YEN Awards Conference

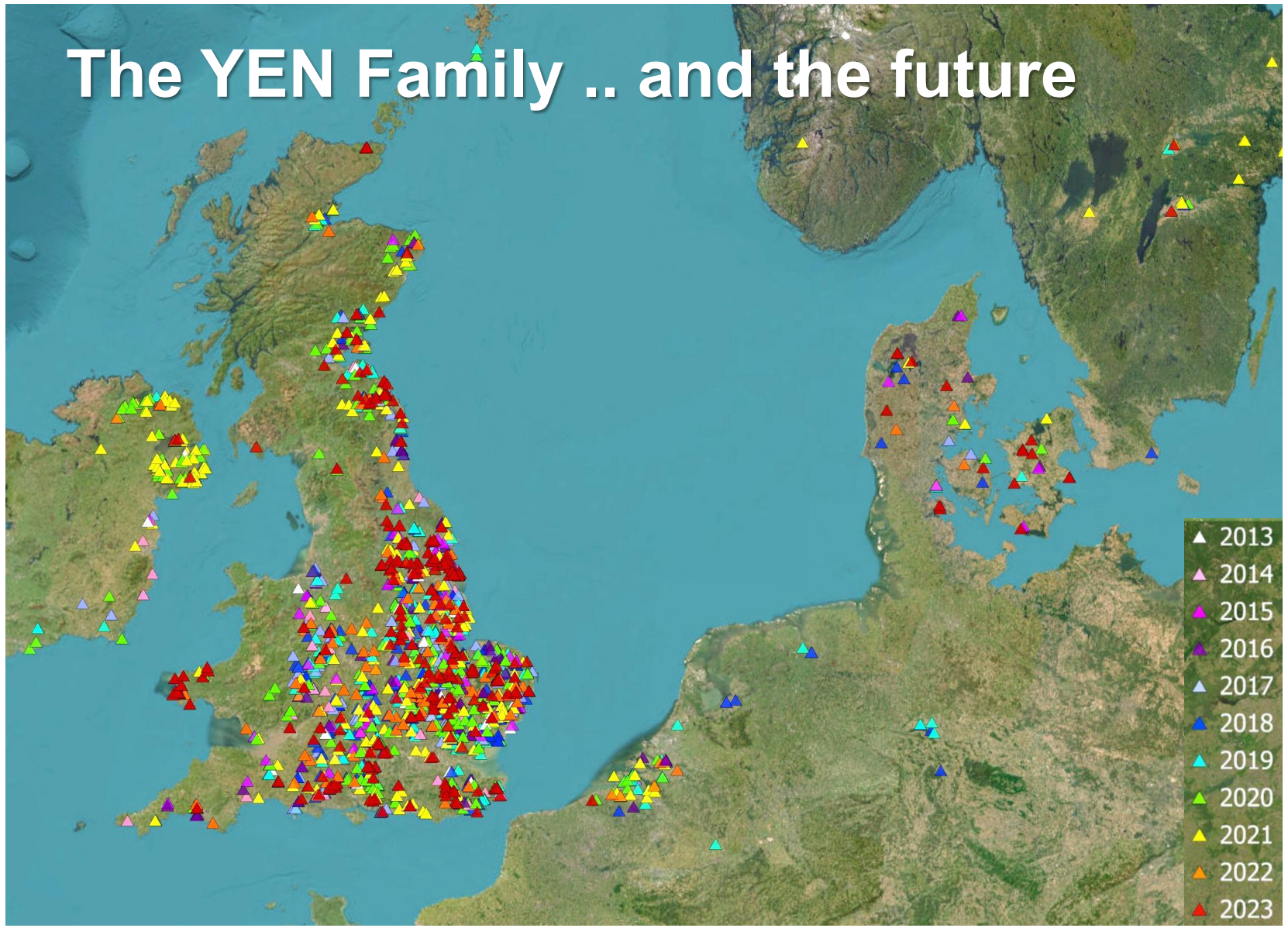
Peterborough, Tuesday 27th January 2026

Welcome

Aims of the conference

Chair: Tim Isaac, Ceres Rural

The YEN Family .. and the future



- *>3,000 YEN reports delivered to entrants*
- *The 13th annual multi-crop YEN Conference*
- *Cereal YEN, Oilseed YENs & and YEN Zero now stopping in UK*
- *Pulse YENs & YEN Nutrition continuing*

YEN 2012 · YEN 2016 · YEN 2017 · YEN 2018 · YEN 2019 · YEN Nutrition 2019 · YEN ZERO 2021 · Linseed YEN Lite 2024

The YEN has only existed *since 2013* through its sponsors …

YEN

YEN Awards Conference – January 2026

Outline Agenda

09:30 **Welcome & Introduction** — chaired by Tim Isaac (Ceres Rural)

09:40 **Keynote: Importance of Crop Yields:** Mario Caccamo (NIAB)
with Christina Baxter (ADAS) on Yield Impacts

10:20 **Dealing with a variable climate** — chaired by Sarah Kendall (ADAS)
with Pete Berry (ADAS), then a Panel Discussion

Coffee & Tea Break (30 mins)

11:50 **2025 YEN Awards**, presented by Roger Sylvester-Bradley (ADAS) — hosted by Tom Allen-Stevens (BOFIN)

Lunch (1 hour)

13:50 **Lessons from YEN data** — chaired by Sarah Clarke (ADAS)
with 3 ADAS speakers on Oilseeds, Pulses & Cereals with Q&A

15:05 **Working with growers to realise improvements**
with David Hawcroft (BASF)

Break (10 mins)

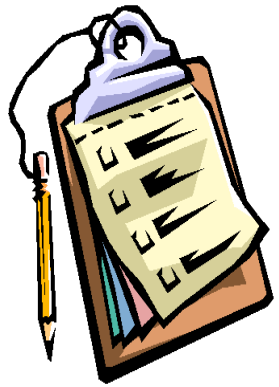
Panel discussion on Exploiting YEN lessons

15:45 **Future YEN Plans** — chaired by Tim Isaac (Ceres Rural)
from PGRO & ADAS

16:10 *Tea & Networking (50 mins)*

17:00 **Close**

Housekeeping …



BASIS & NRoSO

Photography in progress

Slides will be on YEN website

Switch mobiles to SILENT

@adasYEN

#YEN2025

Sli.do instructions …

- **WiFi** Network: KingsGate there is no password
- We are using **Sli.do** to make panel discussions more interactive
  Take part in live polls or submit questions via your smart phone ...

  Go to: **slido.com**

  & use the Event Code: **#YEN2026**
- You can also join the conversation on **Twitter**

  using **#YEN2026**

  or tagging **@adasYEN**

I am a...

Keynote Talk:

Importance of increasing farm productivity

Mario Caccamo, NIAB

What did you have for breakfast?

Flour Milling in the UK

- 12m loaves of bread produced every day (more than three slices per person)
- 10m cakes & biscuits produced every day
- 2m pizzas produced every day
- 4m tonnes of UK milling wheat produced every year (1m tonnes is imported)
- 300k ha of milling wheat varieties (13% of protein content)
- In total the UK grows 1.5m ha of wheat, this the same space taken by all UK cities.

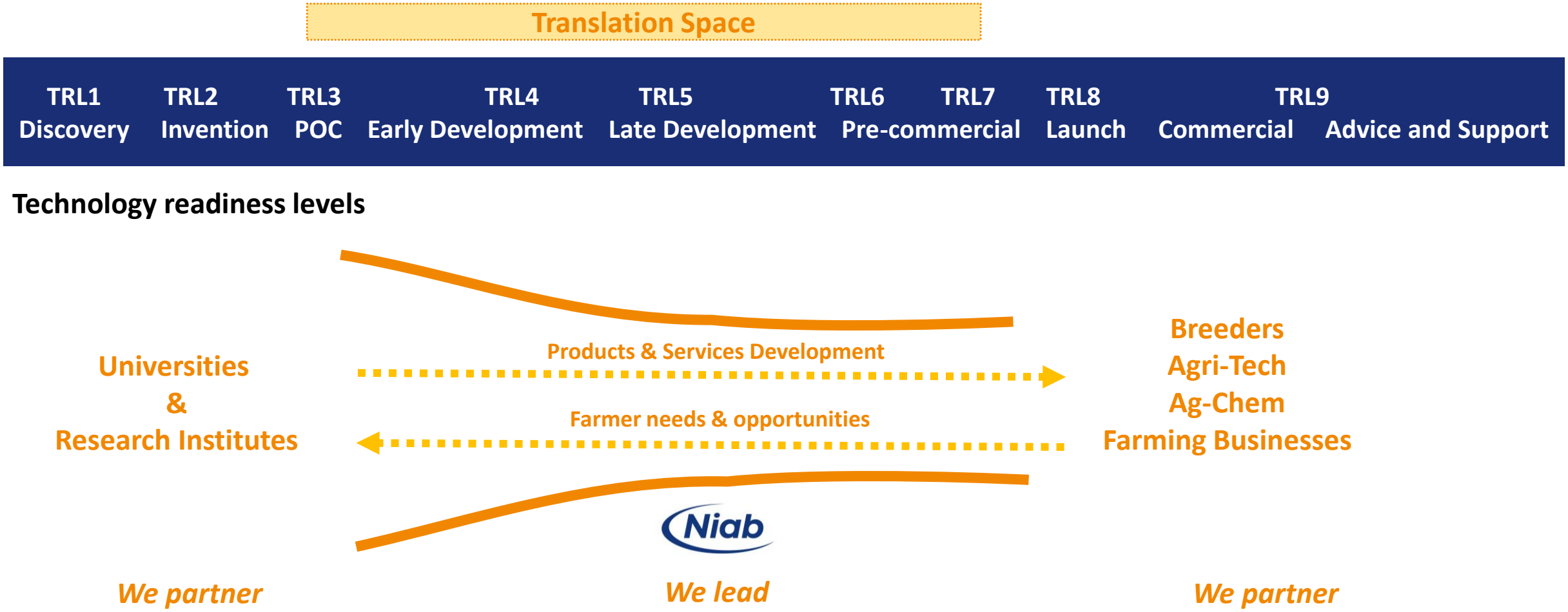
Farming must undergo a transformation…

We need to grow enough nutritious crops for an increasing population while

- reducing use of synthetic fertilisers and pesticides
- protecting biodiversity
- reducing greenhouse gas emissions
- adapting to climate change

This transformation will be driven by the **translation of plant science into practice.**

Translating Crop Science into Practice



Niab Today

- Headquarters in Cambridge
- East Malling horticultural R&D centre in Kent
- £30m income: 47% commercial, 33% research (UKRI, charity, Defra), 20% statutory and levy
- 10 regional field trials centres covering multiple trials sites - 100+ UK field trial sites, 100k+ plots
- 360 FTE staff (crop scientists, pathologists, data scientists, technical specialists, lab analysts, agronomists, trials teams)
- 2,000+ subscribing members (farmers, agronomists, industry specialists)

Translating Crop Science into Practice

The perennial debate….

Would higher crop yields be worthwhile

or

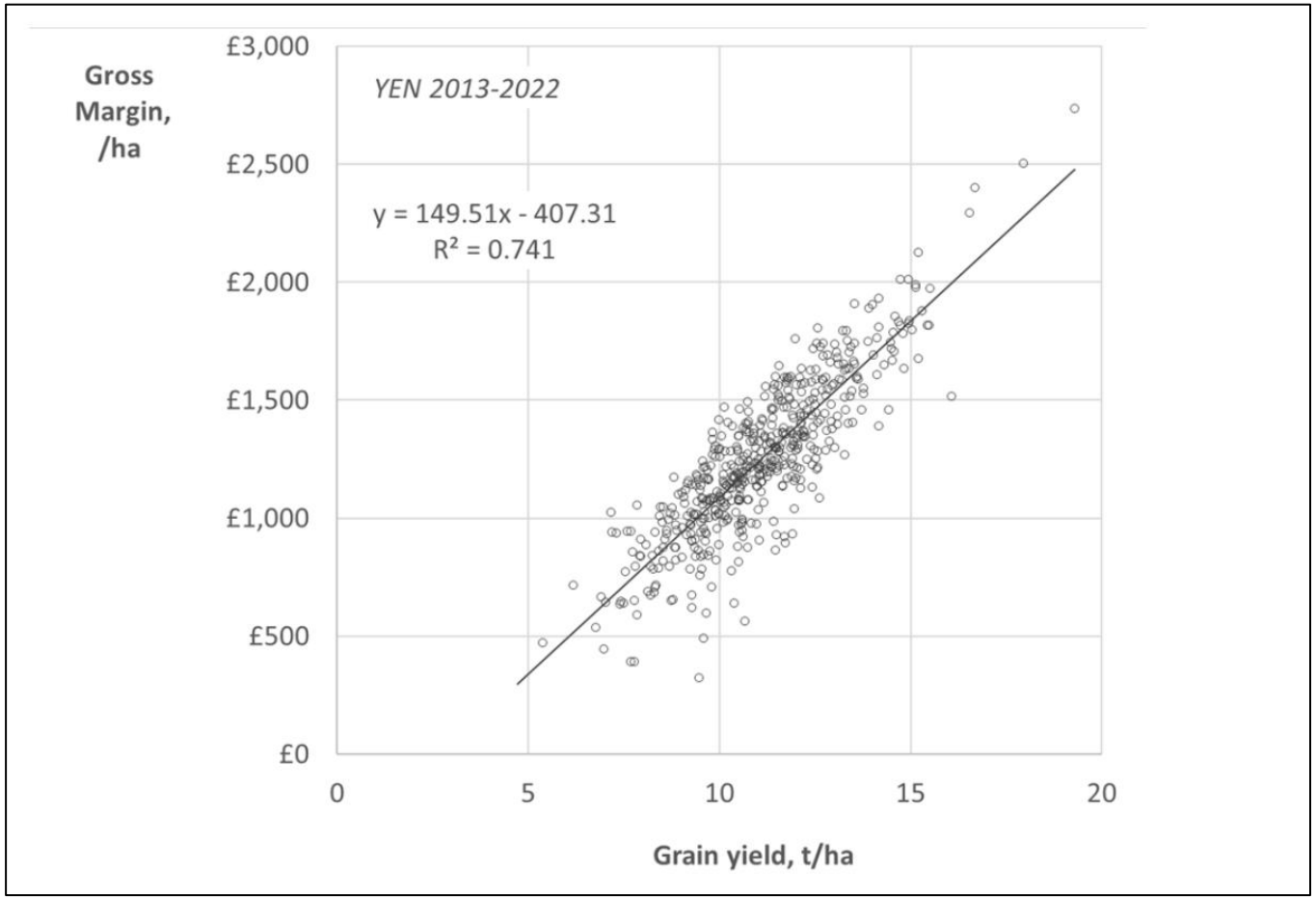
Could the extra costs outpace yield gains?

There is no obvious relationship between input costs per hectare and yield.

From a sustainability perspective: knowledge, management precision and attention to detail may be more important than inputs.

Gross margins were positively related to grain yield.

Gross margin per hectare plotted against grain yield.



YEN Dataset (ADAS)

Better yields result in ….

Higher gross margins over variable costs

Fewer greenhouse emissions per output unit

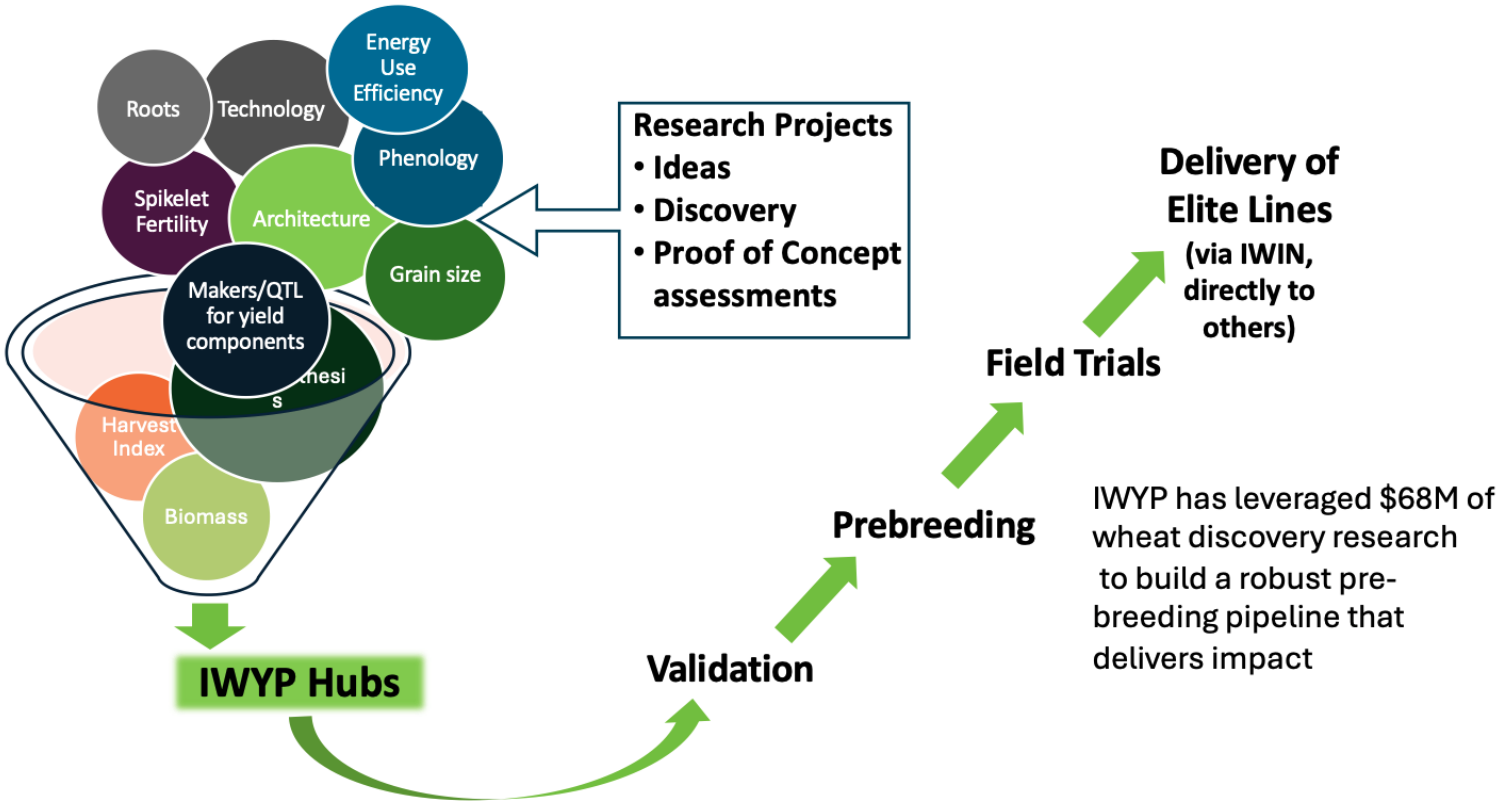
Improved fertiliser balances

More resilient and sustainable farming!

