



UK food security in a volatile world – the case for sustainable intensification in UK commodity crops

**Hybrid meeting - Tuesday 29 November, 4.45 – 6.00pm
Meeting Room W1, Westminster Hall**

Agenda

- 1. Chairman's welcome & introduction – Julian Sturdy MP**
- 2. Guest speakers:**
 - Jonathan Halstead, Head North West Europe & Managing Director, Syngenta UK Limited
 - Dr Chris Brown, Senior Director Sustainable Supply Chains, ASDA
 - Andrew Crossley, Farms Director, Thurlow Estate Farms Ltd
 - Professor Richard Tiffin, Chief Scientist, Agrimetrics
- 3. Questions & discussion**
- 4. A.O.B.**

Views from across the food value-chain



Shared interest in promoting viability, sustainability and competitiveness of UK cereal growers



Andrew Crossley, Farms Director, Thurlow Estate Farms Ltd

Chris Baylis, Director of Farming, Sir Richard Sutton Limited

Professor Richard Tiffin, Chief Scientist, Agrimetrics

Richard Profit, CEO, Cool Farm Alliance

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Mark Tucker, Business Development and Head of Agronomy at Yara UK Ltd & Yara Ireland

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Vicky Robinson, Director, Technical, Linking Environment And Farming

Charlie Whitmarsh, Crop Production Director, Frontier Agriculture

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Harry Fordham, New Technology Lead North-West Europe, Syngenta





Chris Brown

ASDA

Which way for wheat?

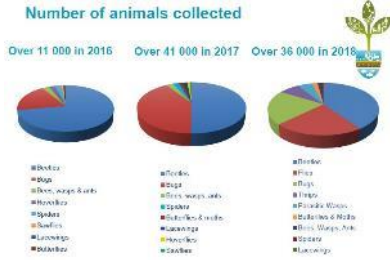
..able to access enough safe and nutritious food to meet their requirements for a healthy life, in ways the planet can sustain in the future



Healthy Sustainable Diets



Natural Capital



Productivity of food production systems



..security of supply



| Name | Positive Impact Equity |
|-----------------|--|
| Description | Fund containing assets believed to be making a positive impact on society and/or the environment through their products, services and operations. Typically involves a technology or innovation enabling better use of resources (circular economy) or unique healthcare solutions. Fund aims to address the first 15 of the SDGs. |
| 10 top holdings | Red Electrica; Interlek; Tomra; Genmab; Alk-Abello; Kerry; Orpax; Aquafil; Basis-Fit; Thule; Kingspan |
| Asset class(es) | 100 per cent listed equity |
| Size | 58.3 MUSD invested in 28 assets |
| Benchmark | MSCI Europe |

