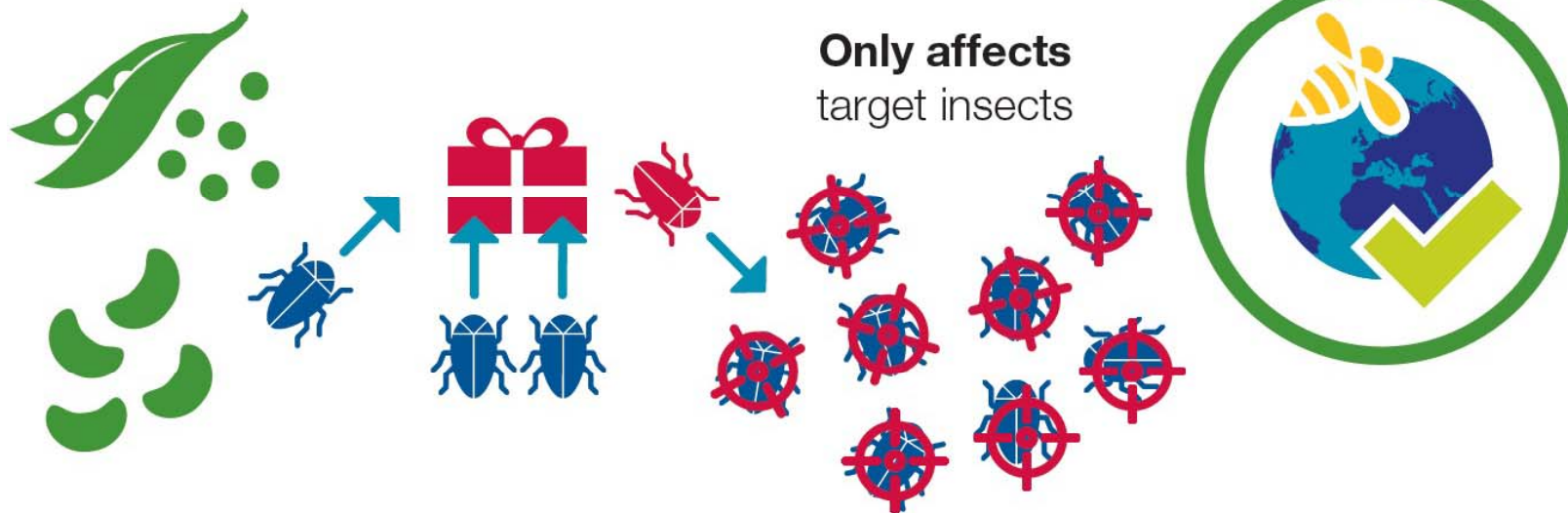


Protecting crops without spraying insecticides

Partners

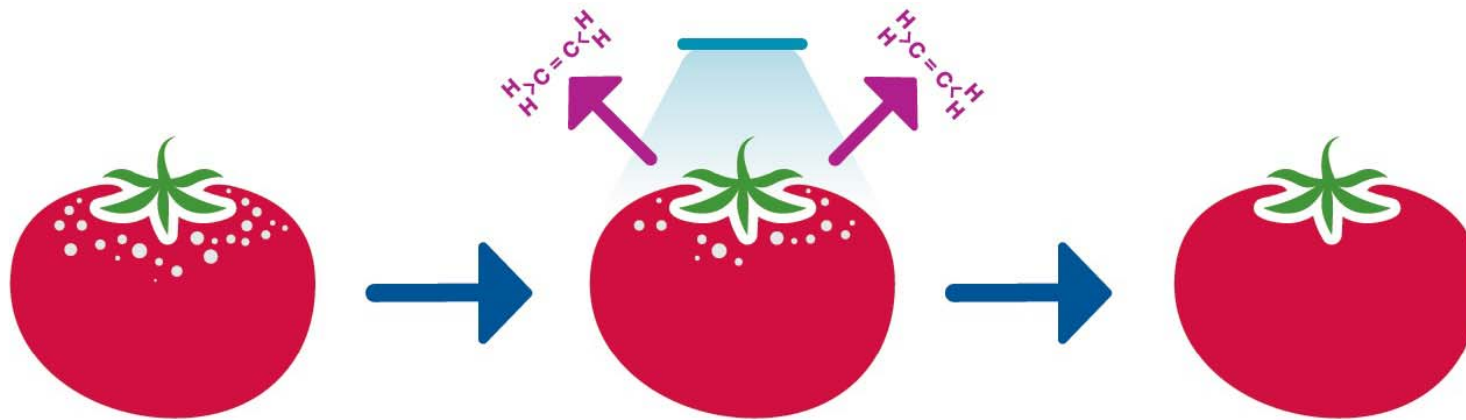


Protecting peas and beans **from beetles without spraying insecticide**, by luring them to devices coated in insect fungal spores. The infected beetles spread the disease to others, with **no ill effects to the environment or non-target insects.**