International Wheat Yield Partnership (IWYP)

IWYP International Wheat Yield Partnership
Research to Deliver Wheat for the Future

To increase the genetic yield potential of wheat by 50% in 20 years

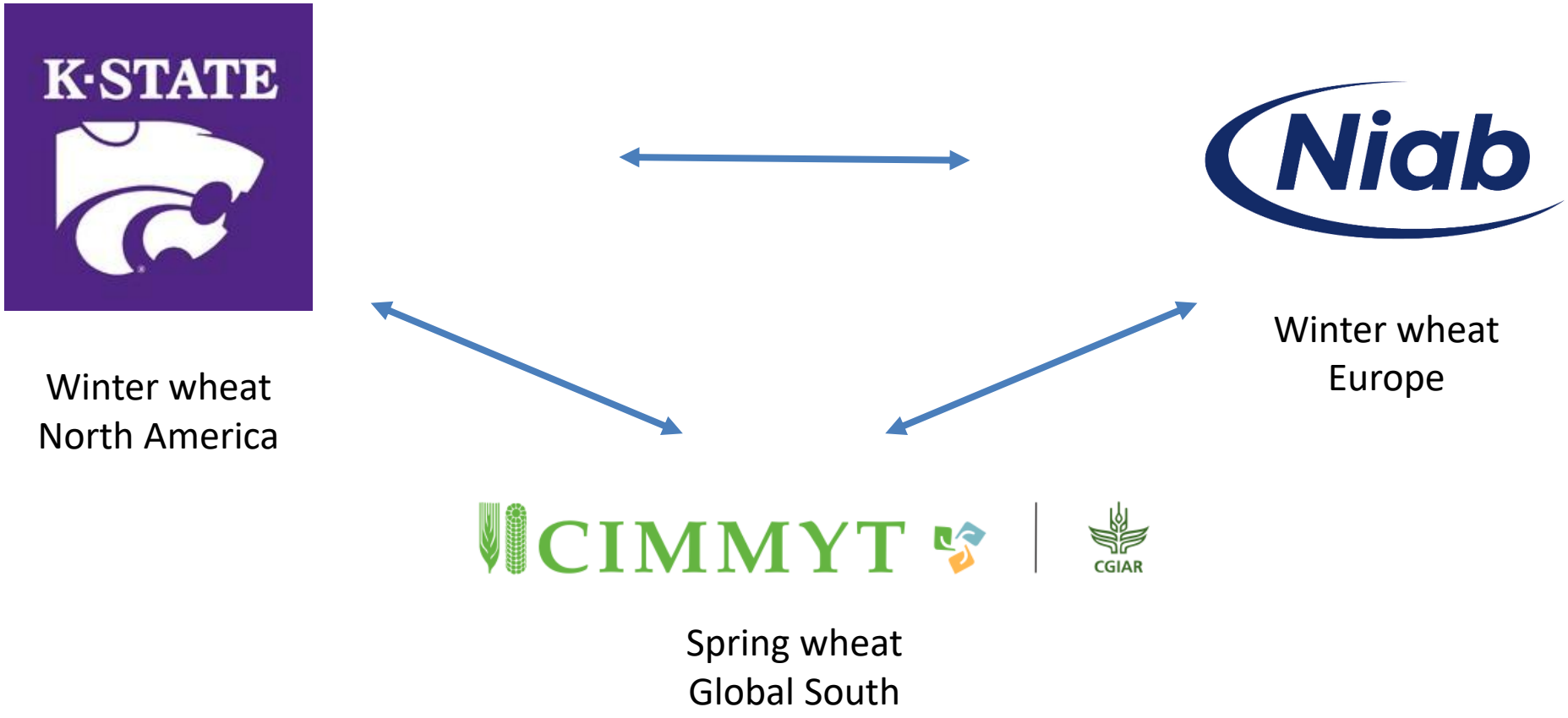


- > $86m invested since 2015 (BBSRC, USAID, GRDC, NIFA, SFSA and AAFC)
- 200 scientific publications
- 9 varieties from IWYP lines
- IWYP lines outyielded baseline varieties by 6%
- IWYP lines are not only higher-yielding but also provide resilience in challenging environments.

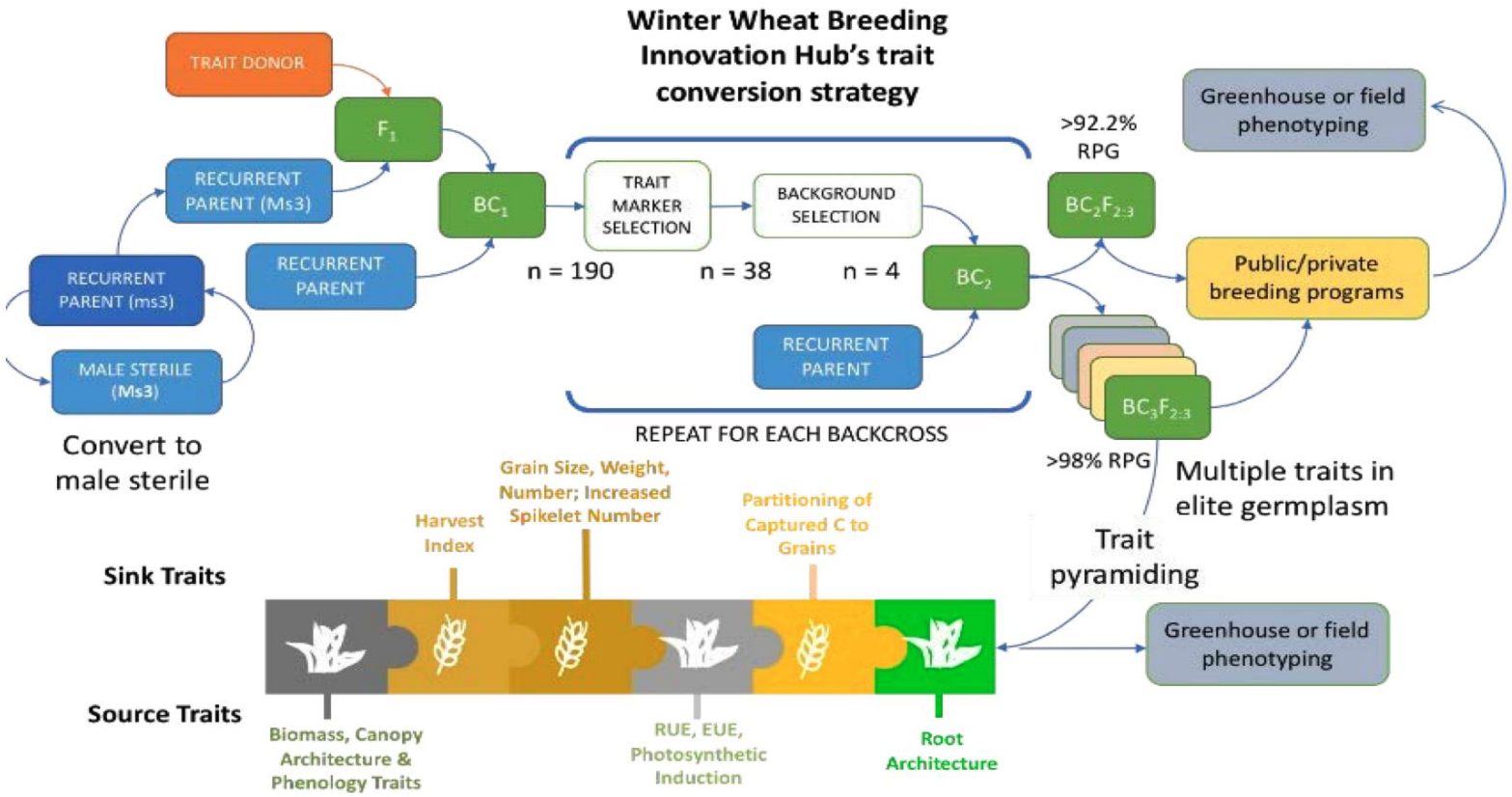
iwyp.org

IWYP Hubs

Fast track traits into pre-breeding material



European Winter Wheat Hub at Niab



- Operated under the IWYP structure, directly funded by breeders (BASF, KWS, RAGT, Syngenta).
- Breeders chose target traits for introgression and which European WW backgrounds to cross into.
- Targets have included flowering biology, source and sink traits.

Dr Phil Howell (Phil.Howell@niab.com)

A final thought
about
the current headlines and narrative.

The global food system is broken and fixing it will take more than good intentions

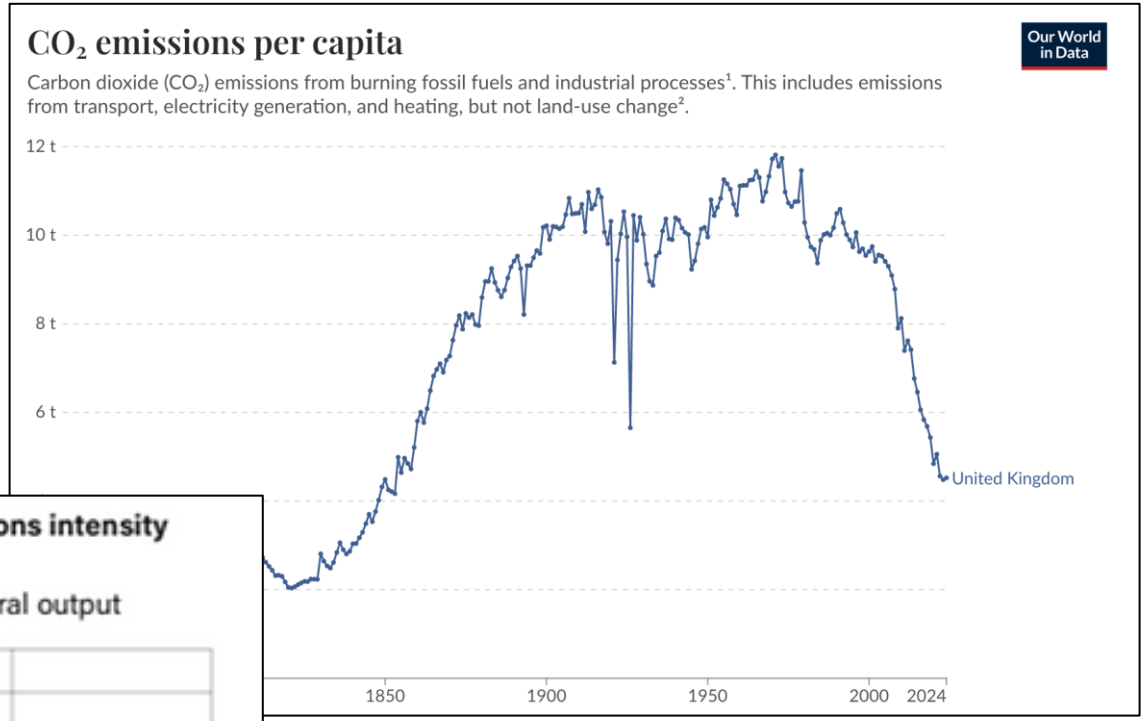
Why Agriculture's Greenhouse Gas Emissions Are Almost Always Underestimated

Recipe for health: a plan to fix our broken food system

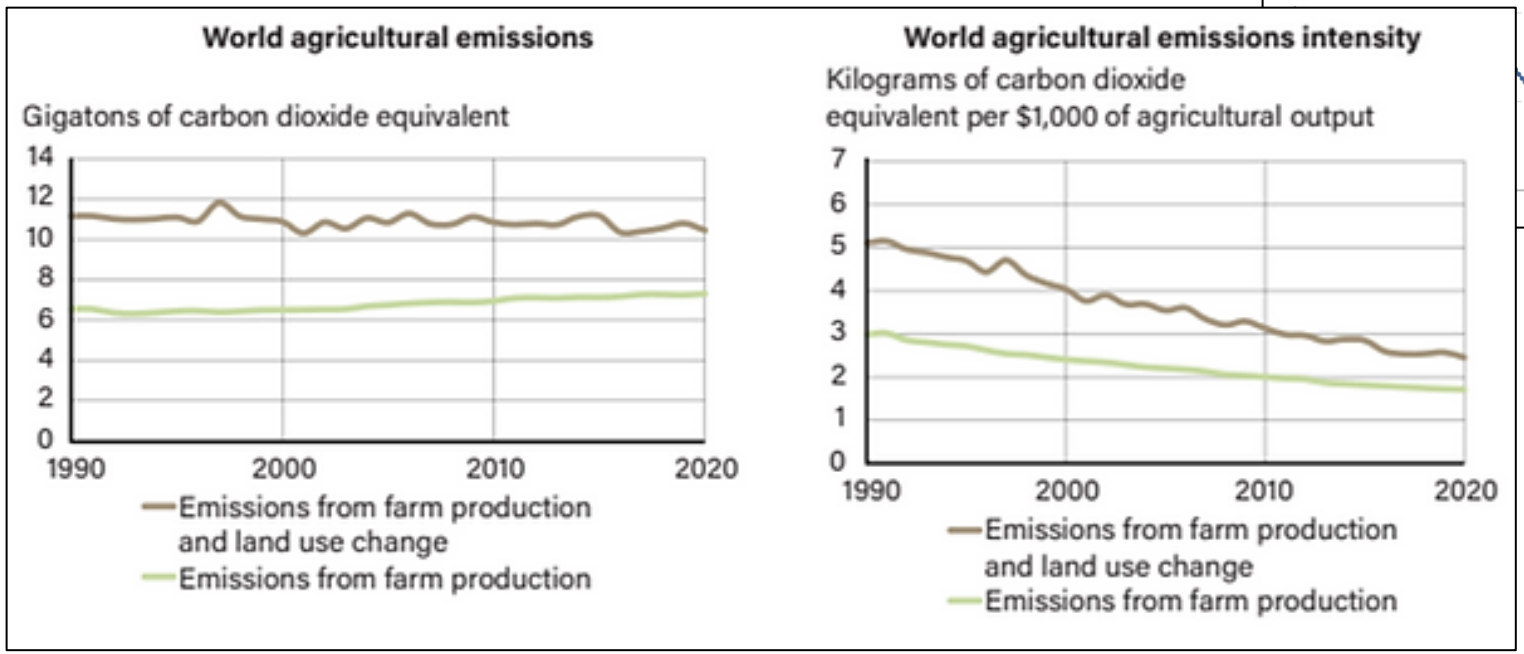
Why the UK's food system isn't working and how we can fix it

Niab
Plant Science into Practice

This is missing the historical context.



CO_2 emissions



Land use

”Things are not bad and getting worse.

They are good and getting better

but

not fast enough”

Jack Bobo

Thank You

Impact of high yields on profitability and sustainability

Christina Baxter, ADAS

Common opinion of high yields…

High yields are bad for the environment

Extra input costs would cancel out extra returns

Growing high yielding crops is too risky

High yields have a high C footprint

Minimising input costs is a better target than high yield

Calculating gross margins & C footprints of YEN data

- >1,200 wheat yields collected between 2013 – 2022 harvest years with ~400 explanatory metrics
  - Agronomic inputs: pesticides, fertilisers
  - Seed rate
  - Variety group
  - Cultivations
  - Weather data
  - Grain moisture content
- Used the data to calculate:
  - Crop input costs (variable costs)
  - Output value (weight of grain x feed or milling value)
  - Crop GHG emissions: kg CO_2e/ha and kg CO_2e/tonne

Calculating gross margins & C footprints of YEN data

- Gross margin calculations:
  - Fixed assumptions of input & output costs

Assumed prices	Unit price
Seed, /tonne	£365
Fertiliser N, /kg	£0.89
Fertiliser P_2O_5, /kg	£0.76
Fertiliser K_2O, /kg	£0.52
Fertiliser SO_3, /kg	£0.20
Other nutrients, /application	£15.00
Biostimulants, /application	£15.00
All agrochemicals, /ha	From grower
Feed Grain, /tonne	£160
Breadmaking premium, /tonne	£17

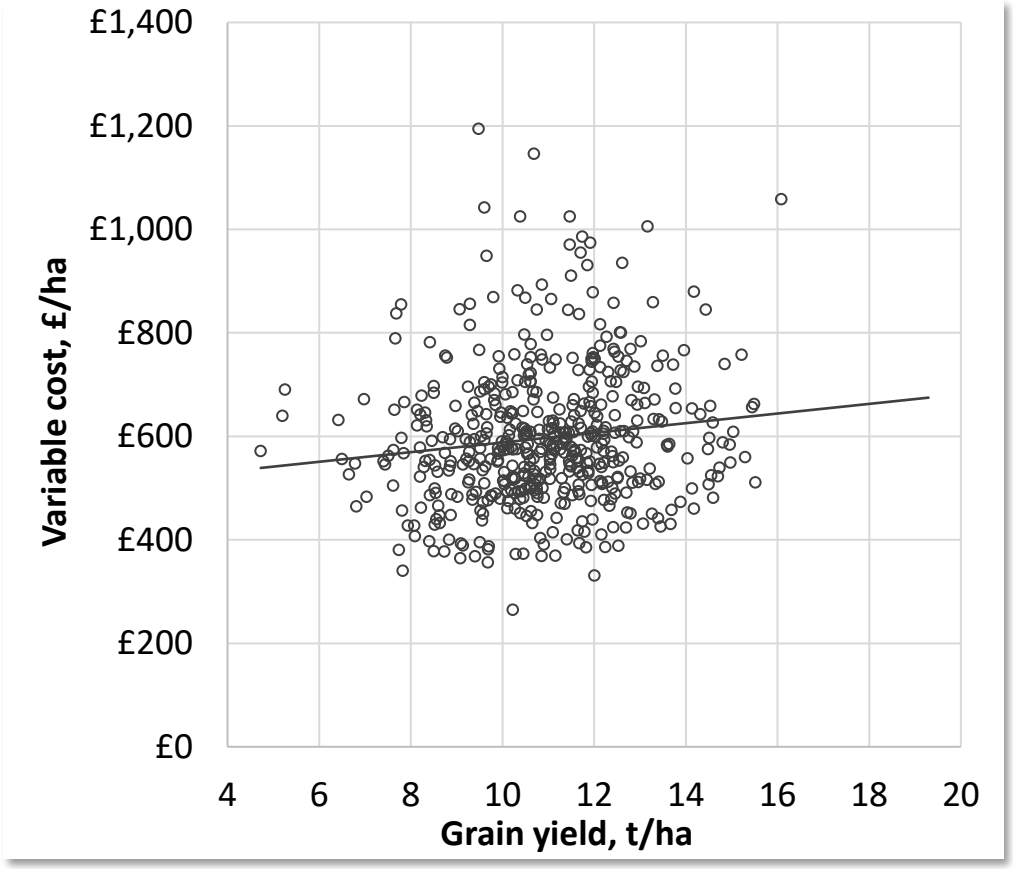
- Crop C footprint calculations:
  - Using emissions factors & inventory methodology

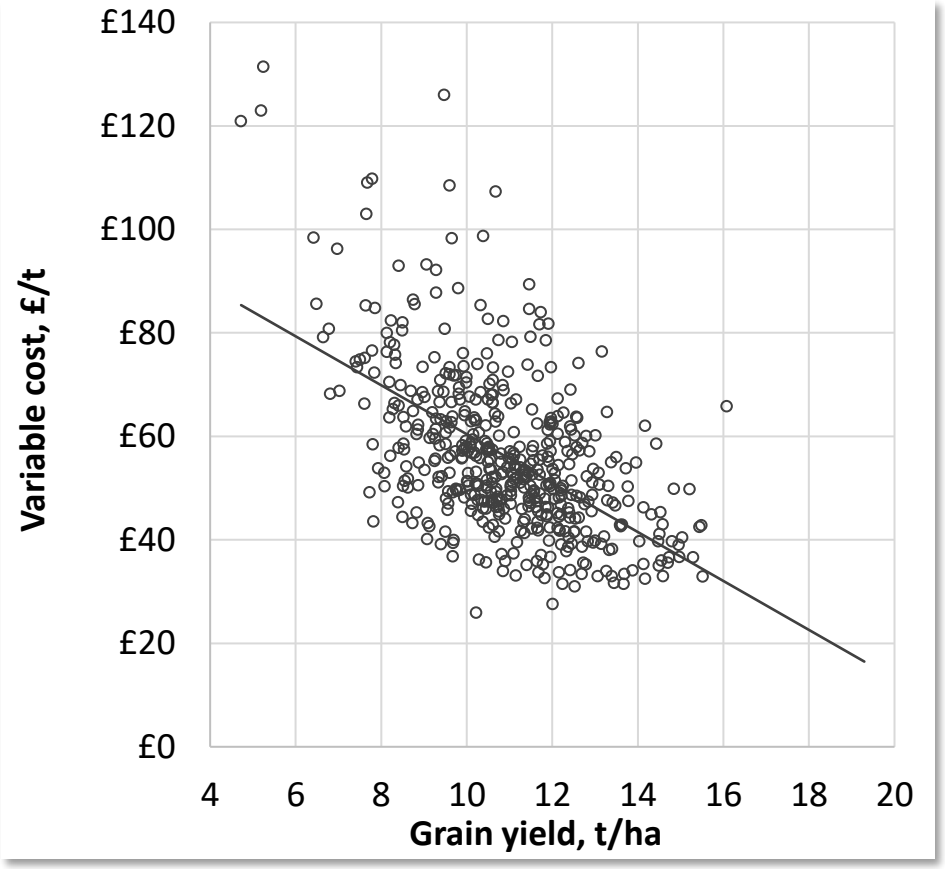
Emissions originate from three areas:

1. **Embedded emissions**
   - Seed
   - Ag-chemical manufacture
   - Nitrogen fertiliser manufacture
   - Non-N fertiliser manufacture
2. **Energy**
   - Operations (cultivations & grain drying)
3. **Direct and indirect N_2O emissions**
   - Nitrogen fertiliser application
   - Manure application
   - Crop residue decay

