

Technology Strategy Board

Driving Innovation

The Sustainable Agriculture & Food Innovation Platform (SAF-IP)

**Rothamsted Research
WGIN Stakeholders**

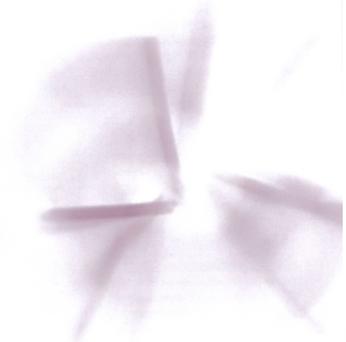
22nd November 2011

Calum Murray
Lead Technologist –SAF IP

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Sustainable Agriculture
and Food
Innovation Platform

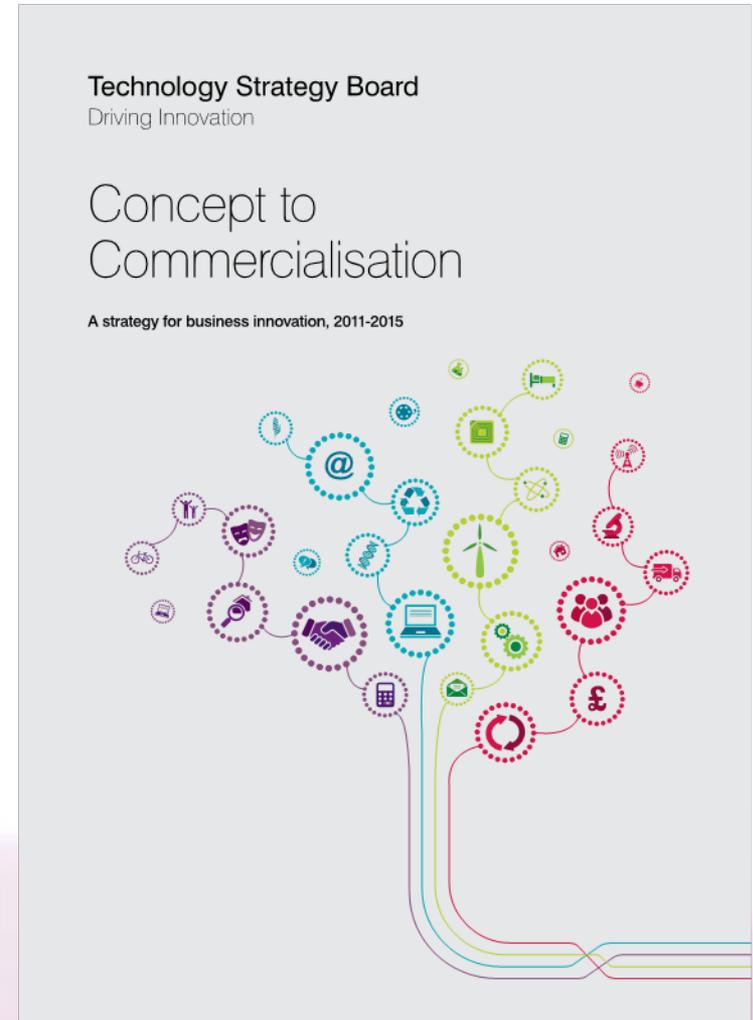


Who are The Technology Strategy Board?

We are the UK's national Innovation agency.

Our goal is to accelerate economic growth by stimulating and supporting business-led innovation.

http://www.innovateuk.org/assets/0511/technology_strategy_board_concept_to_commercialisation.pdf



Key Assessment Criteria...

- **The Idea** (Innovative achievable exploitable)
- **The Market** (Where, How Big, Exploitation Plan)
- **The Consortium** (Capability, Experience)
- **Additionality** (How will TSB make a difference)
- **The Impact** (How Big, Where and When)



Sustainable Agriculture and Food Innovation Platform

Launched in November 2009, the **SAFIP** is a **£90m+** programme of investment over 5 years from 2010 - 2014.