Self Sufficiency

Finance



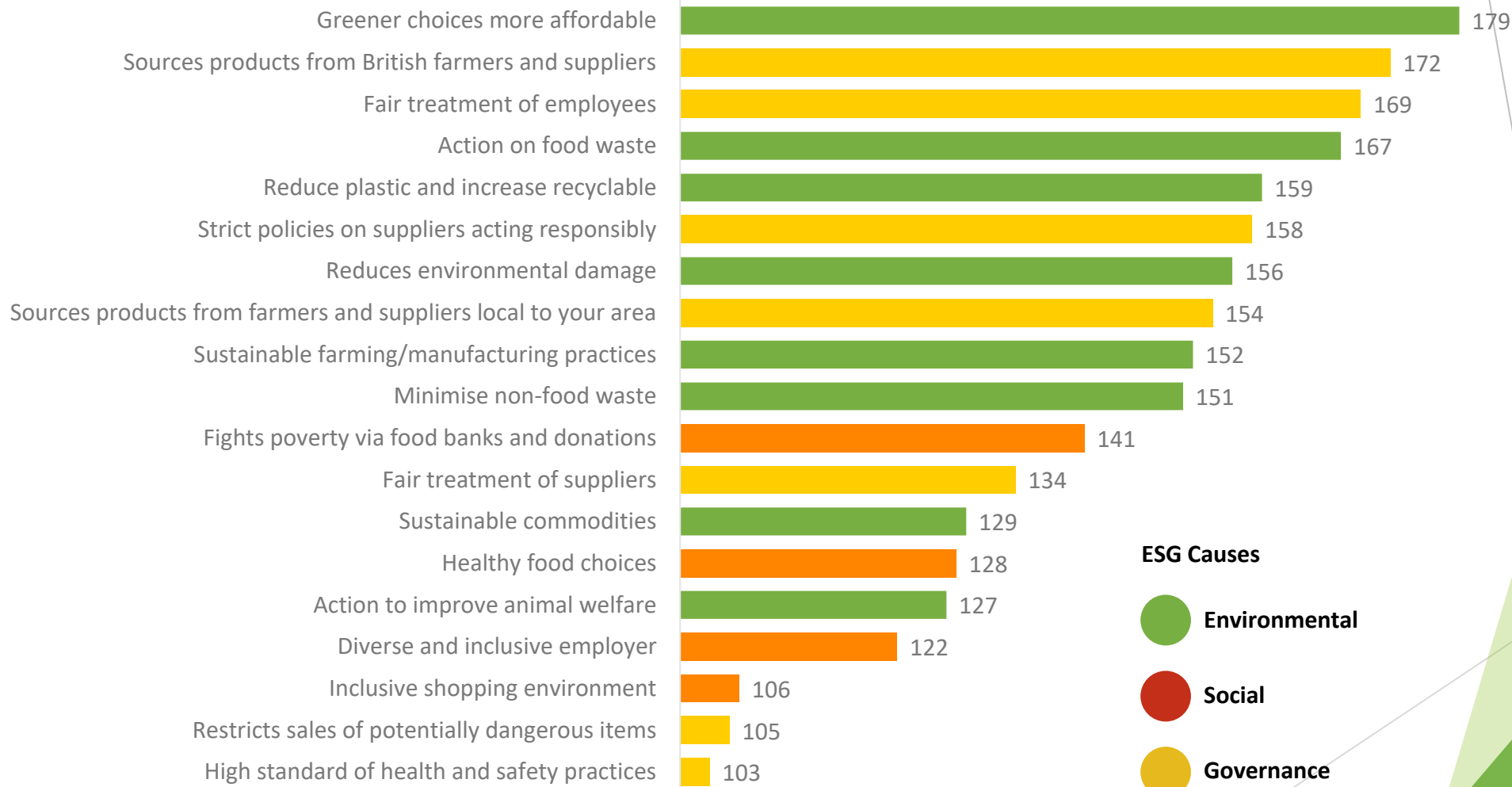
Resilience of food production systems

Wheat is a key product for ASDA supply

- ▶ 99.8% Households purchase bread
- ▶ ASDA Own Brand - 7k products over 35% contain wheat
 - ▶ Not including where fed as feed ingredient in livestock diets
- ▶ Bakery Sales - ASDA customers average 2.4 items per basket
- ▶ Over 95% of baskets contain bakery products

ESG drivers for Asda customers

ESG stated importance amongst ASDA total customers – all drivers above an index of 100 = average