Only affects
target insects

Extending the shelf-life of fresh produce without fungicide



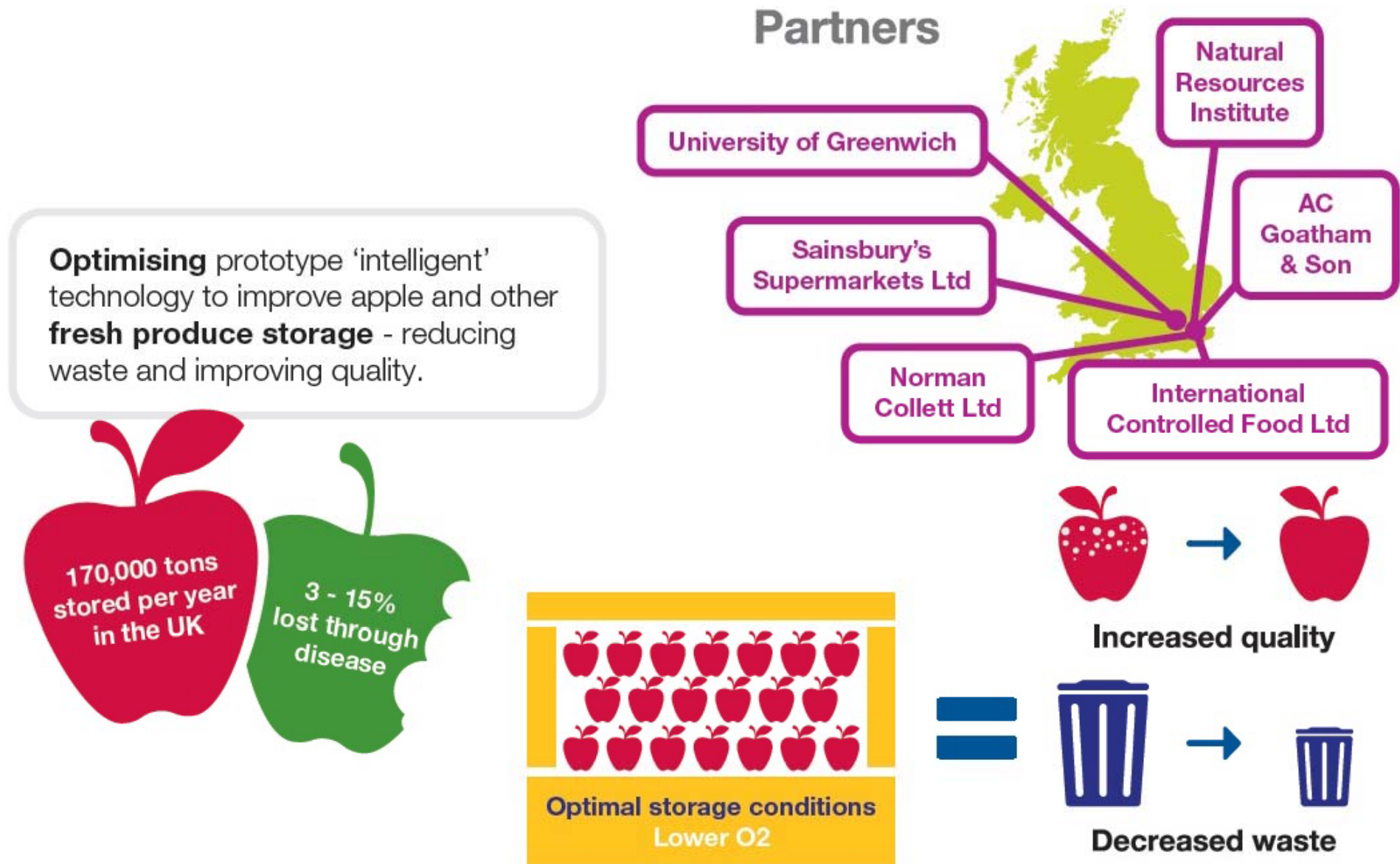
Partners



Extending the shelf-life of fresh produce **without fungicide**, using **ultra-violet light** to **induce natural plant resistance mechanisms** and the removal of the plant hormone ethylene to **prevent grey mould infection**.