YEN variable costs & gross margin

- Yield ranged from 4.7 to 19.3 t/ha: average of 10.9 t/ha
- Big range in variable costs: average of £450/ha

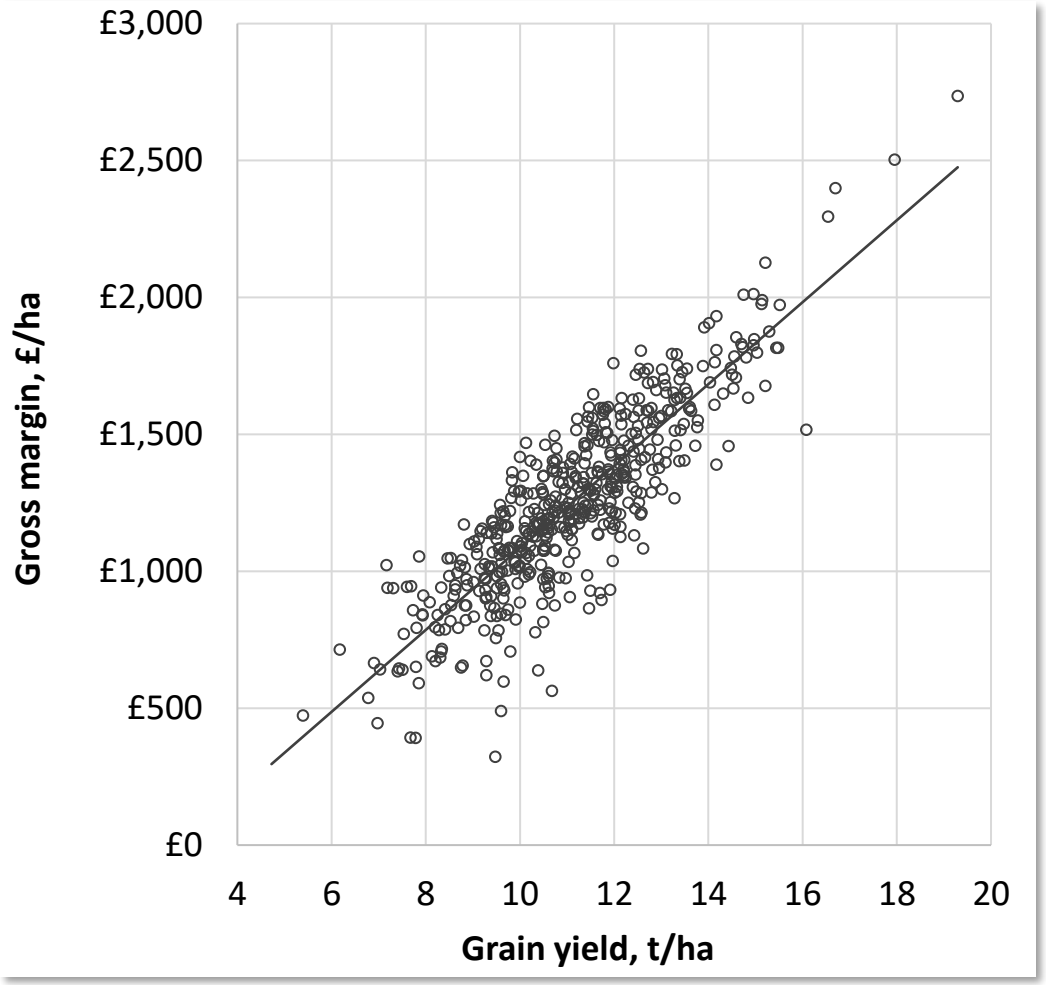




YEN variable costs & gross margin

- **Gross margins (£/ha) were strongly and positively related to grain yield**
- On average less than 3 t/ha of grain paid for average inputs
  - 5 t/ha for big spenders to cover their costs
- On average 8 t/ha yielding crop had gross margin of £800/ha and 12 t/ha had gross margin of £1,400/ha

Farm's fixed costs (rent, staff, buildings, machinery…) will eat into these margins so quoted profits will be lower.

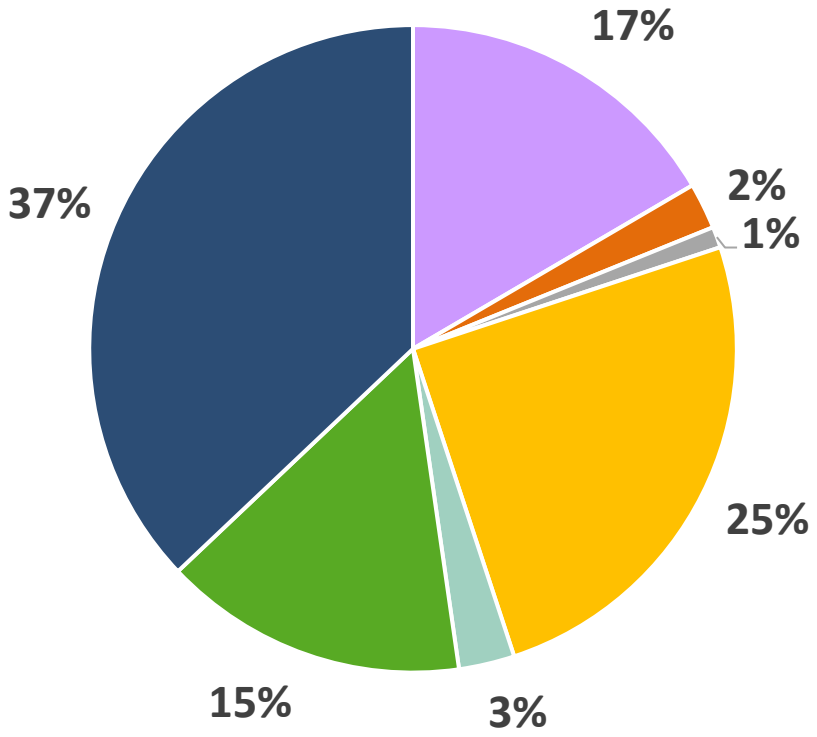


YEN Wheat crop C footprints

Nitrous oxide from nitrogen fertilisers (inorganic and manures)

Nitrous oxide from crop residues

Non-nitrogen fertiliser manufacture



Fuel use in operations

Seed production

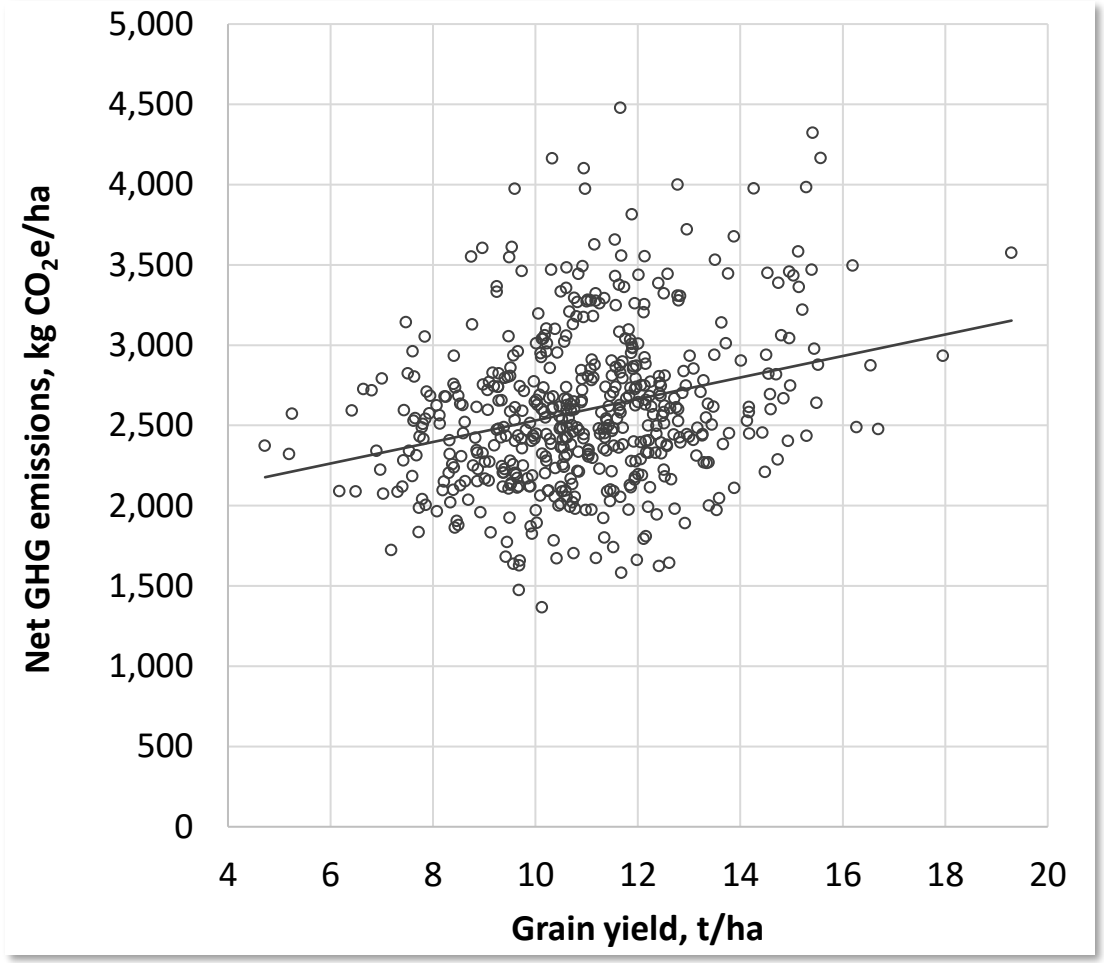
Agri-chemicals

Nitrogen fertiliser manufacture

Average YEN Zero data

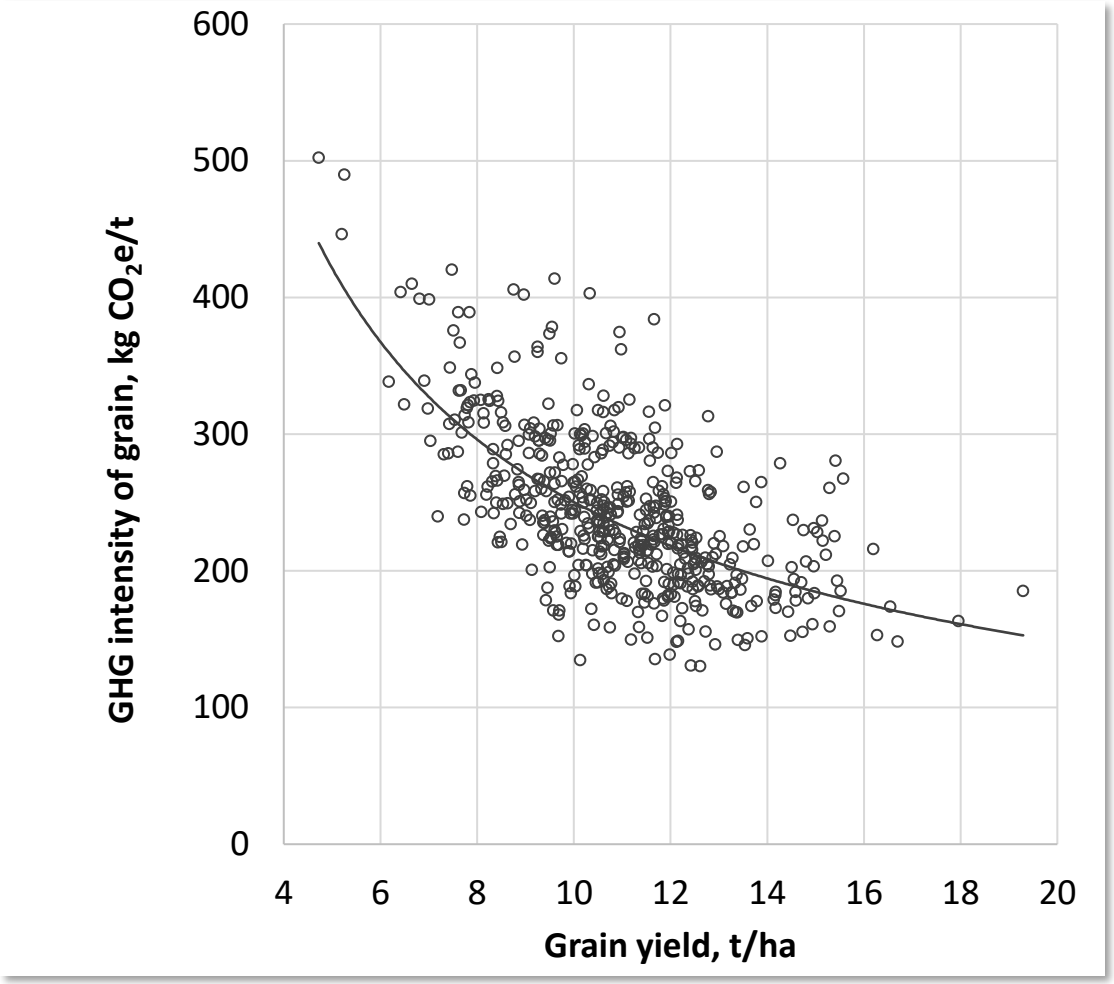
YEN Wheat crop C footprints /ha

- Higher yielding crops had slightly greater C footprints/ha
  - Modest increase in N input
  - Greater quantity of crop residue left in the field



YEN Wheat crop C footprints /tonne

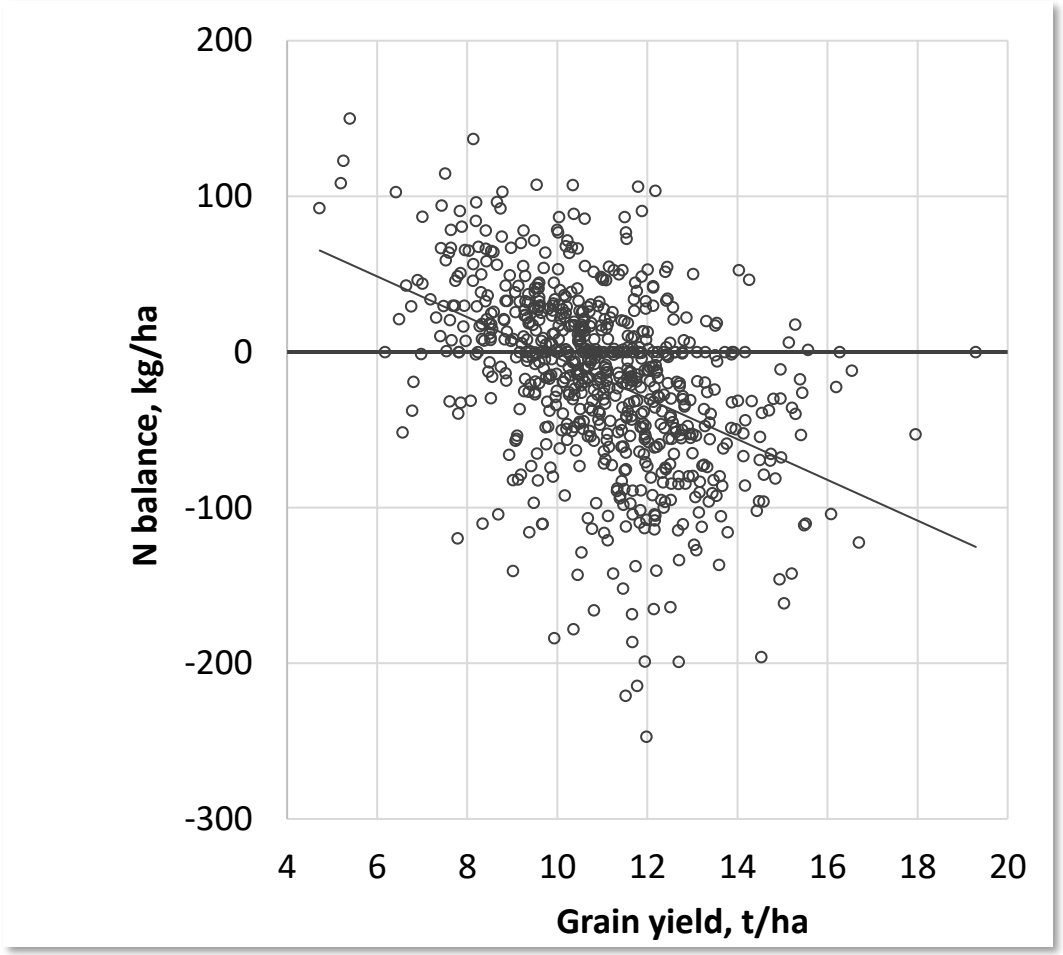
- High yields reduced GHG intensities (C footprint/tonne) of average yielding crops by a third
- Association would be greater if Indirect Land Use Change (ILUC) impacts considered



N balance of high yielding crops

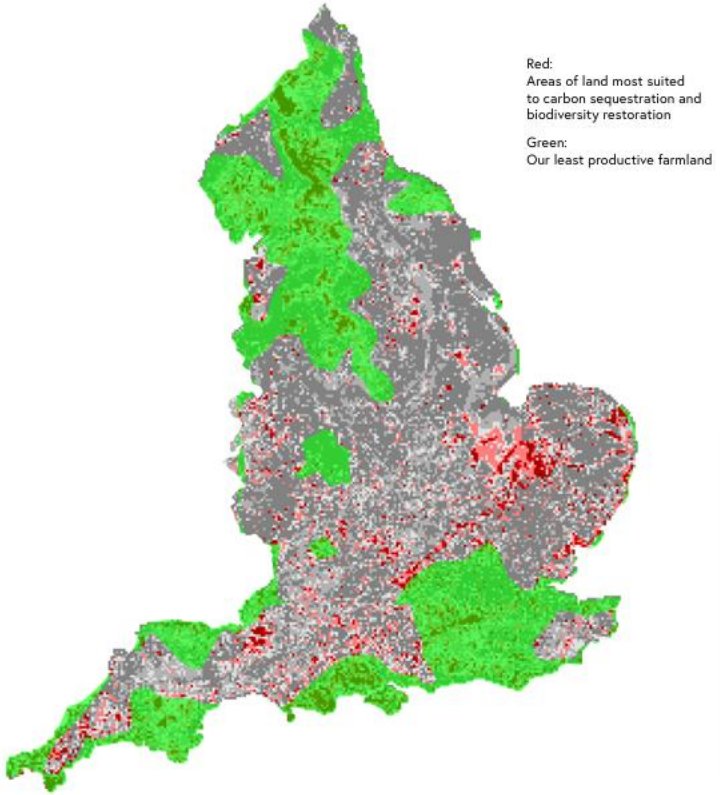
- High yields only had a weak positive relationship with N applied
- N balance became increasingly negative as yield increased: 13 kg N/tonne of yield
  - High yielding crops are effective at capturing N from non-synthetic sources: soil N, organic materials & previous crop residues
  - But need to ensure negative N balances are addressed for following crops

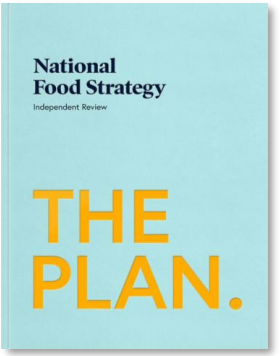
N applied – (Grain N + Straw N)



The UK needs a more targeted Land Use Policy

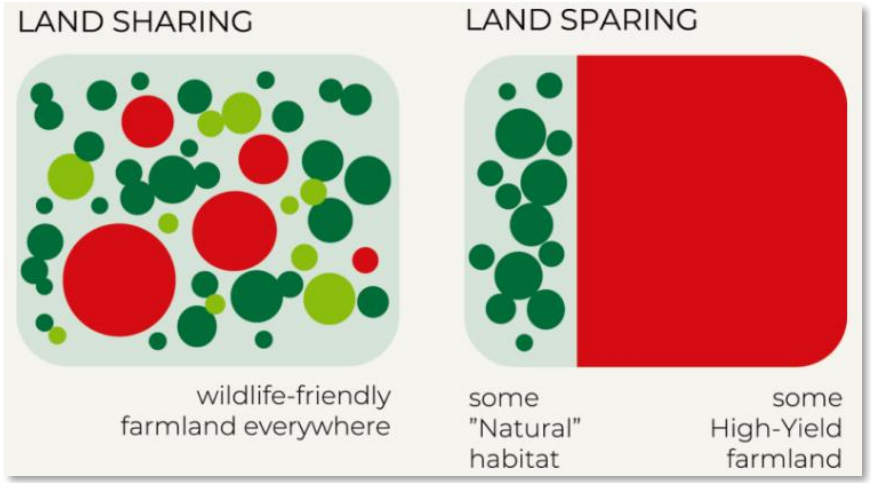
- **High agricultural productivity is needed to feed our growing population**
  - If output declines, land conversion is required: a high emitter of GHG emissions
- **The least productive 20% of our land produces 3% of our calories**
  - This land can be used to support wildlife, plant woodlands and restore peat bogs
- **The remaining 80% high yielding land covers 55% of our surface area**
  - How can we manage this area to support food security and biodiversity?