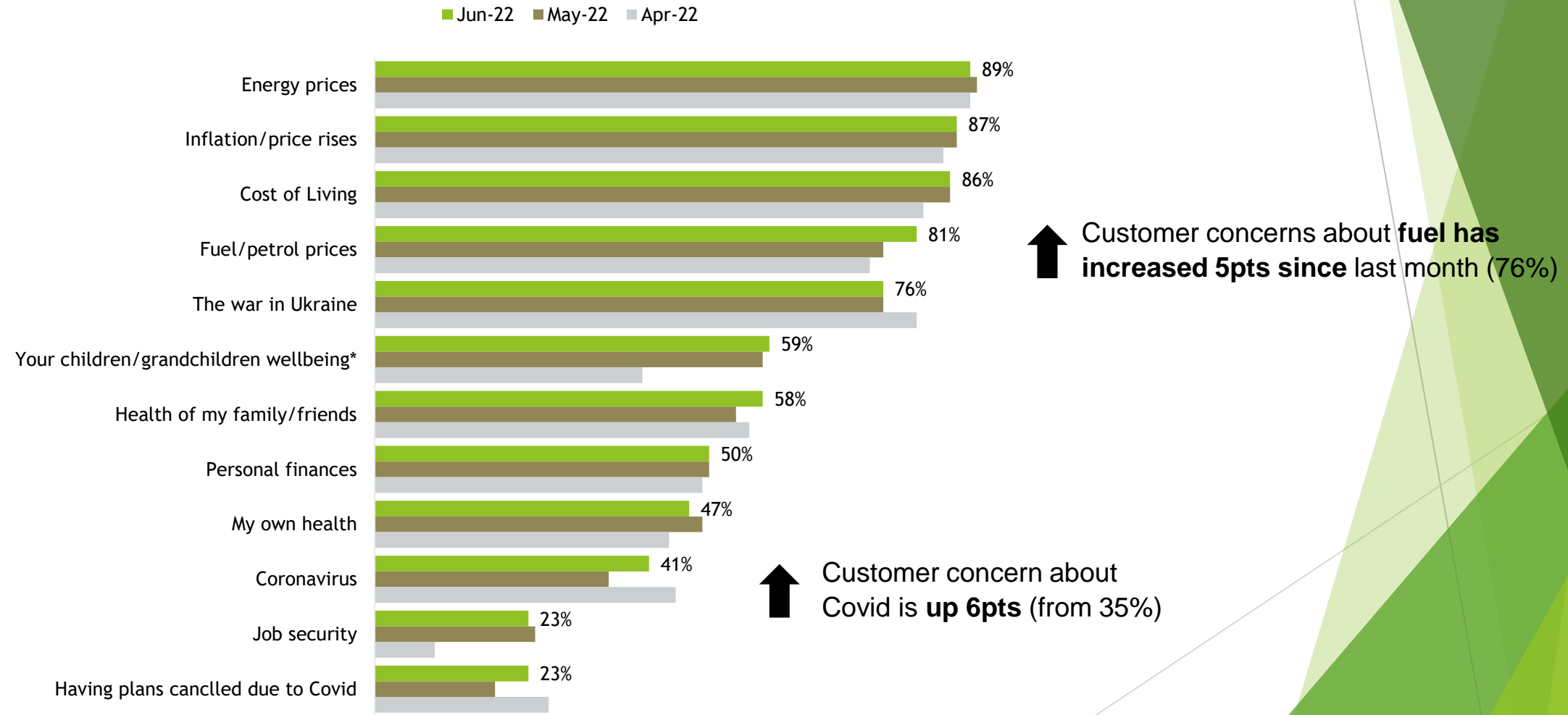
ESG Causes

- Environmental
- Social
- Governance

Macro customer concerns

Concern about energy prices remains the top concern among our customers, closely followed by inflation and cost of living.

Macro Customer Concerns



Source: Pulse of the nation, 27th June 2022, Base 1328 (SO- 65/ FF – 109/ K&C – 73/ MM – 585/ GY – 271) *n/a option added May

Positive industry with ‘surety’