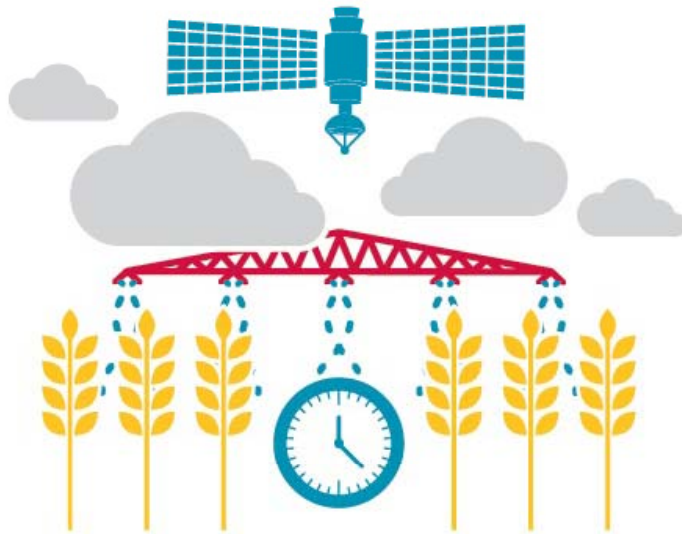
1. North Bank Growers Ltd
2. May Barn Horticultural Consultancy Ltd
3. Nutricycle Ltd
4. University of Nottingham
5. Adas UK Ltd
6. Lambda Photometrics Ltd
7. Finlay Flowers UK Ltd
8. Wight Salads Group Ltd

New technology for intelligent control of fresh produce storage



Using RADAR data to deliver fertilizer when crops optimally need it

Testing **the use of radar data** to monitor arable crops in all weather and light conditions to pinpoint the different growth stages. This will enable farmers **to deliver fertilizer** and other treatments **at precisely the right time.**



Partners

Satellite Applications
Catapult

AgSpace
Agriculture Ltd

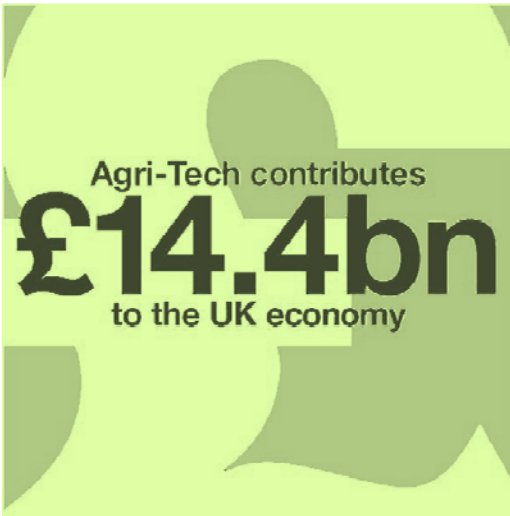


Agrimetrics – using 'big data' to benefit businesses and farmers



- Agrimetrics is the UK's first, potentially the world's first, big-data centre of excellence for the entire food system is now open.
- It will enable the use of data science and modelling to build a more productive, sustainable and efficient food system.
- The information and opportunities available to the agri-food sector from the big-data revolution are vast, but are currently being held back by data being held by multiple organisations, in different formats, and different levels of quality.
- Agrimetrics will develop a big-data science platform to unlock these opportunities for the benefit of the UK economy and put the UK at the heart of a global data revolution in agriculture.

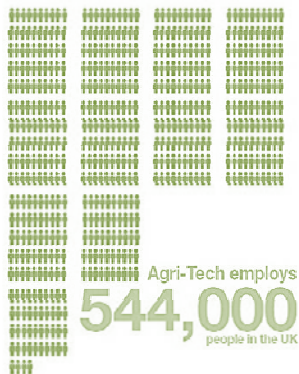
Agri-tech is already a significant part of the UK economy...



£26.5bn
Agri-Tech underpins the
UK's **£26.5bn** food and drink
manufacturing sector



...in addressing the global challenges there is an opportunity for this sector to grow significantly



↑ 1,000 people



Could your business capitalise on this growing market?

Please keep up to date with developments and new opportunities

Twitter: @AgriTechGov

Blog: <https://agritech.blog.gov.uk/>

Website:

<https://www.gov.uk/government/collections/agricultural-technologies-agri-tech-strategy>

Or search “agri-tech strategy collection” in Google

Newsletter: email agritechstrategy@bis.gsi.gov.uk to subscribe



Agribusiness 2016

Accelerating the agriculture and food agenda