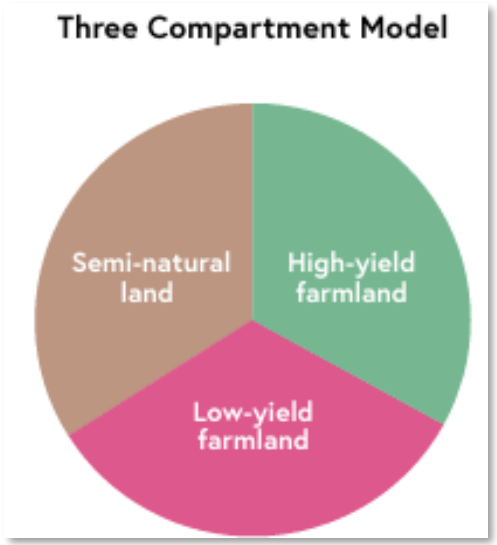




Land sparing vs. Land sharing

- Some species thrive under low intensity agriculture, but others require wild habitats
- Optimal combination of land-use strategies will vary spatially, requiring place-based approaches rather than uniform national policies
- Models indicate regional change recommendations, but changes can also occur at smaller scales – within fields





Current activity to reduce agriculture's C footprint

- **The 30:50:50 mission**: increase UK agriculture's productivity by 30% by 2050 while reducing environmental footprint by 50%
  - 60% land allocating to high yield farming
  - 25% to natural habitat
  - 15% to low intensity farming
- **Rewetting peat**
  - Government supporting efforts to encourage commercially viable options for farming on rewetted peatlands e.g., Lettuce on lowland peat
- **Optimal on farmland use planning**

UK Centre for Ecology & Hydrology
e-planner

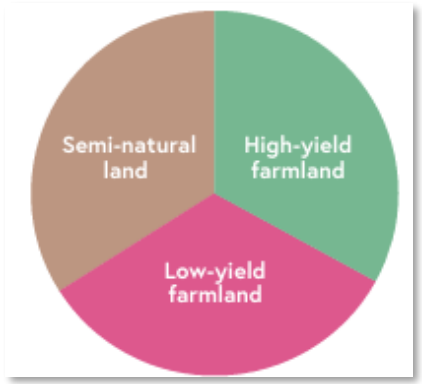
Lumeo
smart land management

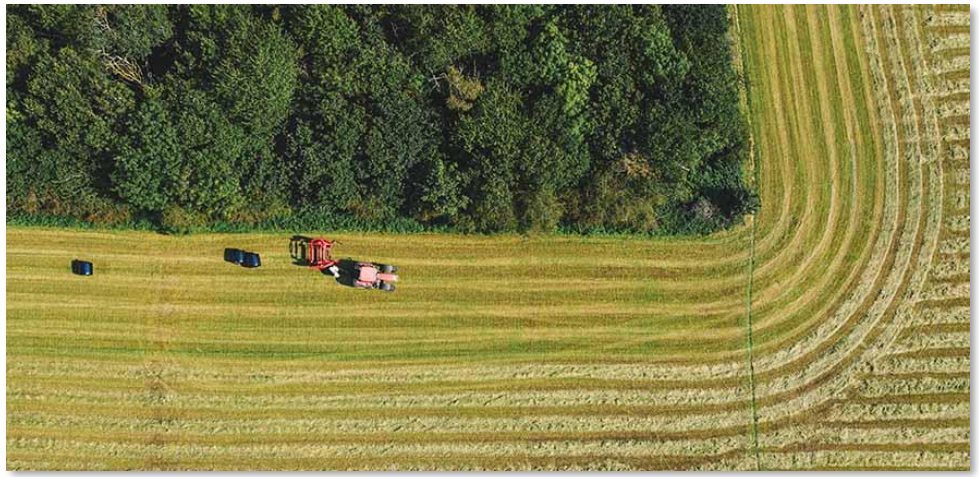
ADAS
PART OF THE RSK GROUP

YEN

Yield is king…in the right contexts

- YEN data indicates high yields don't necessarily mean high inputs
- High yields had greater gross margins (£/ha) and lower GHG intensities (kg CO_2e/tonne)
- High yielding crops were more effective at capturing N from non-synthetic sources
- Productivity is essential for food security and allows more land area to be used for semi-natural habitats and low intensity farming
- But context is important to ensure the right land use in the right place





Impacts of warm, dry and wet conditions on crop performance

Pete Berry, ADAS

Sli.do …

Which of these factors reduce your crop yields most frequently? ….

- Drought
- Waterlogging
- High temperatures
- Low temperatures
- Lack of sunshine

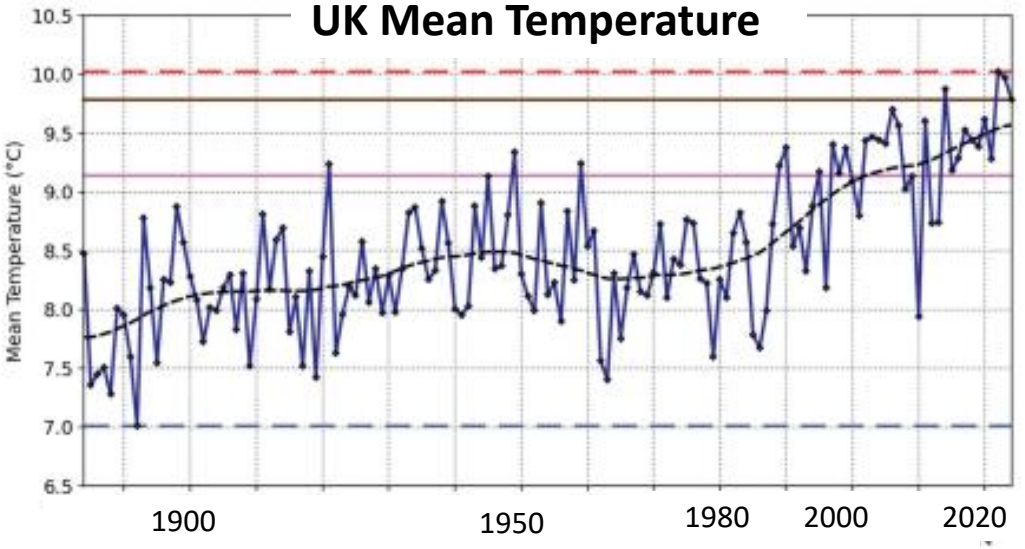
Which of these factors reduce your crop yields most frequently?

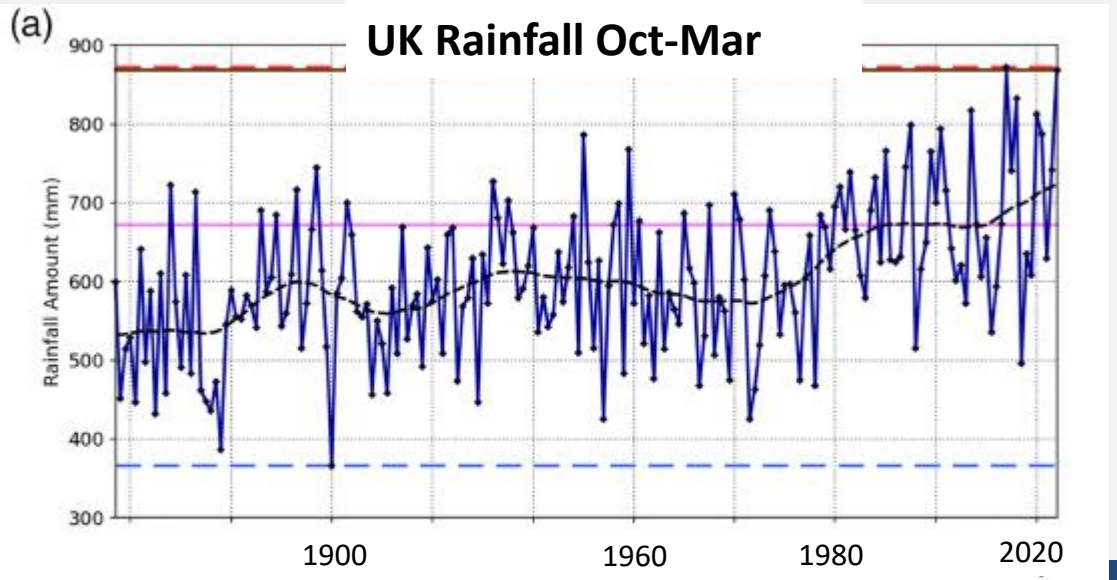
Definitions

- Climate – long-term average weather patterns
- Weather – short-term day-to-day state of the atmosphere

Changes to the UK climate

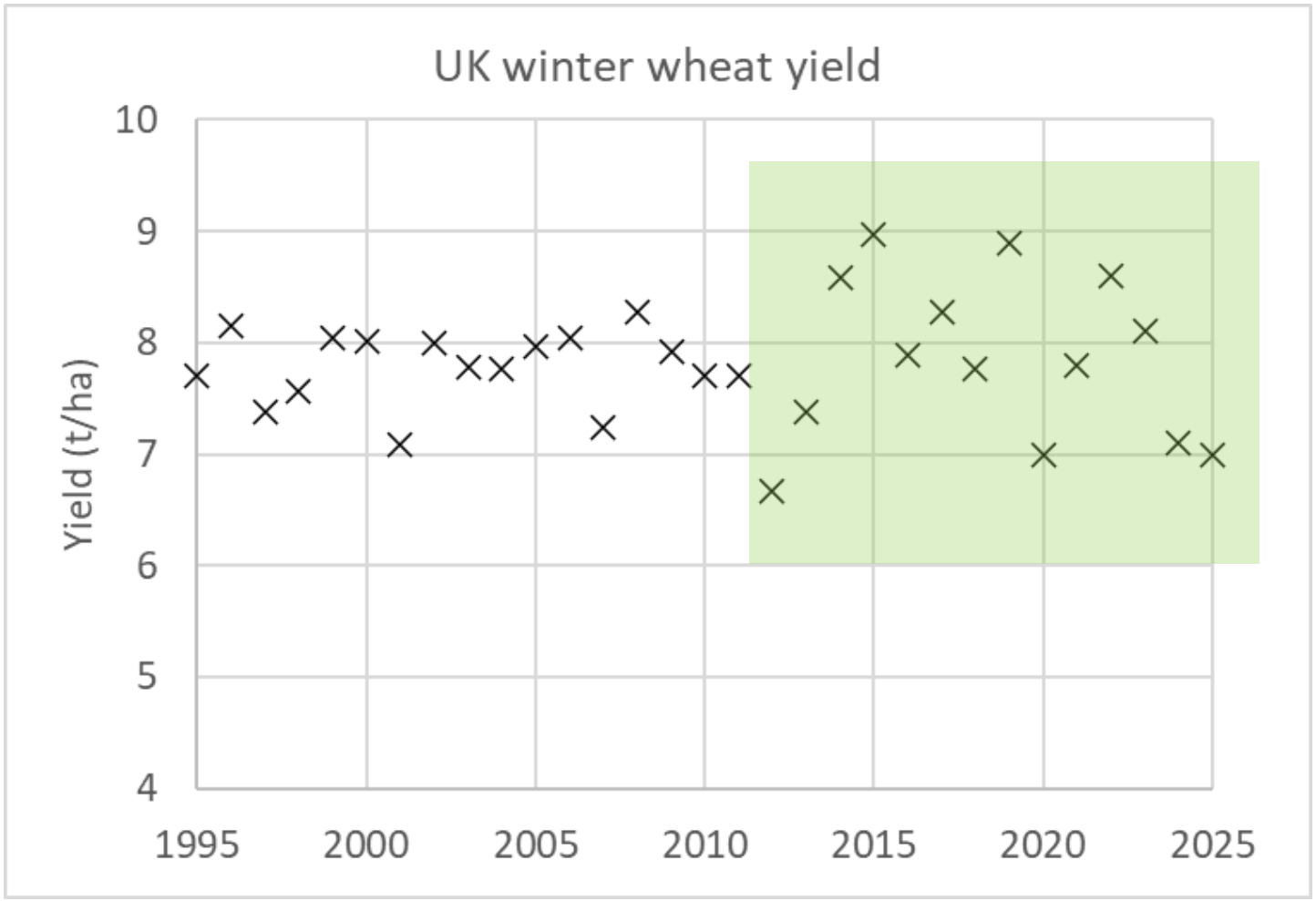
- UK has been warming at 0.25°C per decade since the 1980s
  - Frequency of very high temperatures has increased
- 2015-24 October to March period was 16% wetter than 1961-1990
- 2015-24 springs were 16% sunnier than 1961-1990
- UK climate projections for hotter drier summers (UKCP18 Science Overview Report)





Kendon *et al.* (2025). International Journal of Climatology

Increasingly variable crop yields



The challenges

- Long-term climate trends
  - The climate is getting warmer
    - Greater likelihood of high temperatures
    - General pattern of wetter winters and projection of dryer summers

- Short-term weather challenges
  - Long periods of dry or wet weather

    Big challenge: Don't know before drilling whether the season will be dry or wet

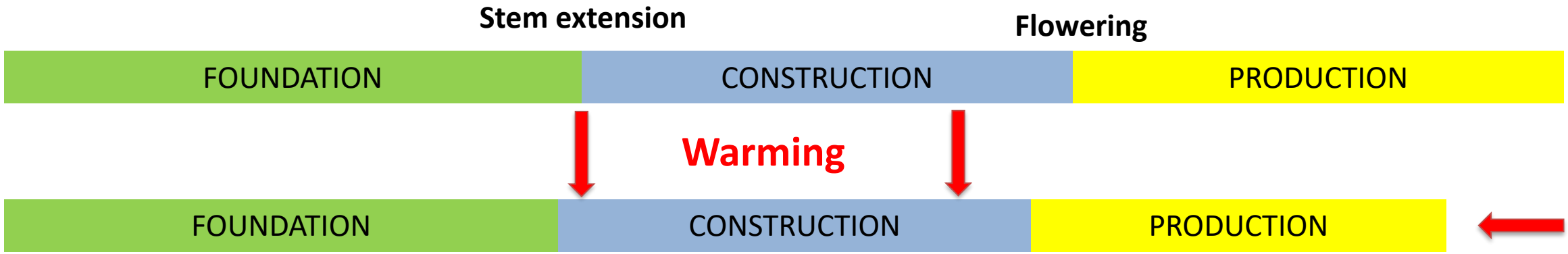
What do we need?

- Crop husbandry strategy that:
  - Deals with warmer conditions and the greater likelihood of very high temperatures
  - Is resilient to long dry or wet periods

Outline

- Explain physiologically how warm, dry & wet conditions affect crop performance as background for the panel discussion '**Best practices for climate resilience**'
- Summarise the key 2025 season weather challenges ahead of the YEN awards

Effect of warmer conditions



- Warm conditions shorten all 3 growth phases, but shorten the Production (grain filling) phase most
- Warm conditions have a limited impact on the length of the Foundation and Construction phases:
  - The start of stem extension depends on a combination of photoperiod (longer days in spring) and vernalisation (exposure to cool temperatures of 0 – 12°C)
  - Flowering date depends on photoperiod
- High temperatures during flowering (>30°C) reduce the number of grains set

Crop management for warm conditions

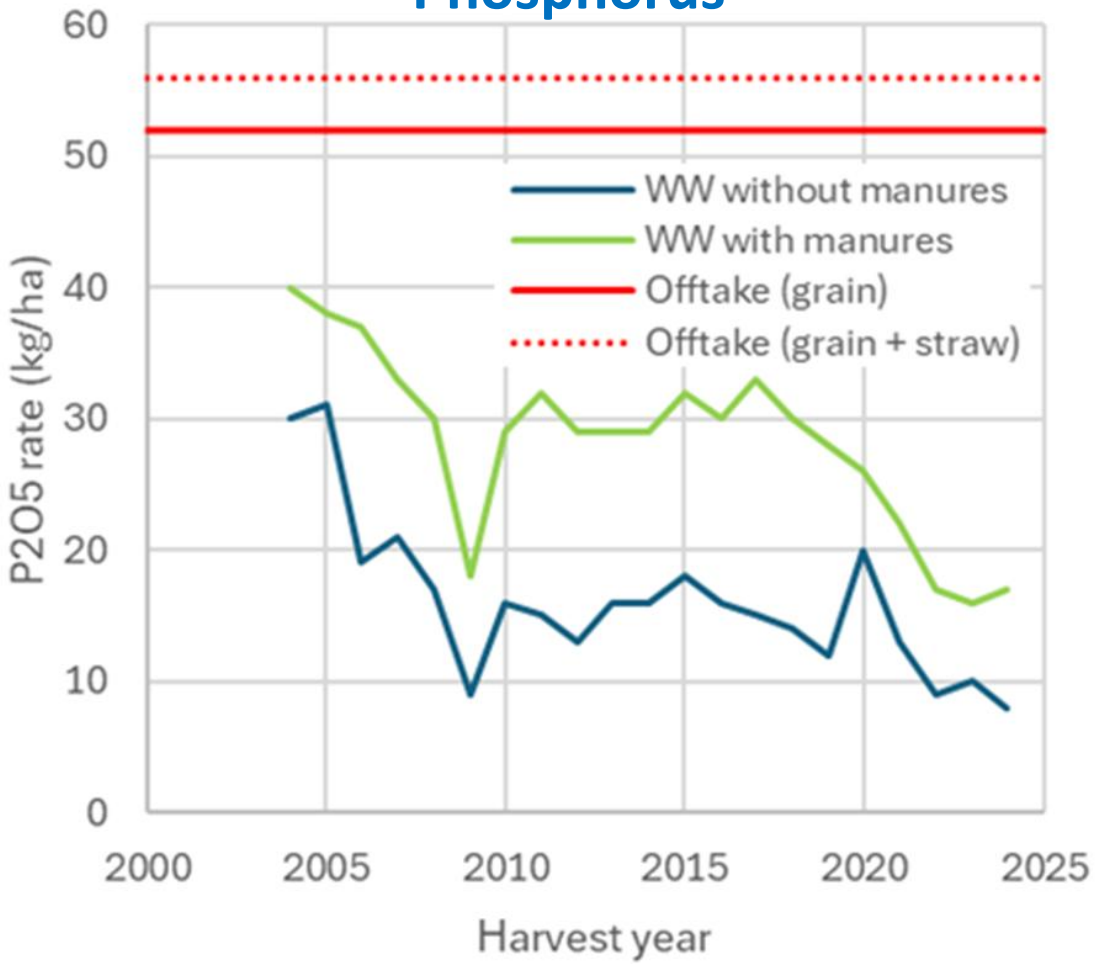
- Earlier flowering and grain filling
  - Shift grain filling to slightly cooler conditions
  - Reduce risk of damaging high temperatures at flowering *(but increase risk of frost)*
  - Reduce water use as less biomass at flowering
  - **Variety choice**

- Ensure sufficient water supply
  - Deeper roots (see next slides)
    - **Earlier drilling** *(bad for black grass, septoria and some pests)*
    - Alleviate soil compaction
  - Irrigate