Innovative

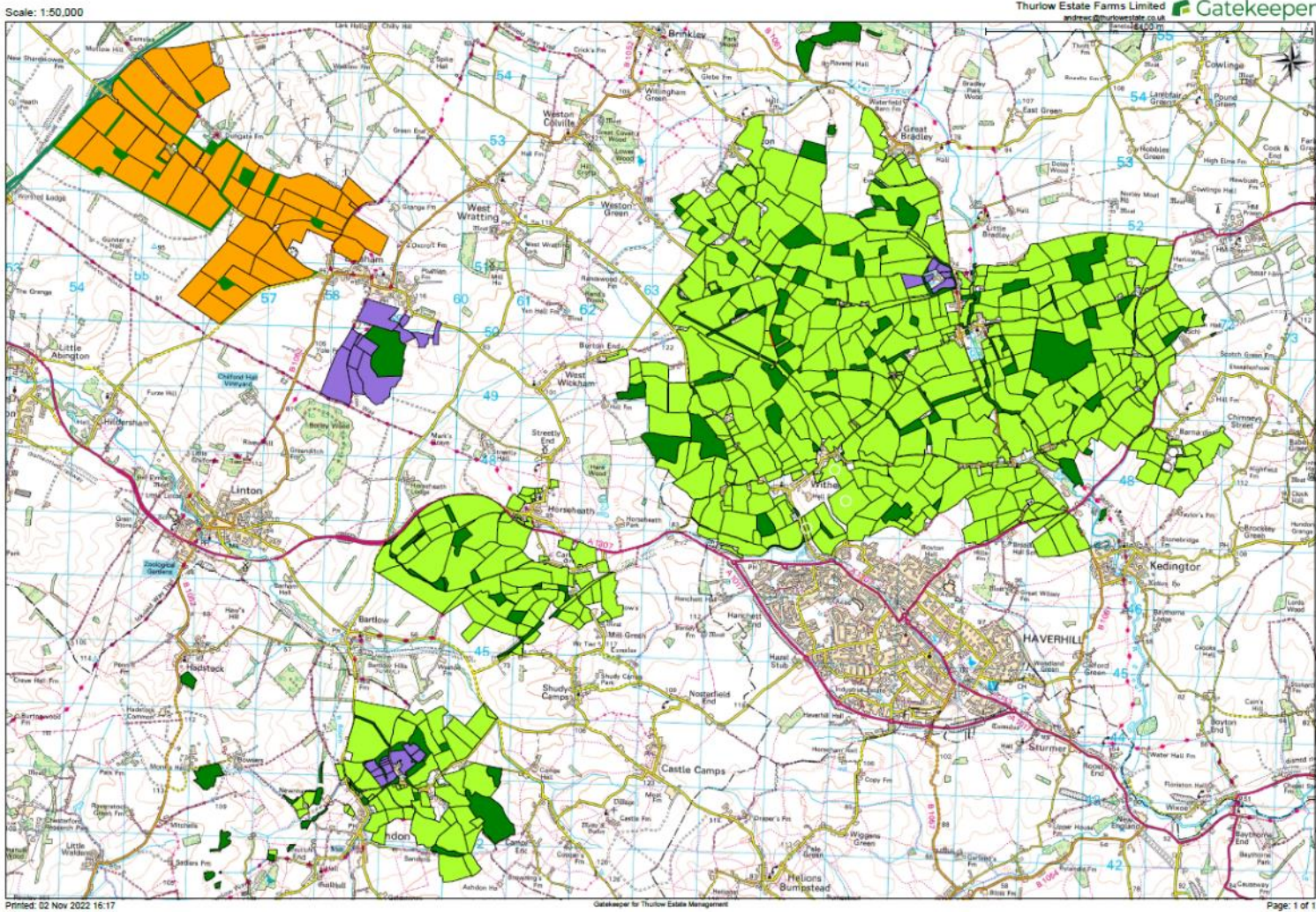