Core-funding from TSB (£50m) DEFRA (£30m) & BBSRC (£10m) , with additional funding from other partners on a call by call basis



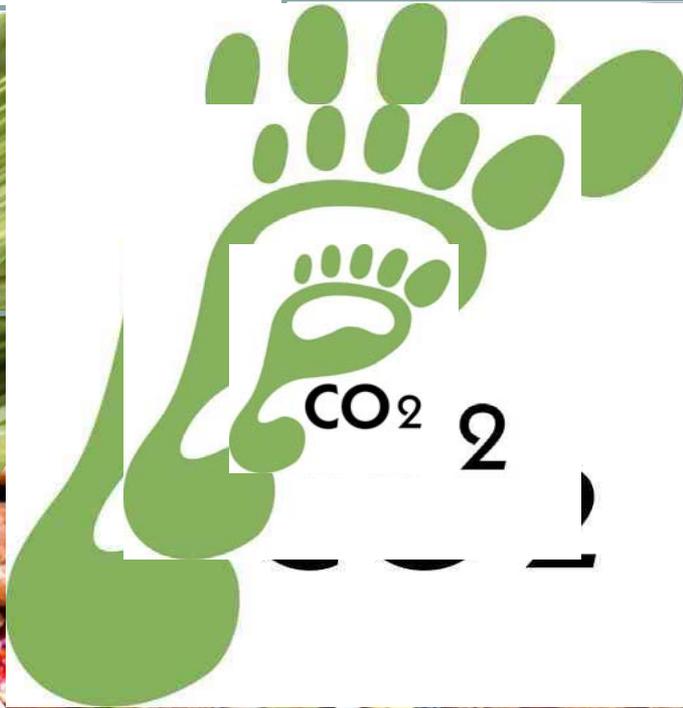
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Crop Productivity



Livestock Productivity



Waste Reduction

New Approaches to Crop Protection

1st SAFIP Collaborative R&D Call

January 2010



New Approaches to Crop Protection

Two Specific Wheat related Projects

1. Protecting 2nd Wheat through the reduction of Take all inoculum build-up

- RAGT, Limagrain, KWS and RRes - £267k Project

2. Inducing Broad Spectrum disease resistance in wheat

- RAGT, University of Sheffield - £476k Project

Co funders



New Approaches to Crop Protection

Protecting 2nd Wheat through the reduction of Take all inoculum build-up

– RAGT, Limagrain, KWS and RRes - £267k Project

- Relative inoculum left by Avalon vs Cadenza
- Genetic Loci controlling trait been Identified
- Assess further UK varieties with respect to this phenotype & fine map genetic loci further
- Identify diagnostic markers
- Utilise results in developing CV's that resist TAB



New Approaches to Crop Protection

Inducing Broad Spectrum disease resistance in wheat

– RAGT, University of Sheffield

- Build on observations of symbiotic root fungal associations inducing systemic resistance to infection by root and shoot pathogens
- High throughput screening to select for this trait
- Assist in development of new varieties with: -
 - Durable disease resistance
 - Enhanced nutrient use efficiency



Sustainable Protein Production



Sustainable Protein Production

**COMPETITION FOR COLLABORATIVE R&D FUNDING
APRIL 2011**

Second SAF IP CR&D call

April 2011

Sustainable Protein Production

High value Protein concentrates from wheat bioethanol through recovery of yeast proteins and reducing fibre content of distillers dark grains

– AB Agri Ltd, Ensus, VireolPlc, Ifr, ADAS UK Ltd - £1.5m

- Develop YPC and WPC as alternative to DDGS
 - Yeast mechanically separated from liquid fraction by centrifugation
 - hydrolysis of residue to remove wheat fibre
- Lower energy cost than DDGS
- Substitutes for Soya bean meal



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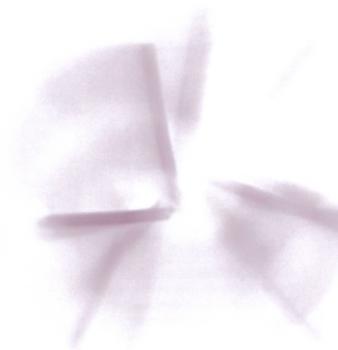
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What next?