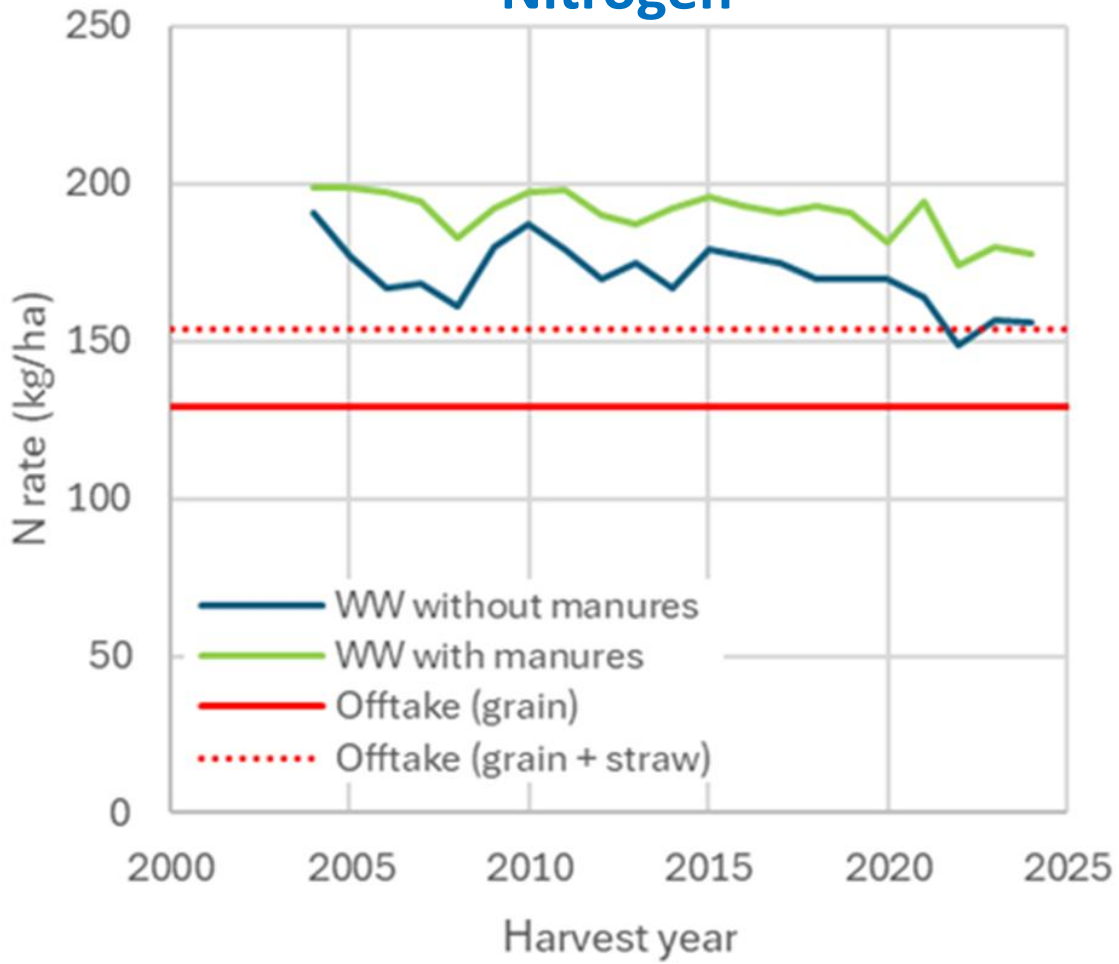
- Ensure sufficient N and P for canopy longevity (avoid self-destruction)
  - N and P inputs declining, grain P frequently below threshold
  - **Re-visit fertiliser strategy – is it enough for high yield?**

Insufficient nutrients being applied

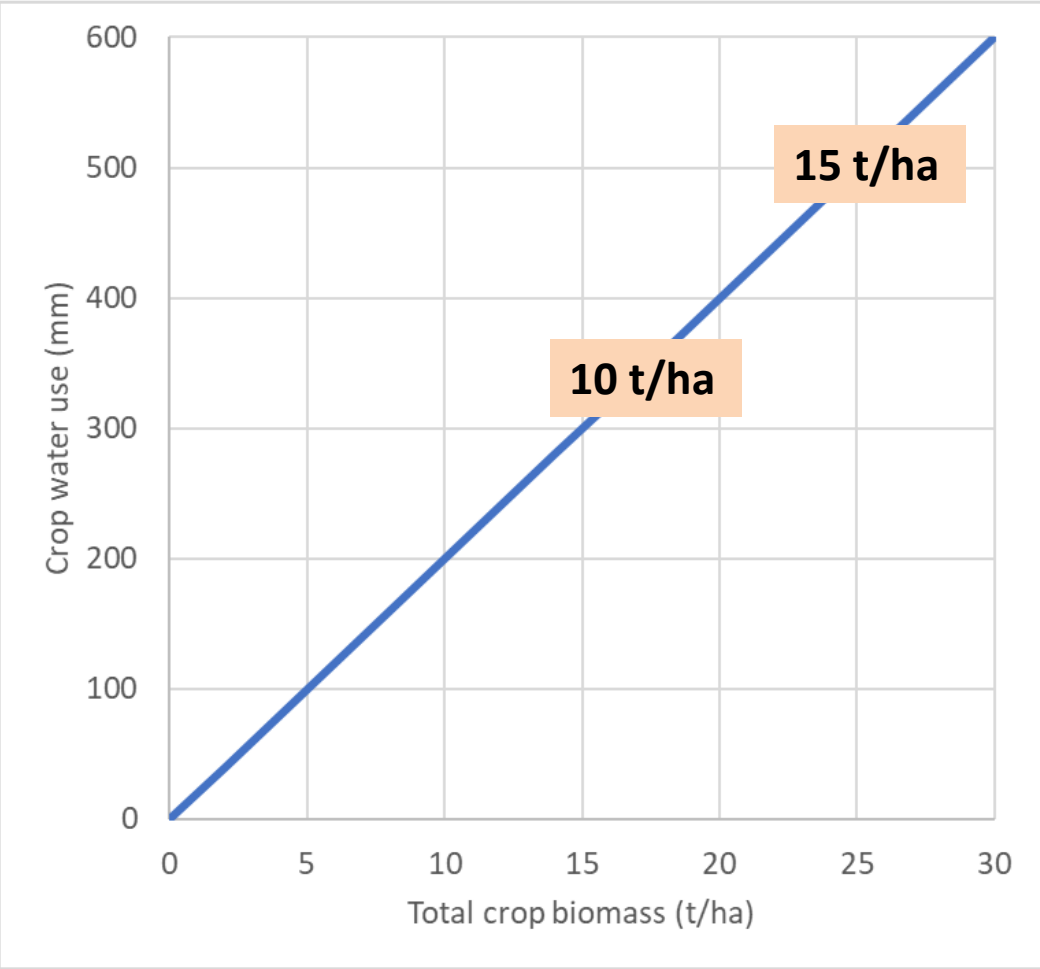
Phosphorus

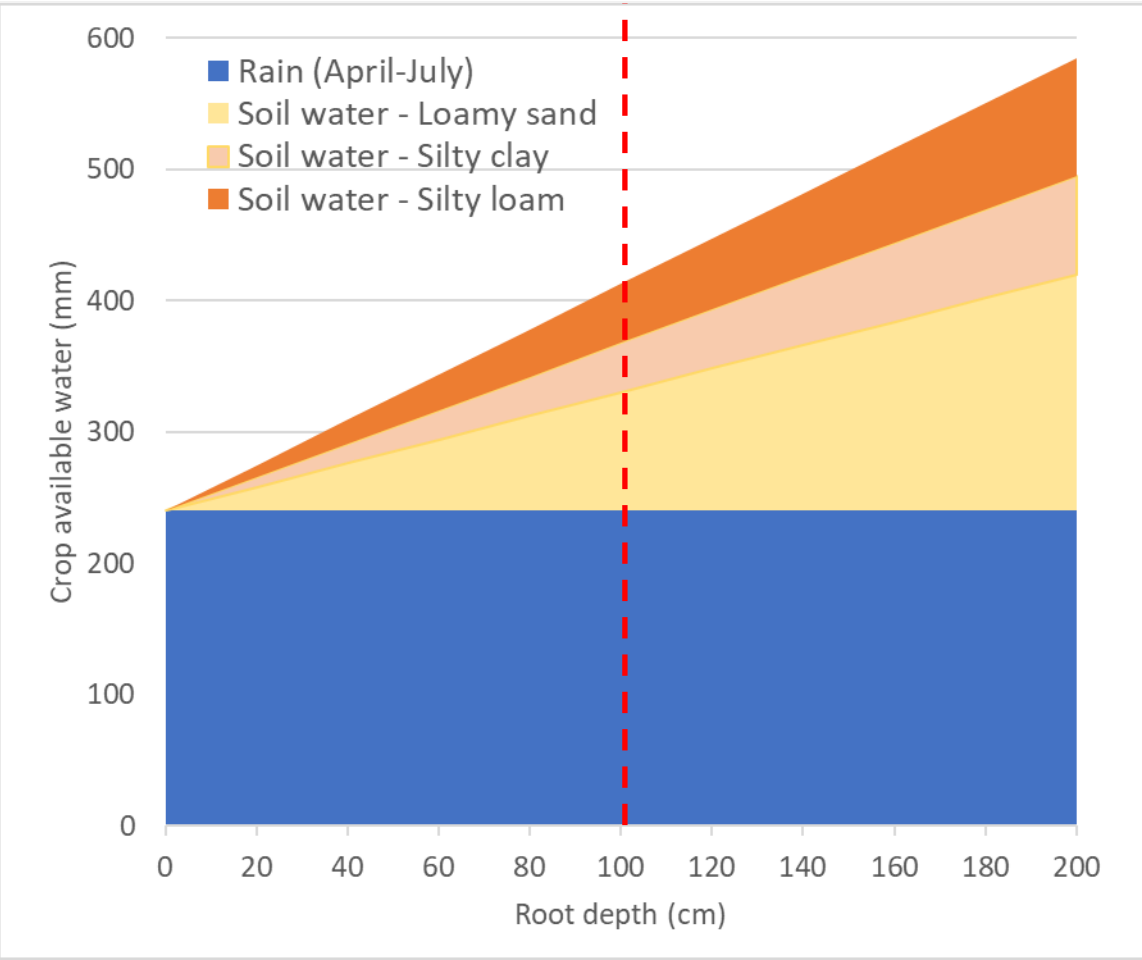


Nitrogen



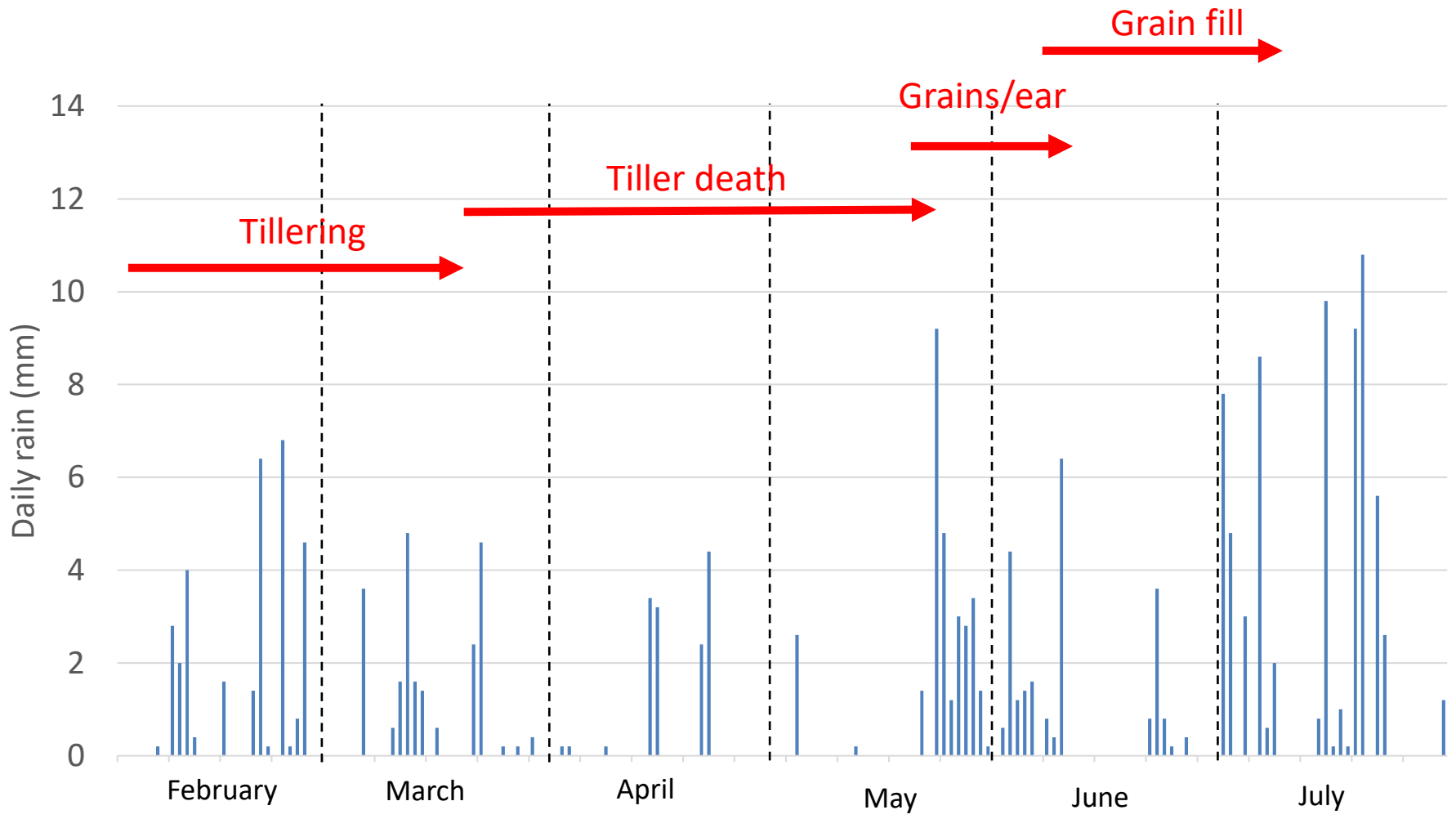
Effect of dry conditions





Action: in a dry year estimate the depth of your roots based on yield, rainfall and soil type

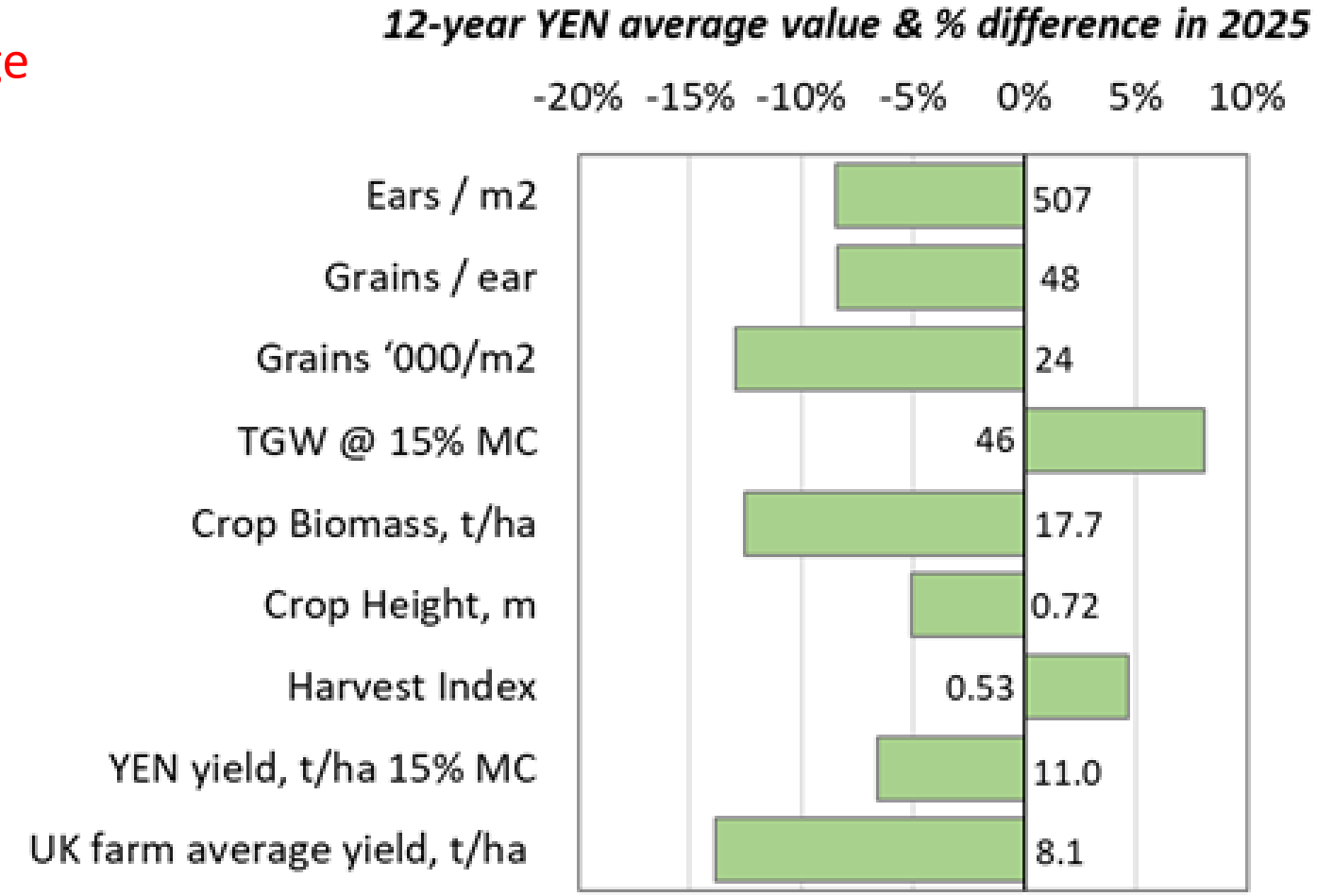
2025 drought: ~40% of normal rain from March to June



Rainfall data for ADAS High Mowthorpe

Comparison of 2025 YEN wheat with previous years

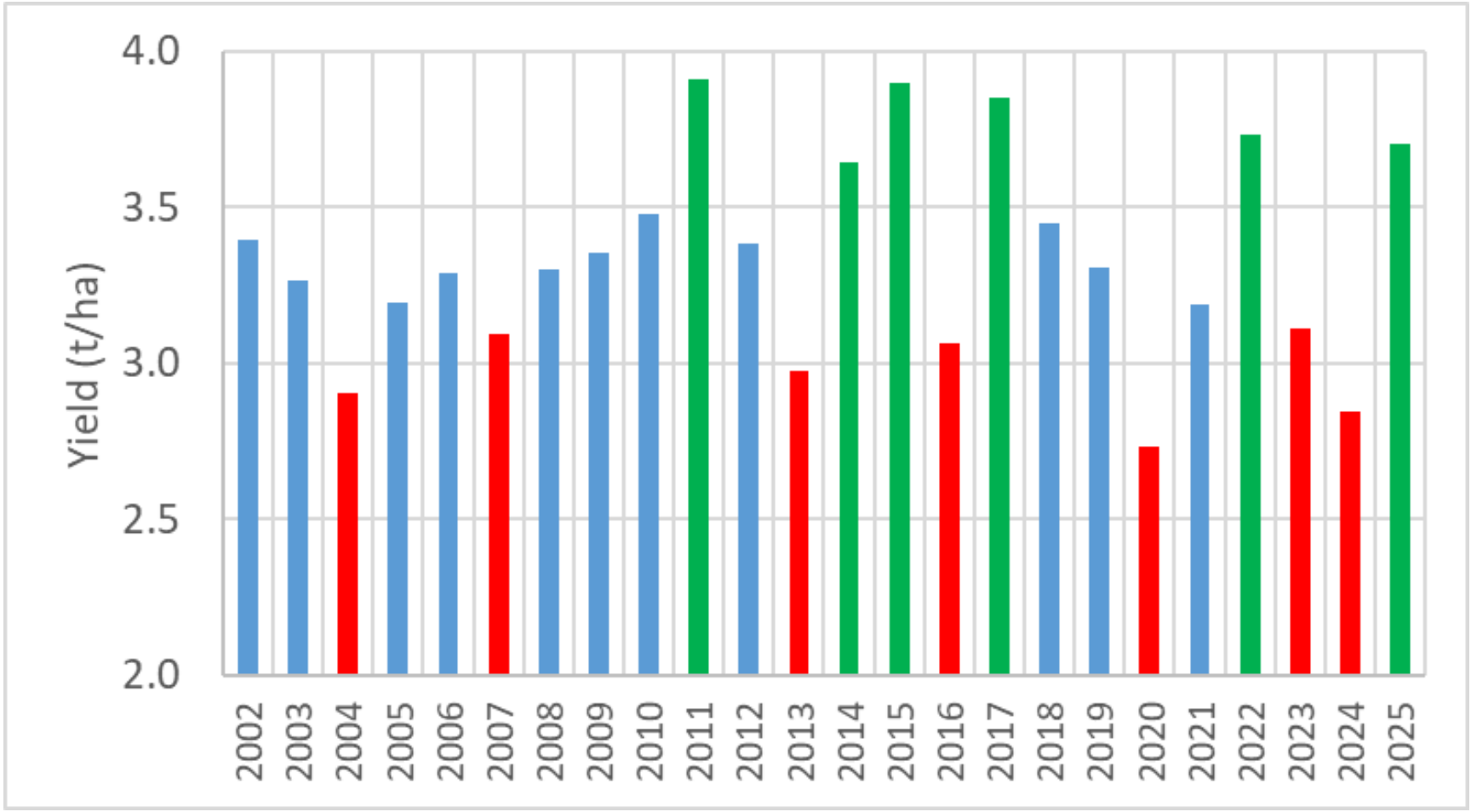
- 2025 yields 13% less than YEN average
- Ears/m^2: Less
- Grains per ear: Less
- TGW: Greater
- Total biomass: Less
- Harvest index: Slightly greater