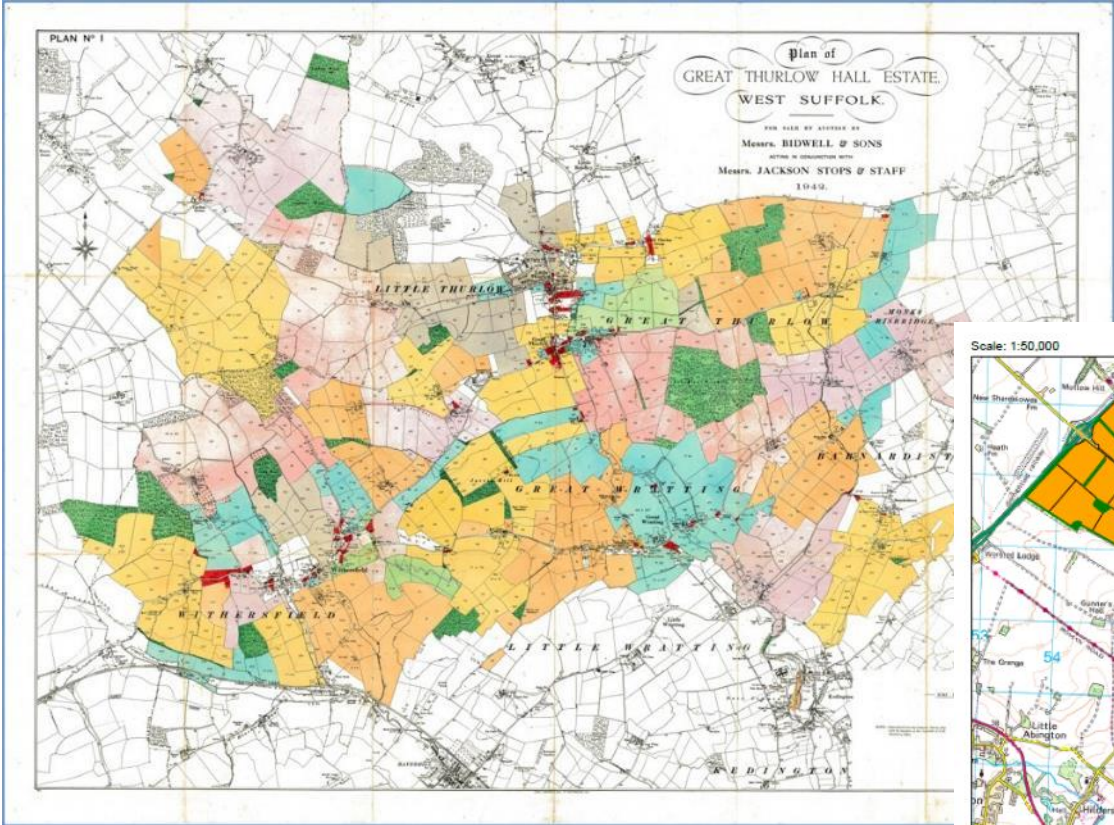
Attractive