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Food Processing & Manufacturing



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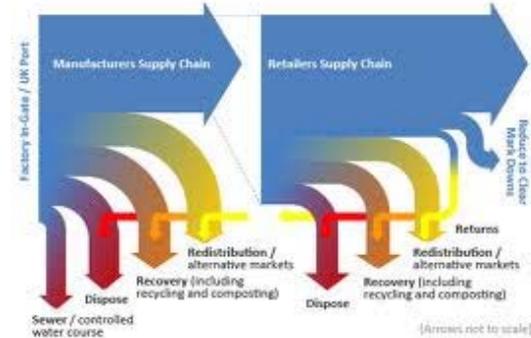
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Food Manufacturing Efficiency £10m CR&D Competition – April 2012

- Increasing Raw material Use efficiency
- Reducing Energy & Water use in Manufacturing
- Reducing Supply chain waste
- Improving Product shelf Life
- A whole supply chain approach
 - from innovative technologies for “pre and post” farm gate handling & storage..
 - to more efficient food processing, & packaging and distribution in the retail and food service sectors..
 - and the efficient recycling of manufacturing by-products and waste streams

To be led by FP & M Industry Partner



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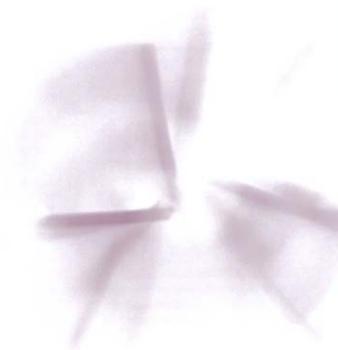
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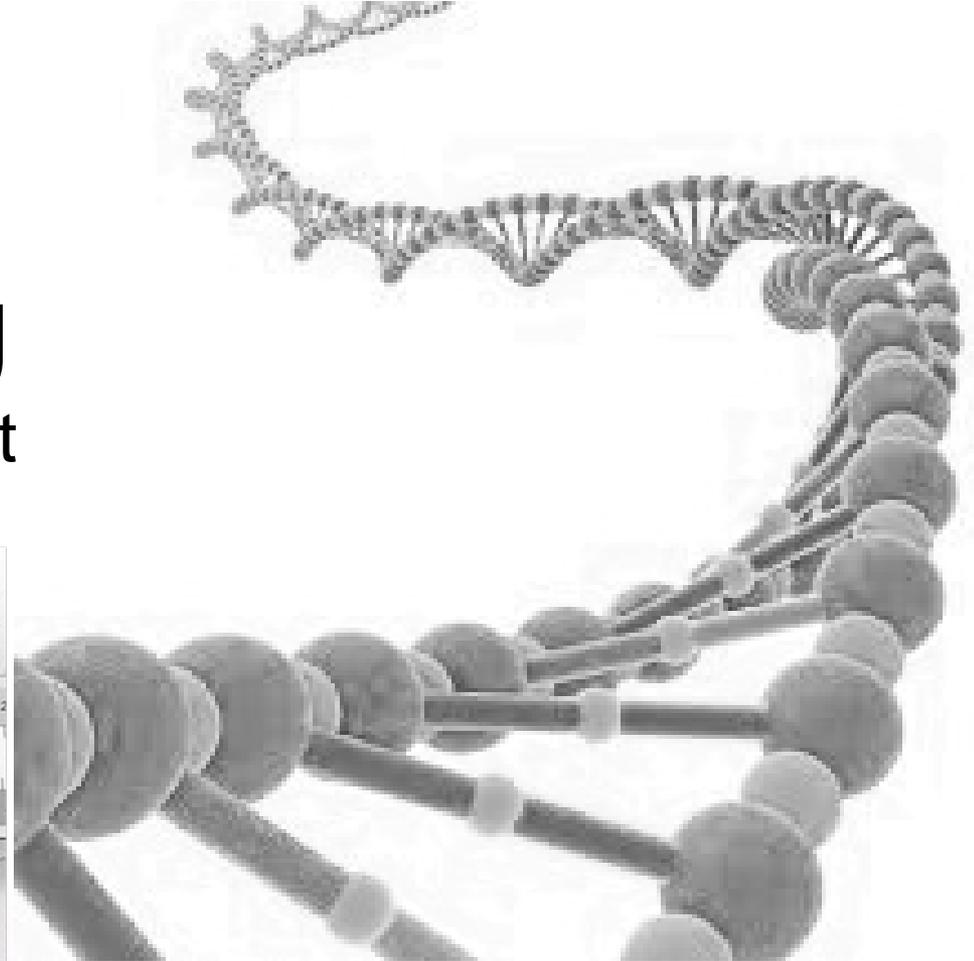
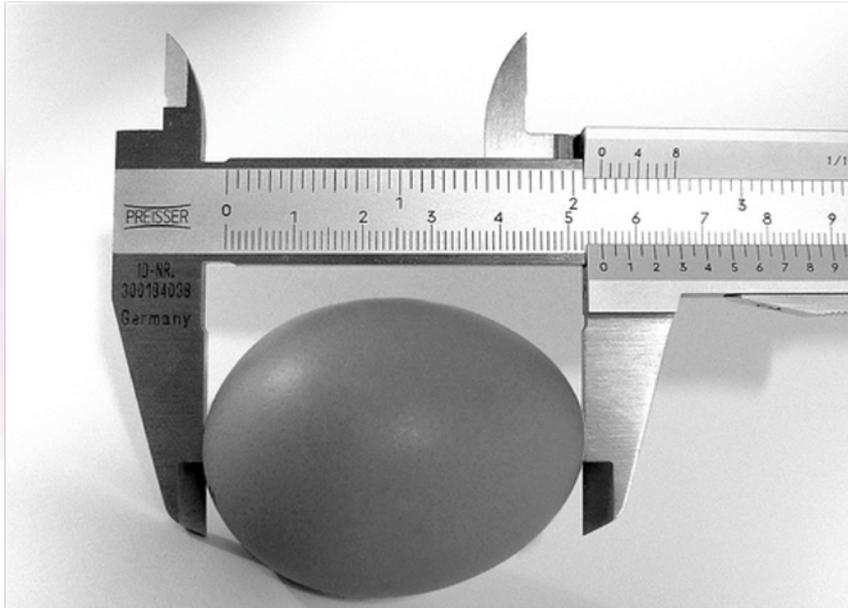