Weather factors associated with high OSR yield (1979-2017)

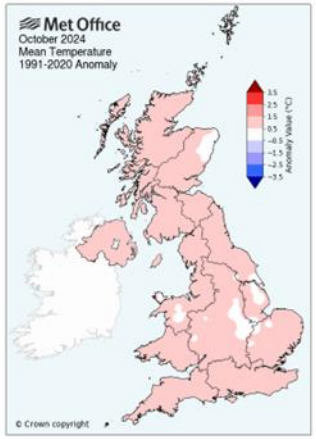
- High Maximum Temperature in October
- Dry December
- Warm min temp March
- Sunny/Dry April
- Wet/cool May

Explaining extreme yielding years

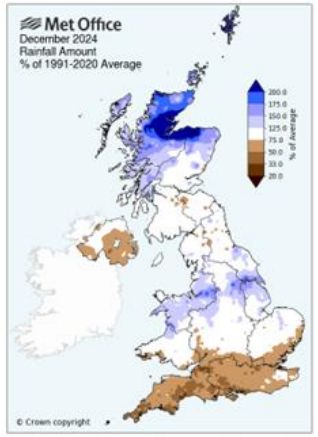


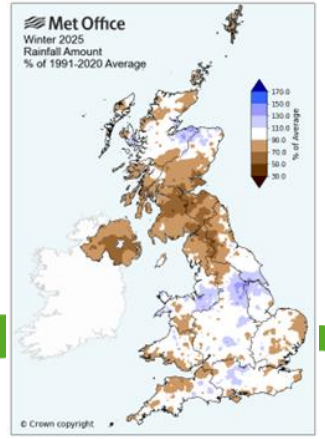
2024-25 weather & effect on OSR yield

October
warm

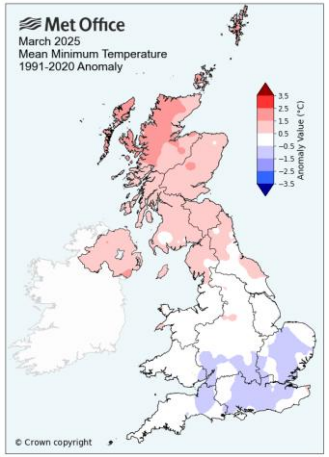


December/ Winter
average

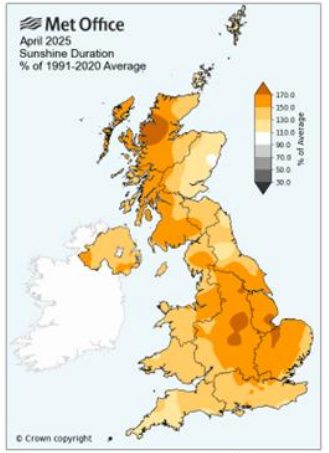


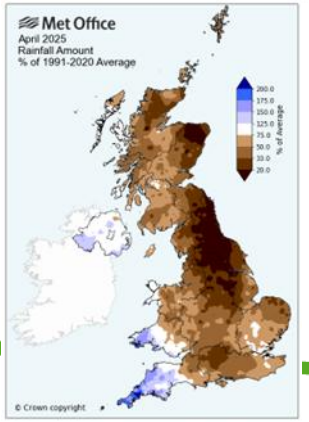


March
warm

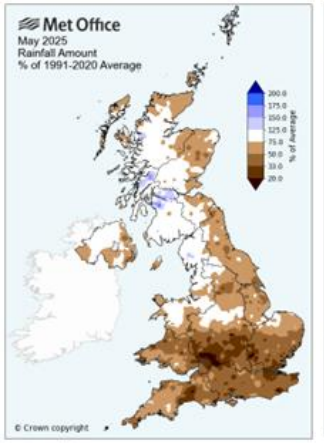


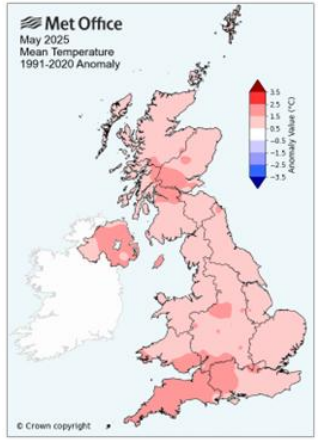
April
sunny/dry



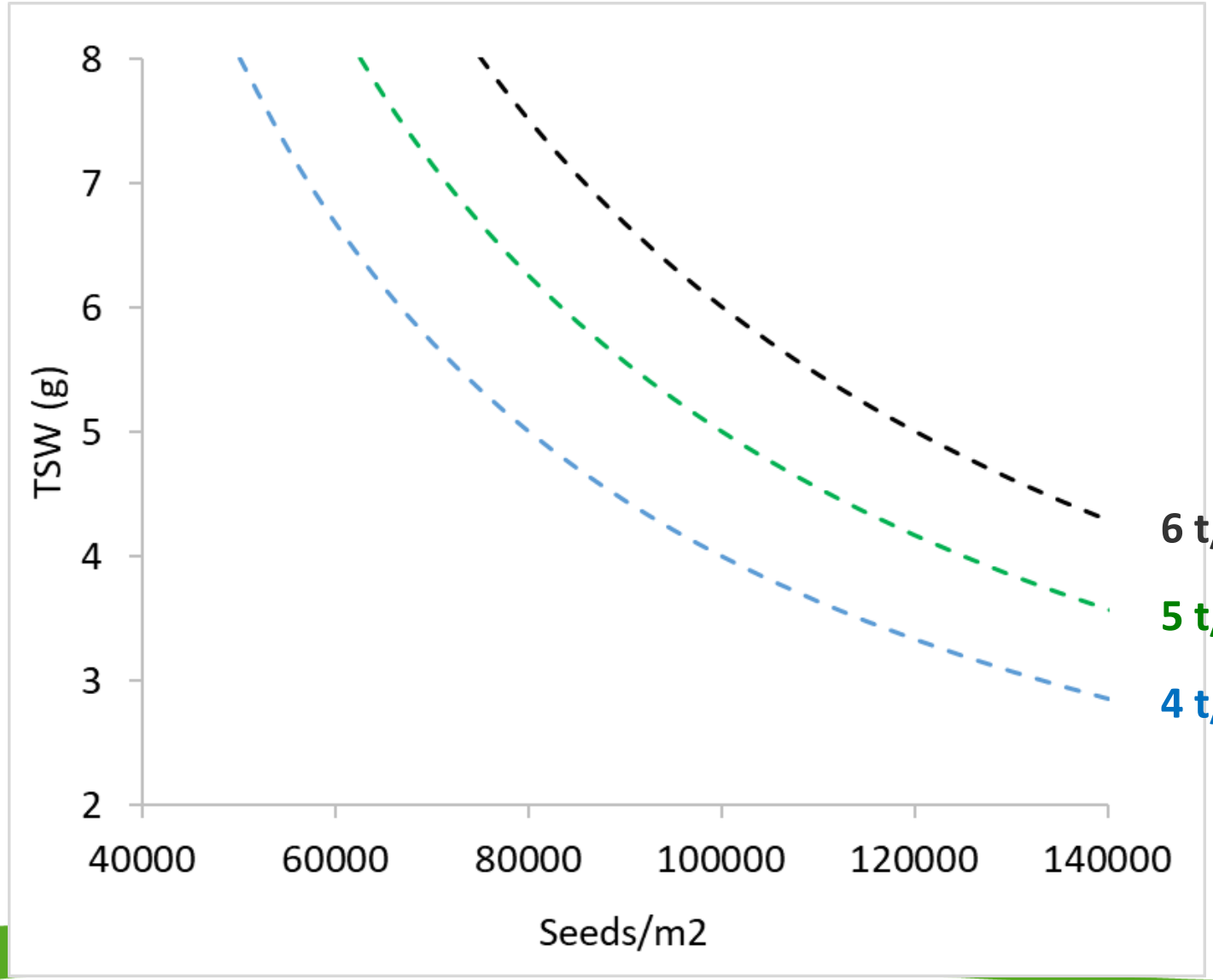


May
Dry/Hot

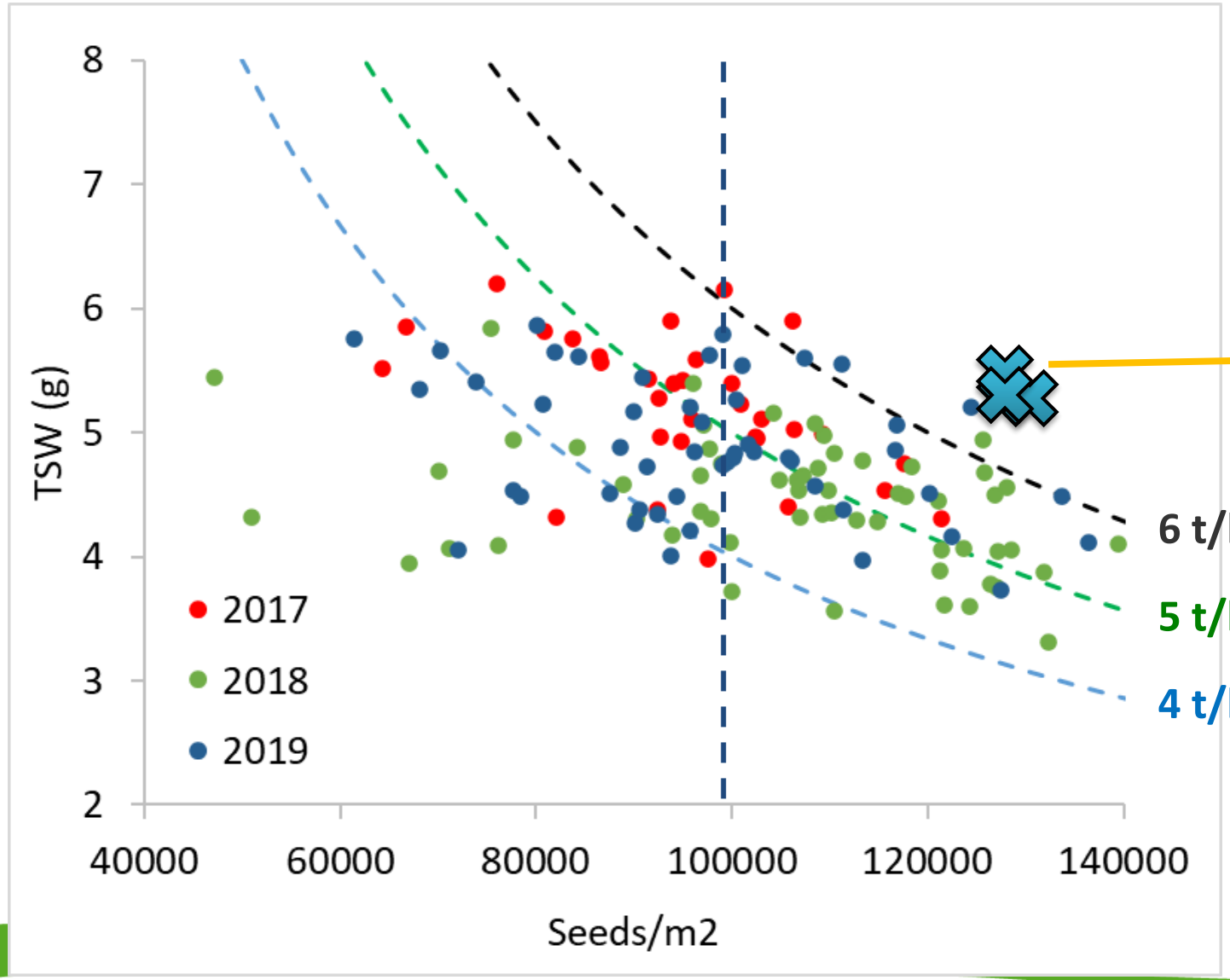




OSR Yield components



OSR Yield components



Three best YEN crops of 2025. All over 7t/ha

Crop management for dry conditions: some ideas for the panel discussion

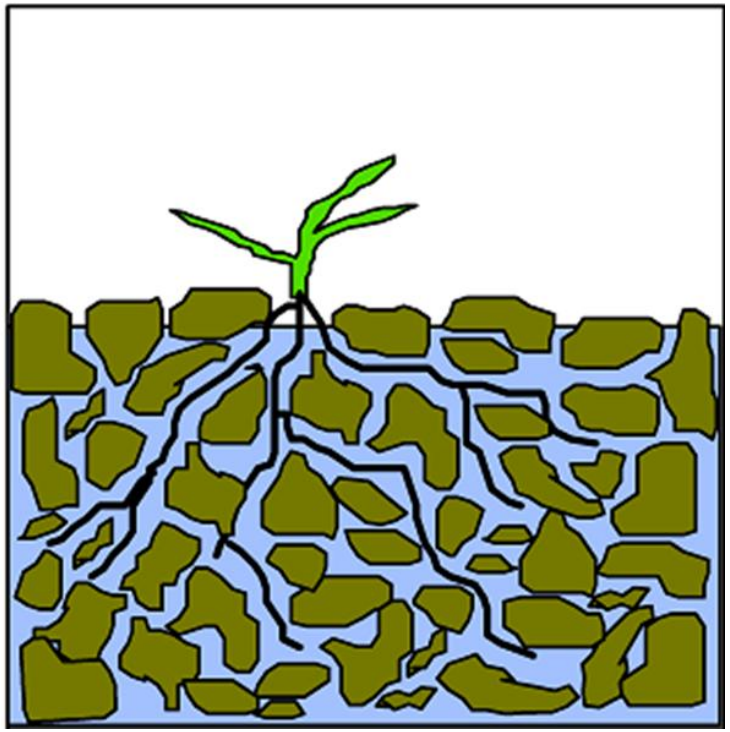
- Crops species that mature early performed better: winter barley, winter oilseed rape
- Early maturing varieties may also perform better
  - Use RL to select varieties that perform better in dry years / environments
- Early drilling (or avoid late drilling) to maximize autumn root growth
- Avoid sub-optimal plant population as spring tillering restricted
- Early fertilizer to minimize the risk of slow N uptake in dry conditions
- *BUT, early drilling, high plant population, early N will increase risk of lodging and disease, in an average or wet year (see next slides for more)*
- Place P as uptake appears to be reduced in dry spring
- Improve soil water holding capacity

Effect of wet conditions

- Waterlogging
  - Most challenging to deal with
- Nutrient leaching
- Disease
- Lodging

Waterlogging effects

- Shift from aerobic respiration to anaerobic fermentation
- Plant uses up carbohydrate reserves
- Uptake of nutrients is inhibited
  - within 48 hrs
- Plant stomata close – reduced photosynthesis
  - within 72 hrs

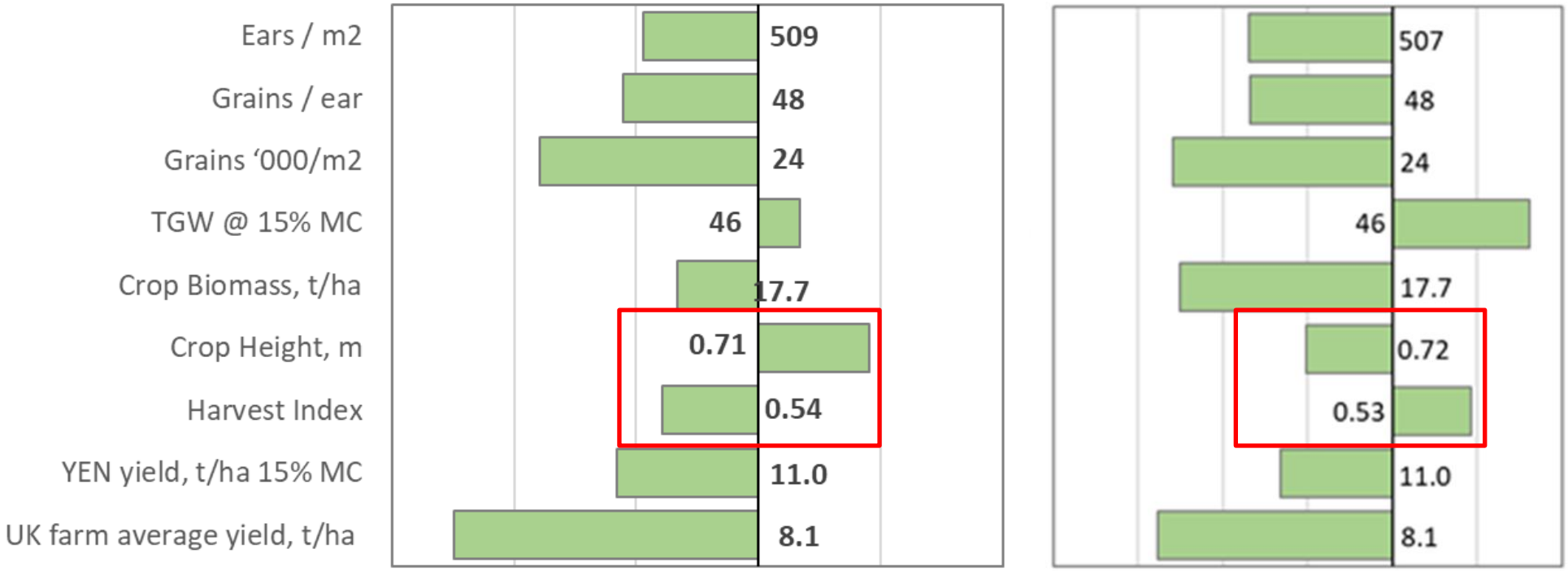


- Increased nodal root production, chlorosis, premature death of leaves and tillers
- Most detrimental up to tillering (cereals) or green bud (OSR)
  - 46 days waterlogging during tillering reduced yield by 20-24% (Dicken et al, 2008)

2024 monsoon compared with 2025 drought

2024 (wet)
compared with 11 year YEN average

2025 (dry)
compared with 12 year YEN average



Crop management for dry & wet conditions: For discussion…

- Crops species that mature early performed relatively better: winter barley and winter oilseed rape
- Early maturing varieties may also perform better
  - Use RL to select varieties that perform better in dry years or dry environments
  - Choose varieties resistant to disease and lodging
  - Choose species/varieties that could be sown in spring if autumn too wet
- Early drilling (or avoiding late drilling) to maximize autumn root growth and overall root depth
- Avoid sub-optimal plant population as spring tillering likely to be restricted
- Include an early fertilizer split to minimize the risk of slow N uptake in dry conditions
  - Use urea to help reduce risk of nitrate leaching
- Place P as uptake appears to be reduced in dry spring
- Be ready with robust fungicide & PGR programme
- Improve soil water holding capacity