Investing

Balancing food production and other land use



Andrew Crossley, Farms Director, Thurlow Estate Farms Ltd



**THURLOW ESTATE
FARMS LIMITED**



Guidance

Environmental Land Management schemes: overview

Published 15 March 2021

Applies to England

Contents

[Sustainable Farming Incentive](#)

[Local Nature Recovery](#)

[Landscape Recovery](#)

[Tests and trials](#)

[Stay up to date](#)

There are 3 new schemes that will reward environmental land management

- Sustainable Farming Incentive
- Local Nature Recovery
- Landscape Recovery

These schemes are intended to support the rural economy while achieving the [25 Year Environment Plan](#) and a commitment to net zero emissions

A Green Future: Our 25 Year Plan to Improve the Environment



National Food Strategy Part One




© GWCT



Rural Payments
Agency




 Department for
 International Trade

Guidance
UK trade agreements in effect

 Department for
 Business, Energy
 & Industrial Strategy

 Prime Minister's Office, 10
 Downing Street

Policy paper
British energy security strategy
 Updated 7 April 2022



 Department
 for Environment
 Food & Rural Affairs

UK Food Security Report 2021

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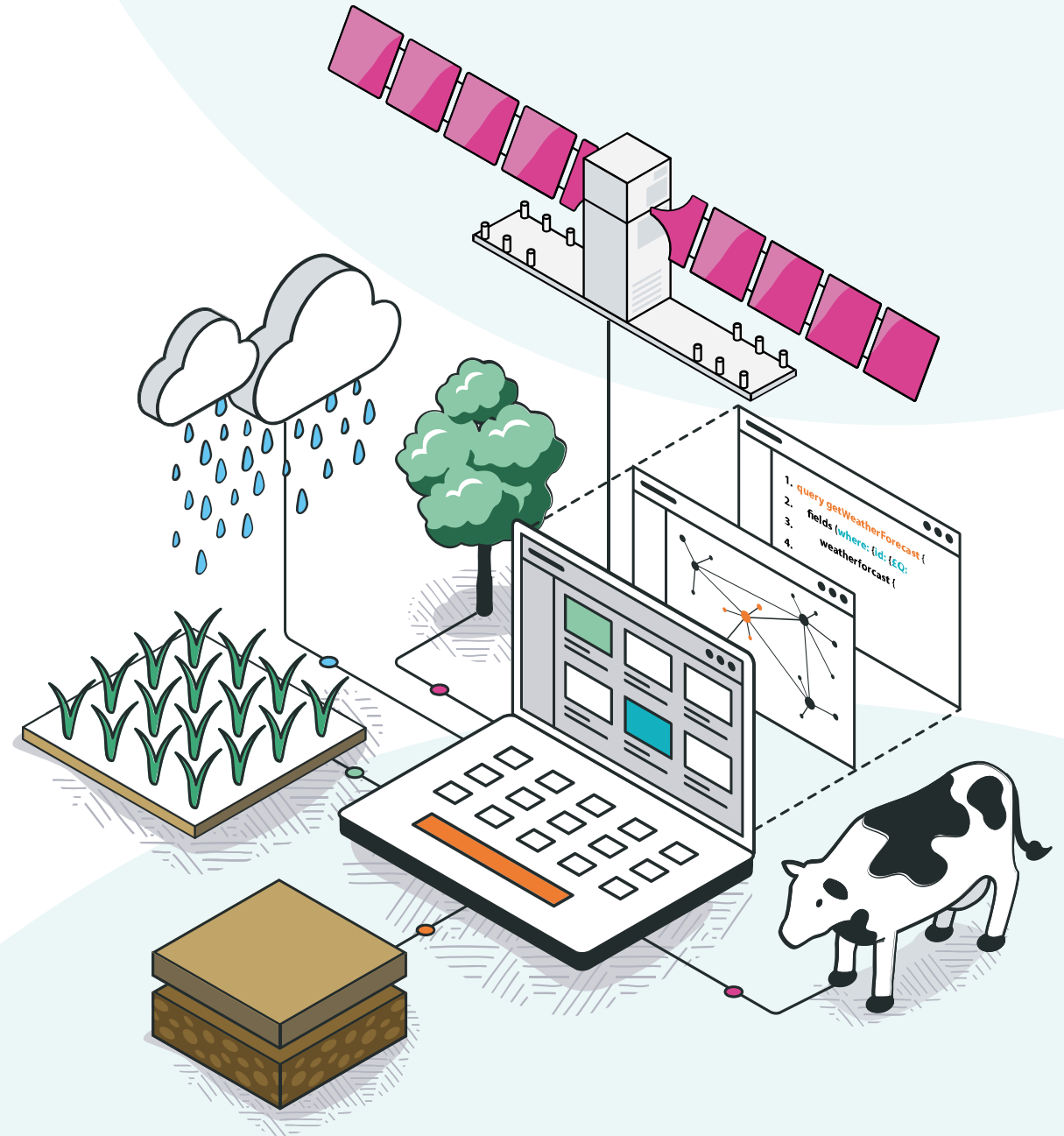
Agrimetrics

THE AGRIFOOD DATA MARKETPLACE

Translational Research in Agriculture (and Food)



Richard Tiffin



KT, KE and the Valley of Death

World class bioscience has a poor track record of making it into the field.

Knowledge transfer and knowledge exchange are human activities that are designed to address this.



Translational Research

World class research is also needed on the setting in which basic science will be applied.

In situ research is needed to augment the basic bioscience.

This is an extension of KE in which practitioners are embedded in the research process:

- Shaping the agenda.
- Obtaining early access to the results.

AI/ML transforms the way in which we do research.