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Thereafter !



Phenotyping & Trait Measurement



Maximising the potential
of genomics

Phenotyping & Trait Measurement

Improving the Identification & measurement of key production & Quality Traits

→ Better understanding & application of Genomic Information

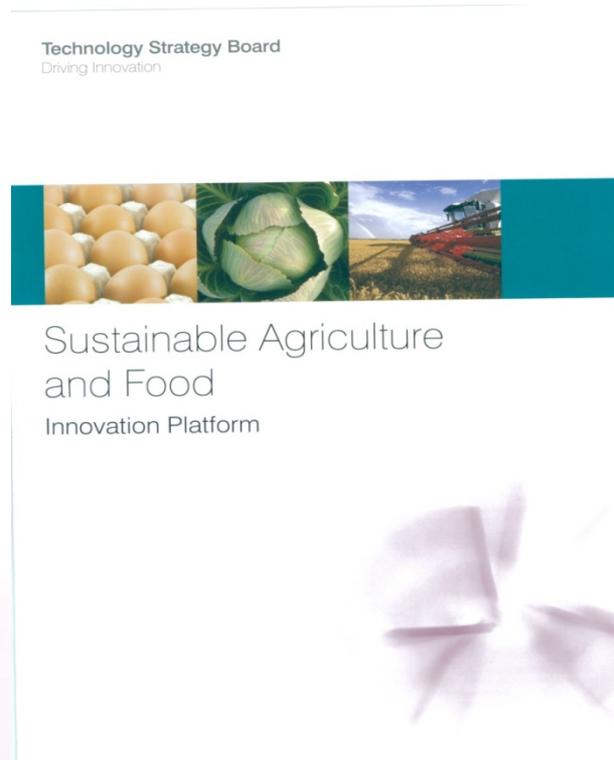
→ Better Management decision making in the field

‘If you cant measure it you can’t manage it’

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Please help us with Feedback !



Thank You

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