Panel discussion:
Best Practices for Climate Resilience

- Todd Jex, Agrii
- Dmitry Feoktistov, NFU
- Pete Berry, ADAS

Audience Q&A

Coffee / Tea

Please return by 10:45

THE YIELD ENHANCEMENT NETWORK AWARDS 2025

CELEBRATING THE BEST OF FARMING

HOSTED BY TOM ALLEN-STEVENS

PRESENTED BY ROGER SYLVESTER-BRADLEY

WEBSITE WWW.YEN.ADAS.CO.UK

THE YIELD ENHANCEMENT NETWORK

SUPPORTED BY

Agrii

HIGHEST YIELD

IN THE EAST MIDLANDS

WITH A YIELD OF 12.62 T/HA

MARK POPPLEWELL

OF

HAPPY DAYS FARMING COMPANY

KINGERBY, LINCOLNSHIRE

THE YIELD ENHANCEMENT NETWORK

INDEPENDENT ENTRY

HIGHEST YIELD

IN EAST ANGLIA

WITH A YIELD OF 11.92 T/HA

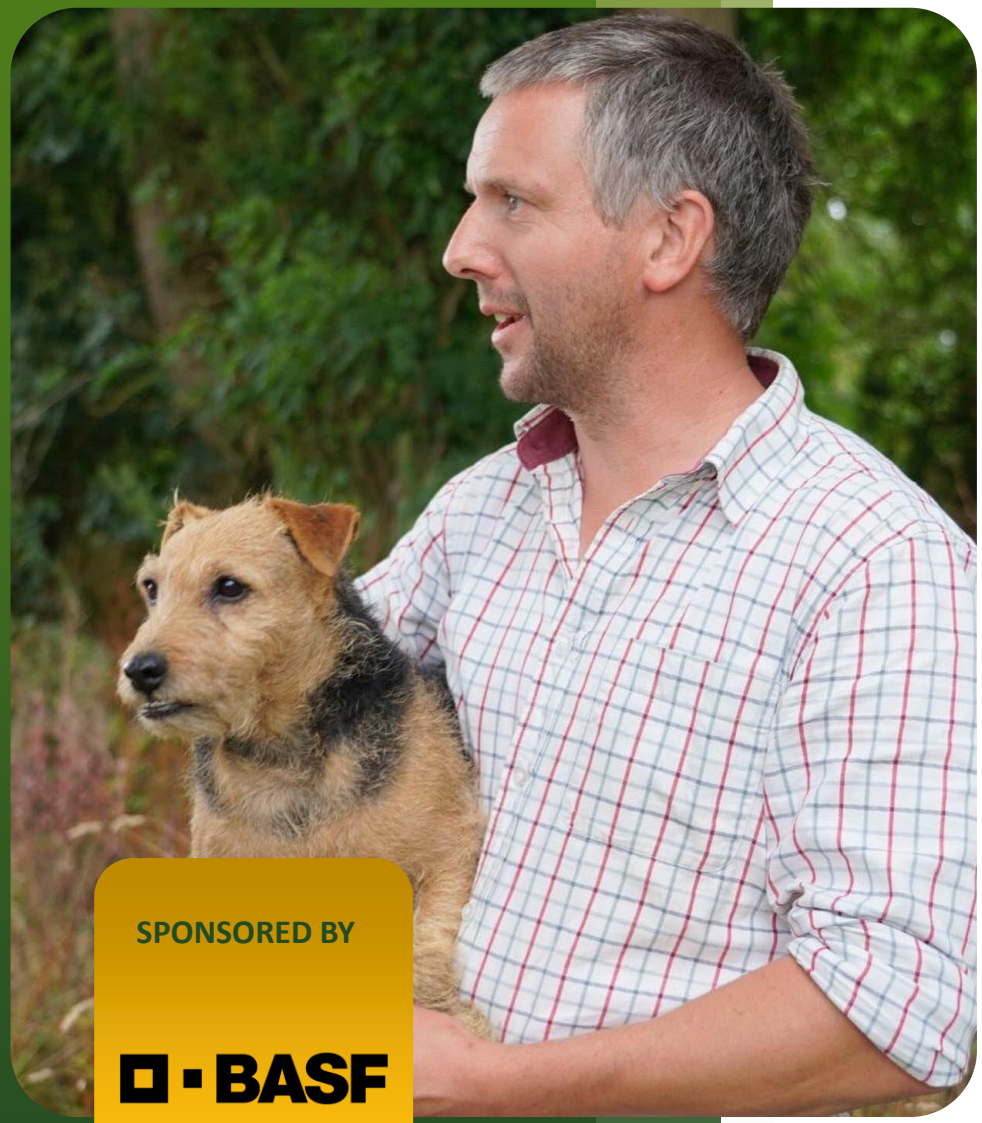
ED SALMON

OF

HYDE HALL

FRANSHAM, NORFOLK

THE YIELD ENHANCEMENT NETWORK



SPONSORED BY

BASF

HIGHEST YIELD

IN THE SOUTH EAST REGION

WITH A YIELD OF 13.23 T/HA

RICHARD BUDD

OF

STEVENS FARM (HAWKHURST) LTD

HAWKHURST, KENT

THE YIELD ENHANCEMENT NETWORK

INDEPENDENT ENTRY

HIGHEST YIELD

IN SCOTLAND

WITH A YIELD OF 12.94 T/HA

JACK CARNEGY

OF

BALNAMOON FARMS COMPANY

BRECHIN, ANGUS

THE YIELD ENHANCEMENT NETWORK

INDEPENDENT ENTRY

HIGHEST YIELD

OUTSIDE THE UK

WITH A YIELD OF 11.73 T/HA

LARS RIIS

OF

SØGAARD VILS

DENMARK

THE YIELD ENHANCEMENT NETWORK

CLOSEST TO POTENTIAL YIELD

IN THE EAST MIDLANDS

SUPPORTED BY

Agrii

ESTIMATED TO BE 70% OF 18.0 T/HA

MARK POPPLEWELL

OF

HAPPY DAYS FARMING COMPANY

KINGERBY, LINCOLNSHIRE

THE YIELD ENHANCEMENT NETWORK

CLOSEST TO POTENTIAL YIELD

IN EAST ANGLIA

INDEPENDENT ENTRY

ESTIMATED TO BE 70% OF 17.0 T/HA

ED SALMON

OF

HYDE HALL

FRANSHAM, NORFOLK

THE YIELD ENHANCEMENT NETWORK

CLOSEST TO POTENTIAL YIELD

IN THE SOUTH EAST REGION

SUPPORTED BY

HUTCHINSONS
Crop Production Specialists

ESTIMATED TO BE 70% OF 18.6 T/HA

MATTHEW ATTWOOD

OF

DOWN COURT FARM

DODDINGTON, SITTINGBOURNE

THE YIELD ENHANCEMENT NETWORK

CLOSEST TO POTENTIAL YIELD

IN SCOTLAND

INDEPENDENT ENTRY

ESTIMATED TO BE 77% OF 16.9 T/HA

JACK CARNEGY

OF

BALNAMOON FARMS COMPANY

BRECHIN, ANGUS

THE YIELD ENHANCEMENT NETWORK

SUPPORTED BY

CLOSEST TO POTENTIAL YIELD

OUTSIDE THE UK

ESTIMATED TO BE 70% OF 13.4 T/HA

MARTIN JUSTESEN KETTINGE

DENMARK


YEN
WHEAT
THE YEN AWARDS 2025

THE YIELD ENHANCEMENT NETWORK

SUPPORTED BY

SILVER AWARD

FOR A GRAIN YIELD OF 13.45 T/HA

MARTIN JUSTESEN KETTINGE

DENMARK

THE YIELD ENHANCEMENT NETWORK

SPONSORED BY BASF

GOLD AWARD

FOR A GRAIN YIELD OF 14.34 T/HA

DAVID PASSMORE

OF

MAYS FARM

WALLINGFORD, OXFORDSHIRE

THE YIELD ENHANCEMENT NETWORK

SUPPORTED BY

Agrii

SILVER AWARD

FOR ACHIEVING 102% OF POTENTIAL GRAIN YIELD ESTIMATED TO BE 12.5 T/HA

ANNABEL HAMILTON

OF

BEE EDGE FARM

EYEMOUTH, BERWICKSHIRE

THE YIELD ENHANCEMENT NETWORK

SPONSORED BY BASF

GOLD AWARD

FOR ACHIEVING 117% OF POTENTIAL GRAIN YIELD ESTIMATED TO BE 12.2 T/HA

DAVID PASSMORE

OF

MAYS FARM

WALLINGFORD, OXFORDSHIRE

OATS

THE YEN AWARDS 2025

THE YIELD ENHANCEMENT NETWORK

GOLD OATS AWARD

INDEPENDENT ENTRY

FOR A GRAIN YIELD OF 10.09 T/HA

JOHN ANDERSON

OF

BROYNACH FARM

CAITHNESS, THURSO

THE YIELD ENHANCEMENT NETWORK

GOLD OATS AWARD

INDEPENDENT ENTRY

FOR ACHIEVING 61% OF POTENTIAL
YIELD ESTIMATED TO BE 16.5 T/HA

JOHN ANDERSON

OF

BROYNACH FARM

CAITHNESS, THURSO


YEN
BARLEY
THE YEN AWARDS 2025

THE YIELD ENHANCEMENT NETWORK

SUPPORTED BY

HUTCHINSONS
Crop Production Specialists

SILVER SPRING BARLEY AWARD

FOR A GRAIN YIELD OF 9.35 T/HA

PAUL SPINKS

OF

WHITWELL HALL FARM

NORWICH, NORFOLK

THE YIELD ENHANCEMENT NETWORK

GOLD SPRING BARLEY AWARD

INDEPENDENT ENTRY

FOR A GRAIN YIELD OF 10.39 T/HA

DYSON FARMING

LINCOLN

THE YIELD ENHANCEMENT NETWORK

SILVER SPRING BARLEY AWARD

INDEPENDENT ENTRY

FOR ACHIEVING 71% OF POTENTIAL GRAIN YIELD ESTIMATED TO BE 12.0 T/HA

SIMON BUDDEN

OF

NETHERLEY FARM PARTNERSHIP

WATERLOOVILLE, HAMPSHIRE

THE YIELD ENHANCEMENT NETWORK

GOLD SPRING BARLEY AWARD

INDEPENDENT ENTRY

FOR ACHIEVING 81% OF POTENTIAL YIELD
ESTIMATED TO BE 12.8 T/HA

DYSON FARMING

LINCOLN

OILSEED

THE YEN AWARDS 2025

THE YIELD ENHANCEMENT NETWORK

SUPPORTED BY

CROP MANAGEMENT PARTNERS LLP

SILVER OILSEED AWARD

FOR A GROSS OUTPUT OF 7.61 T/HA

RICHARD BUDD

OF

STEVENS FARM (HAWKHURST) LTD

HAWKHURST, KENT

THE YIELD ENHANCEMENT NETWORK

SUPPORTED BY

United Oilseeds

GOLD OILSEED AWARD

FOR A GROSS OUTPUT OF 7.71 T/HA

TIM LAMYMAN

OF

WORLABY FARM

LINCOLNSHIRE

THE YIELD ENHANCEMENT NETWORK

SUPPORTED BY

CROP MANAGEMENT PARTNERS LLP

SILVER OILSEED AWARD

FOR ACHIEVING 63% OF POTENTIAL SEED YIELD ESTIMATED TO BE 12.1 T/HA

RICHARD BUDD

OF

STEVENS FARM (HAWKHURST) LTD

HAWKHURST, KENT

THE YIELD ENHANCEMENT NETWORK

SUPPORTED BY

United Oilseeds

GOLD OILSEED AWARD

FOR ACHIEVING 89% OF POTENTIAL SEED YIELD
ESTIMATED TO BE 8.4 T/HA

ANNABEL HAMILTON

OF

BEE EDGE FARM

EYEMOUTH, BERWICKSHIRE


YEN
PULSE
THE YEN AWARDS 2025

THE YIELD ENHANCEMENT NETWORK

PEA YEN GOLD AWARD

FOR HIGHEST PEA YIELD STABILITY OF 7.2% DEVIATION FROM AVERAGE YIELD WITH AN AVERAGE YIELD OF 3.81 T/HA OVER 4 YEARS

DAVID PICKERING

OF

OLD MANOR FARM

EAST RUSTON, NORFOLK

THE YIELD ENHANCEMENT NETWORK

BEAN YEN GOLD AWARD

HIGHEST SPRING BEAN YIELD STABILITY OF 13.6% DEVIATION FROM AVERAGE YIELD WITH AN AVERAGE YIELD OF 6.51 T/HA OVER 4 YEARS

ANDREW GENTLE

OF

HALE FARM

CHICHESTER, WEST SUSSEX

THE YIELD ENHANCEMENT NETWORK

BEAN YEN GOLD AWARD

HIGHEST WINTER BEAN YIELD STABILITY OF 14.5% DEVIATION FROM AVERAGE YIELD WITH AN AVERAGE YIELD OF 7.29 T/HA OVER 4 YEARS

RICHARD BUDD

OF

STEVENS FARM (HAWKHURST) LTD

HAWKHURST, KENT

THE YIELD ENHANCEMENT NETWORK

SPONSORED BY

SILVER AWARD

ACHIEVING CLOSEST TO POTENTIAL BEAN YIELD ESTIMATED TO BE 63% OF 12.9 T/HA

WILLIAM DAKIN

OF

DUDDO FARM

BERWICK-UPON-TWEED, NORTHUMBERLAND

THE YIELD ENHANCEMENT NETWORK

SPONSORED BY Origin ENTERPRISES

BEAN YEN GOLD AWARD

ACHIEVING CLOSEST TO POTENTIAL BEAN YIELD

ESTIMATED TO BE 64% OF 11.5 T/HA

RICHARD BUDD

OF

STEVENS FARM (HAWKHURST) LTD

HAWKHURST, KENT

THE YIELD ENHANCEMENT NETWORK

SPONSORED BY

SILVER AWARD

FOR ACHIEVING CLOSEST TO POTENTIAL PEA YIELD ESTIMATED TO BE 44% OF 8.0 T/HA

HEATHCOTE FARMS LTD

TODDINGTON, BEDFORDSHIRE

THE YIELD ENHANCEMENT NETWORK

SPONSORED BY

PGRO

GOLD AWARD

FOR ACHIEVING CLOSEST TO POTENTIAL PEA YIELD ESTIMATED TO BE 69% OF 9.7 T/HA

ED KING

OF

BLANKNEY ESTATES LIMITED

NAVENBY, LINCOLNSHIRE

THE YIELD ENHANCEMENT NETWORK

SILVER AWARD

ACHIEVING THE BEAN YIELD OF 7.38 T/HA

JOHN SEED

OF

WOODEND FARMING PARTNERSHIP

GAVINTON, DUNS

SUPPORTED BY

BOFIN

THE YIELD ENHANCEMENT NETWORK

INDEPENDENT ENTRY

GOLD AWARD

ACHIEVING THE BEAN YIELD OF 8.15 T/HA

WILLIAM DAKIN

OF

DUDDO FARM

BERWICK-UPON-TWEED, NORTHUMBERLAND

THE YIELD ENHANCEMENT NETWORK

INDEPENDENT ENTRY

SILVER AWARD

ACHIEVING THE PEA YIELD OF 6.31 T/HA

MATTHEW BEECH

OF

MANOR FARM

DRIFFILED, EAST YORKSHIRE

THE YIELD ENHANCEMENT NETWORK

SPONSORED BY

GOLD AWARD

FOR ACHIEVING PEA YIELD OF 6.70 T/HA

ED KING

OF

BLANKNEY ESTATES LIMITED

NAVENBY, LINCOLNSHIRE


YEN
INNOVATORS
THE YEN AWARDS 2025

THE YIELD ENHANCEMENT NETWORK

INNOVATOR OF THE YEAR

RICHARD BUDD

OF

STEVENS FARM (HAWKHURST) LTD

FOR HIS COMMITMENT, INNOVATIVE IDEAS, AND USE OF TRIALS AND ANALYSIS FOR YIELD ENHANCEMENT

THE YIELD ENHANCEMENT NETWORK

INNOVATOR OF THE YEAR

TIM LAMYMAN

OF

WORLABY FARMS LTD

FOR HIS COMMITMENT, INNOVATIVE IDEAS, AND USE OF TRIALS AND ANALYSIS FOR YIELD ENHANCEMENT

Audience Q&A

BOFIN

Lunch

Please return, ready to restart at 13:50

From YEN Lessons to Grower Guidance

Chair: Sarah Clarke, ADAS

Speakers:

Tom Wilkinson (ADAS) ..... Oilseed lessons

Charlotte White (ADAS) ..... Pulse lessons

Roger Sylvester-Bradley (ADAS) ..... Cereal lessons

} Use Slido for later Q & A session

David Hawcroft (BASF) ..... Working with growers to realise improvements

… Break & Panel Discussion

YEN lessons : Oilseeds

Tom Wilkinson

Oilseed YEN lessons - a history

- 359 yields since 2016.
- YEN Yield Testing: OSR cross drilling in 2018
  - Positive yield effects of cross drilling when standard practice is wide rows
  - Plant spacing is important
- REML data set analyses 2020 & 2021
  - Important weather factors & high yielding ideotypes
- Establishment beauty contest in 2020-2022 in response to increased CSFB pressure.
  - Case studies on how even & targeted plant populations can be established

Yield Partition Analysis

- Separate out the top and bottom 25% of yielding entries within each year.
- Test for statistically significant differences between the measured parameters of the two groups.
- Highlight **associations**, not cause and effect.

- 359 Yield data points, including a small number from Estonia and Denmark
- Range from 1.4 to 7.4 t/ha yield and 5.9 to 14.9 t/ha potential yield
- Aim is to:
  - 1) Use YEN physiology data to describe a YEN crop *ideotype.*
  - 2) Interrogate the data for management and site factors associated with high yield.
  - 3) Use the data to hypothesise potential management approaches.

Describing a high yielding ideotype

- Only sig effects shown.
- ~2.5 t/ha on average between bottom and top 25% yields.
- Also, higher gross outputs and difference above that expected due to yield potential.

Parameter	No. data points lower/upper	Lower group mean	Higher group mean
Yield (t/ha 9% MC)	90/90	3.37	5.81
Gross output (t/ha 9% MC)	63/72	3.54	6.23
% Yield Potential	82/88	33	55

Describing a high yielding ideotype

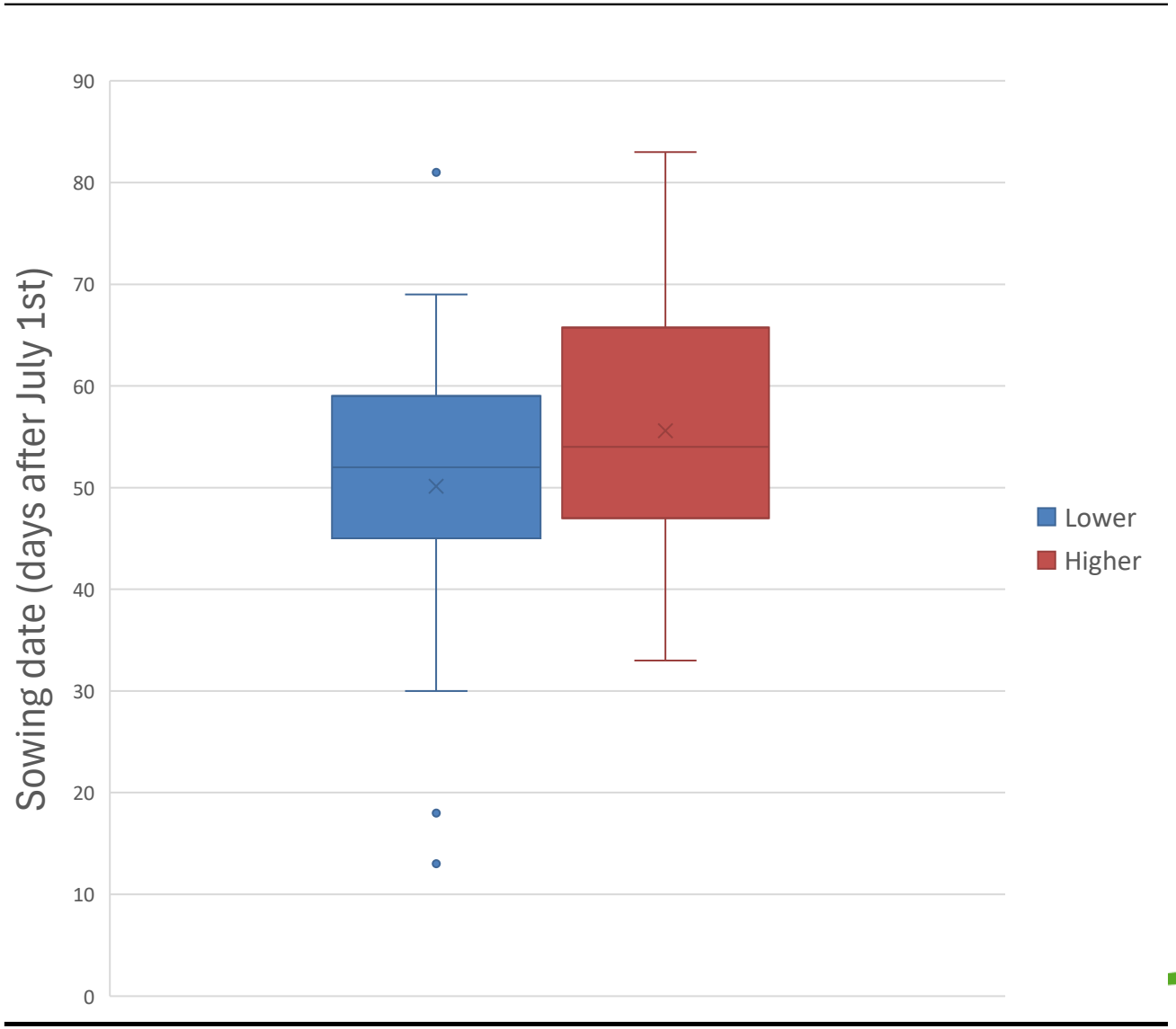
- Larger crop, by being more efficient at resource capture.
  - But also higher HI.
- Physiological data points to large crops with high seed set which needs good canopy structure.
  - 120,000 seeds/m^2 for 6 t/ha?
  - and also better seed fill.