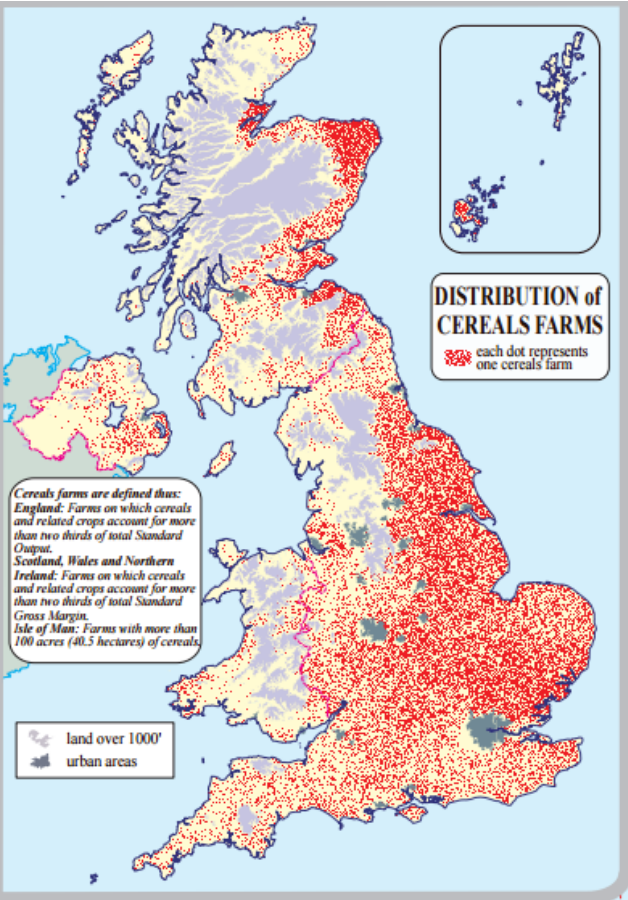
Data infrastructure



- Fragmentation
- Findability
- Interoperability
- Meaning
- Trust/security/permissioning
- Access



Delivering innovations for UK cereal growers



4.5m
Arable ha

3.1m
Cereal ha



Crop Protection Research & Development: How we do it

Our challenge

Bring innovative products to growers to secure their harvest



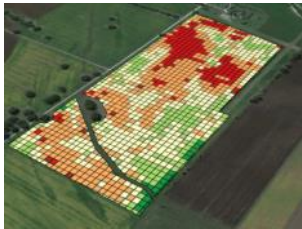
Our solution

Transforming new technologies into innovative Crop Protection solutions for growers which are safe for consumers and the environment

What is needed in a changing environment



- Better / more accurate decision making
- Enhanced forecasting and predictions
- Benchmarking
- Year-on-year performance mgt.
- Tracking and traceability
- Input optimisation & precision – what to use, when to use, only where it's needed
- Increased certainty (technology & solutions)
- Enhanced safety (food, environment, operators)
- Farm efficiencies & optimisation



Enabling regulatory & policy framework

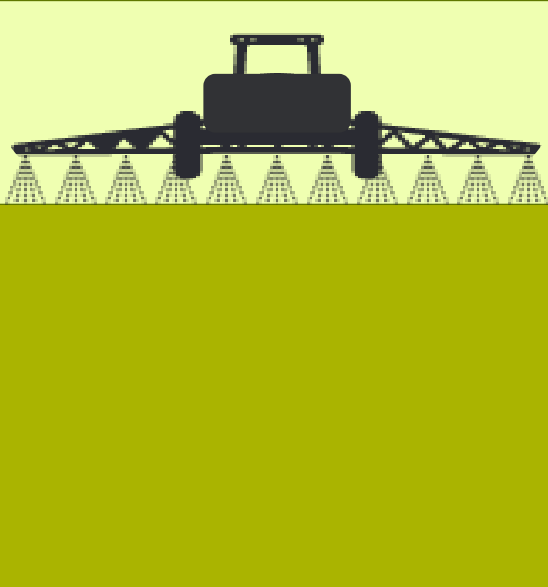


| Area | Value | Unit | Value | Unit |
|------------------|--------|--------------|--------|--------------|
| Total Field Area | 112 | Acres | 153 | Acres |
| Harvested Area | 113.3 | Acres | 99.3 | Acres |
| Total Yield | 7196.1 | Bushels | 4068.8 | Bushels |
| Average Yield | 64.1 | Bushels/Acre | 26.5 | Bushels/Acre |



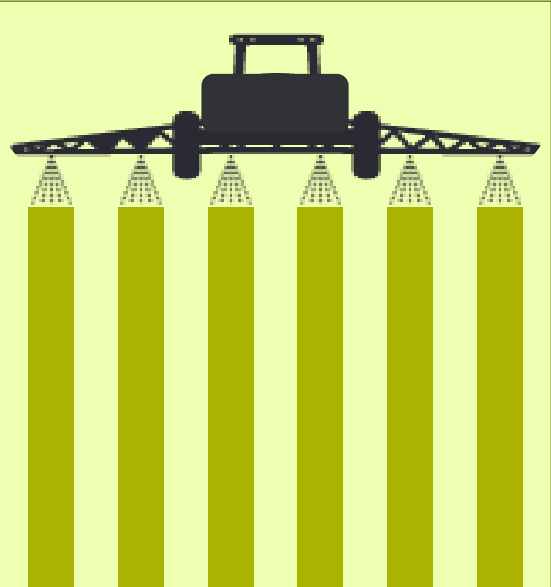
New technologies offer opportunities for more site-specific CP applications

Broadcast



Precision Application

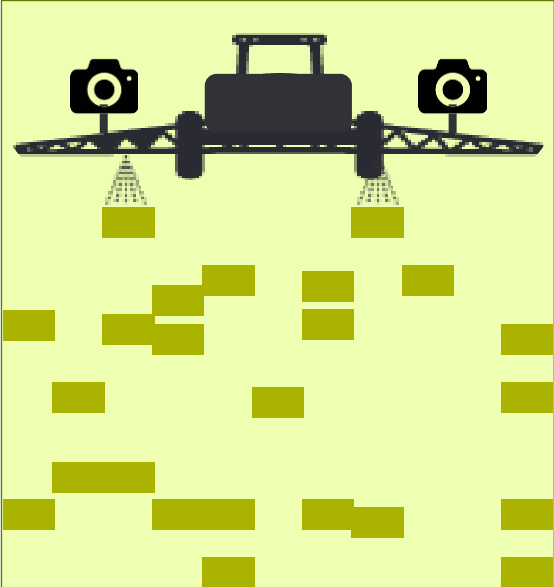
Banded



Prescription



Optical Spot Spraying



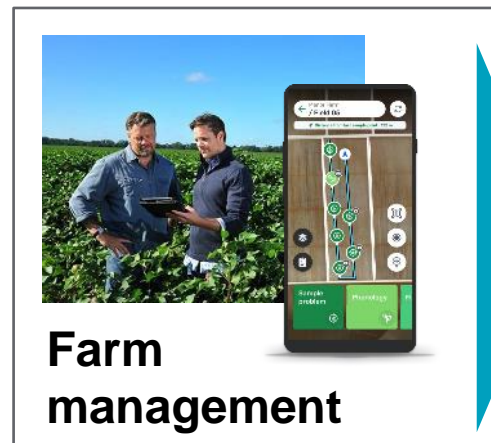
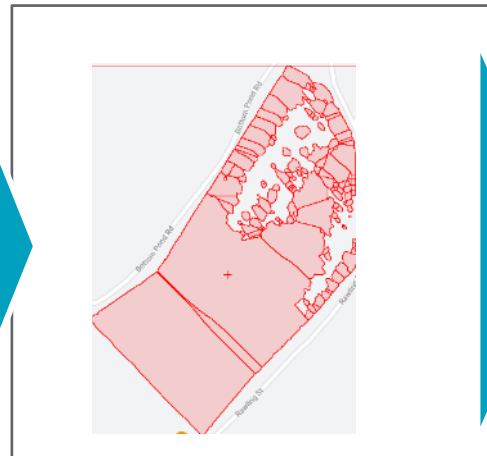
 = Application area

• Enables tailored rates and targeted applications: apply what is needed, where it is most needed, when it is needed

Prescription Application



Map pest



Grower benefits

- Higher ROI on CP use
- Reduced used of CP
- Higher sustainability

Biologicals

CONNECTING
SCIENCE
WITH
NATURE



Biocontrols

Products based on naturally occurring materials that are used for biotic stress management in **controlling** fungal and bacterial diseases, arthropod pests, nematodes and weeds.



Biostimulants

Any substance, that is applied to plants, seeds or the root environment with the intention to **stimulate** natural processes of plants. Benefiting nutrient use efficiency, tolerance to abiotic stress or crop quality.

Benefits of Biocontrols

- An additional tool for Integrated Pest Management
- Can be used in combination with Crop Protection chemistry to manage resistance risk
- Reduced residues and improved soil health

What is needed

- Clarity on registration requirements and framework for novel biopesticides

Q&A / Discussion



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