*modelled % of available

Parameter	No. data points lower/upper	Lower group mean	Higher group mean
Biomass (t/ha)	75/82	9.61	14.75
Light interception (%)*	60/66	40	67
Water use (%)*	58/67	48	74
HI (%)	75/82	34.2	36.8
Seeds per m^2	80/88	74,710	123,077
TSW (g)	80/88	4.59	4.83

Describing a high yielding ideotype

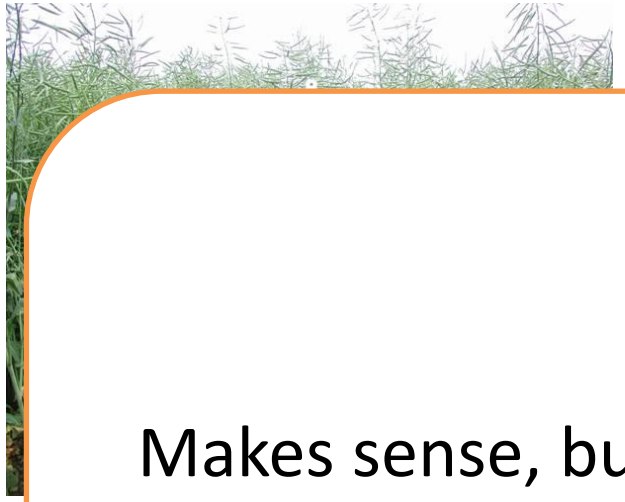
- Higher yielding crops tend to be sown and develop 5-10 days later.
  - Related to CSFB avoidance in high pressure areas?
  - Overly large/early maturing canopies?
- However, variation around the mean is large (in both low and high yielding groups).



Describing a high yielding ideotype

In summary:

- **High seed set**
  - more **efficient resource capture & conversion**
  - From Canopy Management Principles:
    - **Highly branched**
    - Also, **optimised canopy size** for light interception at flowering to maximise seed filling (**GAI of 3.5 – 4.0**)
- **Effective** seed fill
  - **Longer green tissue**
  - **more efficient resource conversion**



Makes sense, but what can I do about it?

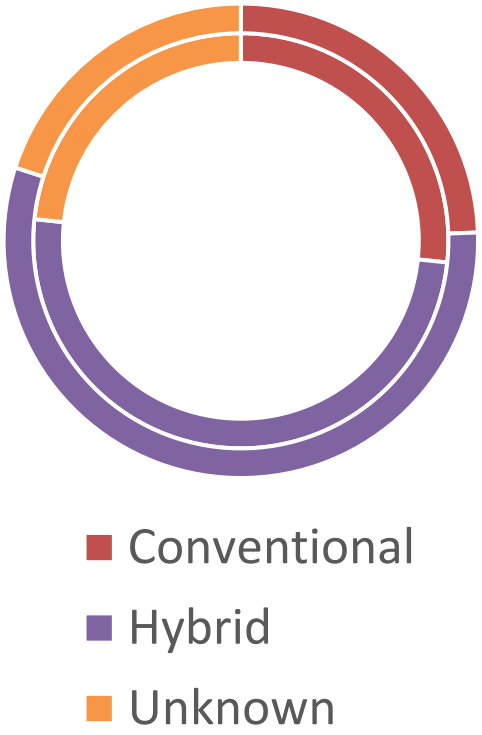
Site details associated with high yields

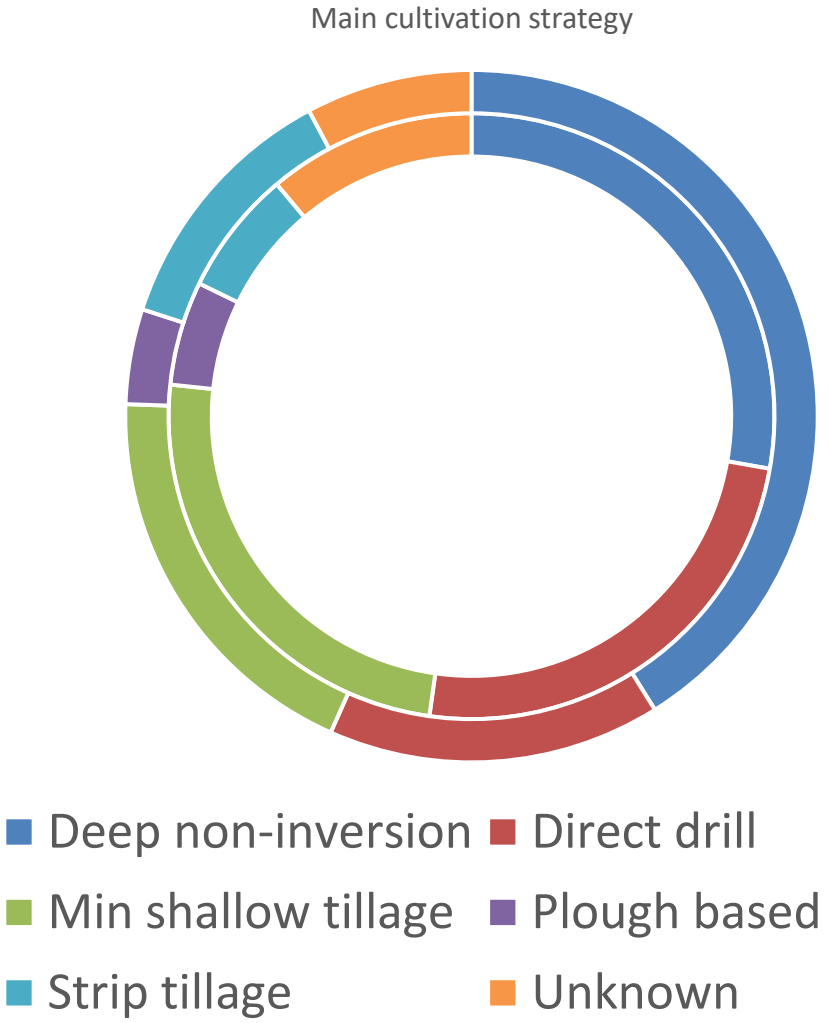
- Higher soil Mg, but less soil K .
  - Note that nutrient indices are adequate in both high and low yield groups.
  - Doesn't mean P isn't important.
- Lower pH may = changes in micronutrient availability.
- On a subset of years, soil health and microbial respiration indices associated with higher yields: higher use of OM?

Parameter	No. data points lower/upper	Lower group mean	Higher group mean
Available soil Potassium (mg/l)	53/54	194	153
Available soil Magnesium (mg/l)	53/54	103	146
Soil pH	53/54	7.3	6.7
CO_2 Soil Respiration (mg/kg)	32/30	135	167
Soil Health Index	29/25	4.8	5.2
CO2 burst, mg/kg OM	32/30	2433	3159

Farm management approaches with high yields

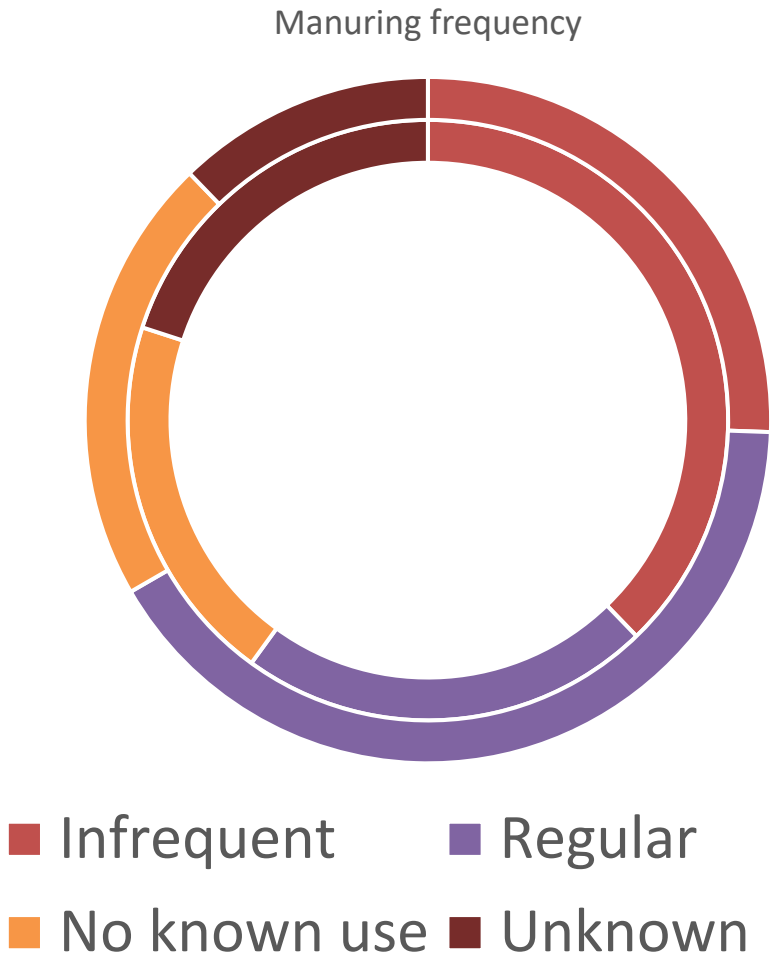
- Outside ring = upper yields
- Inside ring = lower yields
- Similar use of variety type across the data set.
- Higher proportion of deep non-inversion in higher yielding partition.





Farm management approaches with high yields

- No standout type of N fertilizer, although most farms used a mix.
- More regular manuring in higher yielding crops.
- No obvious differences between type of bagged N applied.



Farm management approaches with high yields

- Use of higher yielding varieties
- Lower seed rate (lower plant populations)
- Nutrition
  - Good early nutrition, with OM.
  - Autumn N & total K.
  - Total N & S not significantly different.

Parameter	No. data points lower/upper	Lower group mean	Higher group mean
Variety RL yield (t/ha)	67/73	5.2	5.3
Sowing rate (Kg/ha)	38/33	3.7	2.8
Fertiliser K_2O applied	63/64	32.8	60.7
Autumn Fertiliser N applied (kg N/ha)	33/34	26.6	37.9
N applied as organic material	19/20	7.9	38.9

Farm management approaches with high yields

- *Note that higher potential crops could be seen as more suitable for investments of farm inputs.*
- Use of PGRs
- Use of fungicides
- Less, molluscicides perhaps indicating lower pressure conditions
- Note, no association with insecticides.

Parameter	No. data points lower/upper	Lower group mean	Higher group mean
PGR apps	58/66	0.4	1.0
Mollusc. Apps	20/20	1.8	1.0
Fung. Apps	64/70	2.6	3.3
Total Fung. Spend	52/57	42.3	68
Total crop protec. Spend	50/50	175	213
Total crop protec. spend per tonne yield	50/50	53	37

CSFB IPM & high yielding strategies are not mutually exclusive

AHDB & OSR Reboot's Top 10 cabbage stem flea beetle (CSFB) management strategies for oilseed rape, Bold = yield insight available with YEN data.

1. **Ditch the date → don't stick to calendar dates**
2. **Chase perfection at establishment → variety choice best varieties, adequate nutrition** & seed to soil contact & moisture
3. **Keep your distance** → space and **time** between **previous** and current **OSR**
4. **Improve larval tolerance → Fewer, bigger plants**
5. **Make use of muck → Organic materials can disrupt beetle attack and support crop growth**
6. **Park the pyrethroids → consider resistance and impact on natural enemies**
7. Create companions
8. Build brassica buddies → use trap crops
9. Stir it up after harvest → light cultivations after harvest may disrupt emerging CSFB *
10. Unlock hidden gems → stack tactics & test on farm

*more data required

How can we achieve this ideotype?

Combine principles of canopy management with your IPM strategy.

1) Maximise seed set through canopy management.
   1a) target appropriate sow date in light of flea beetle risk, noting that higher yielding crops often sown later. Consider OM if you can/Autumn N & ensure adequate soil nutrition.
   1b) aim for plant popn of 25-40/m^2. Consider plant spacing.
   1c) monitor canopy size and tailor N and PGRs to achieve optimum size by flowering.

2) Having maximised seeds/m^2, still need to fill them.
   2a) extend green canopy by ensuring sufficient root depth for water capture and excellent disease control.

3) Test on farm. Oilseed YEN data may suggest micronutrients, cultivation methods, varieties might help split the difference.

YEN lessons : Pulses

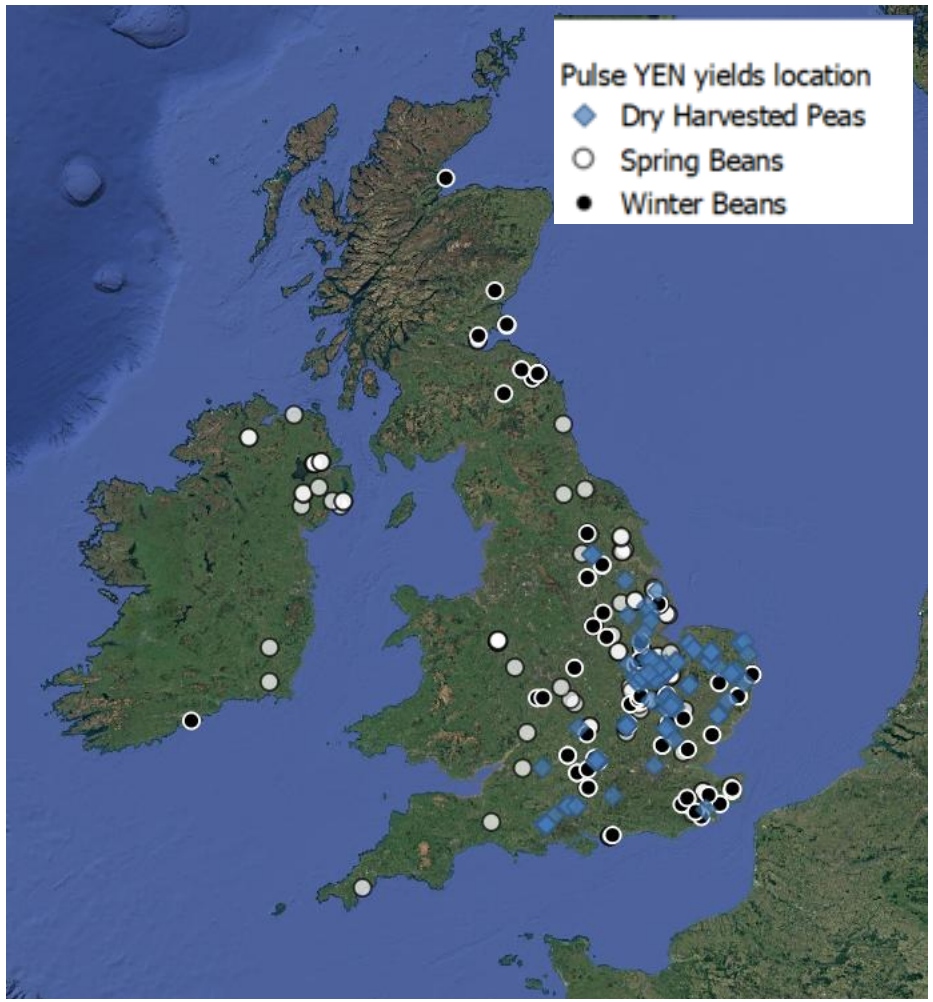
Charlotte White

Audience poll

- How many in the audience grow peas or beans?
  1. Peas
  2. Beans
  3. Both
  4. None

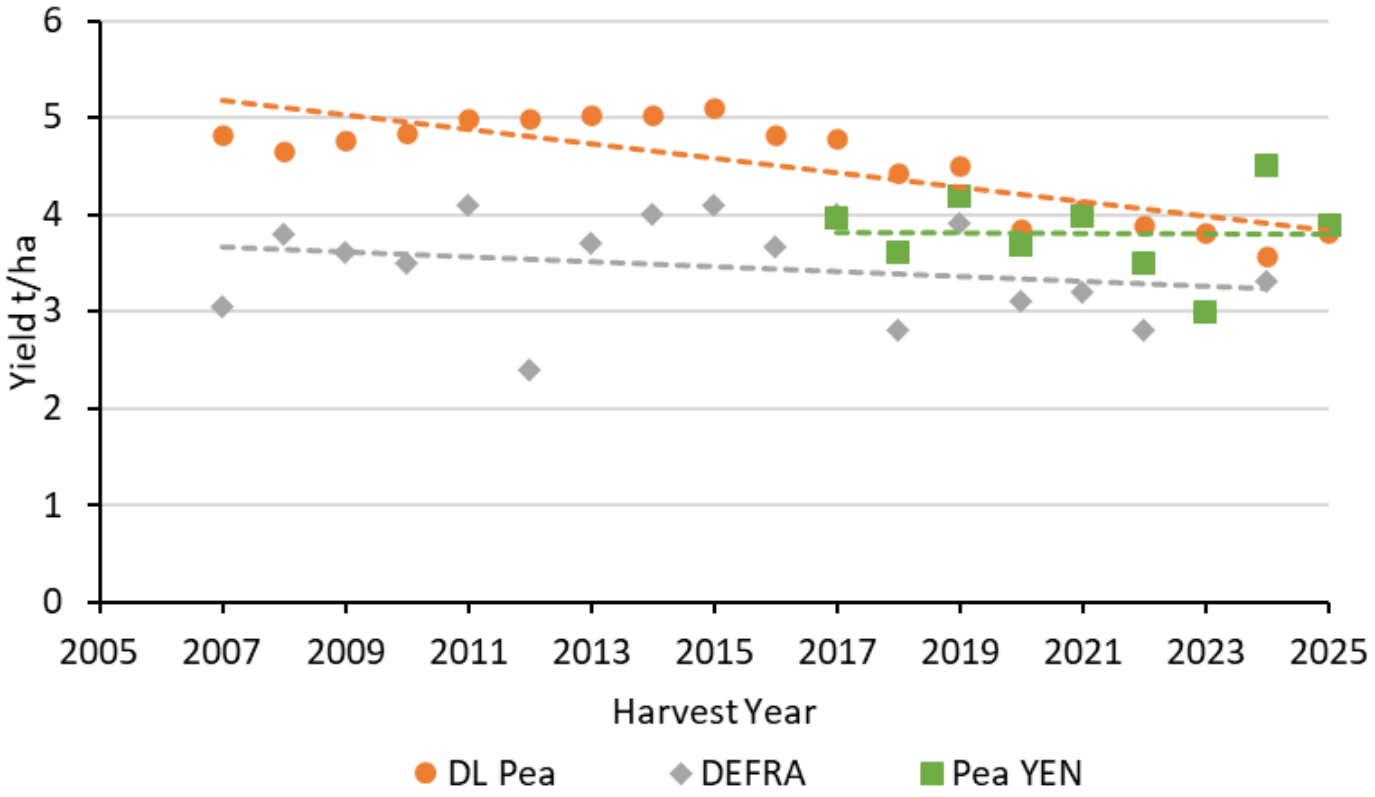
How many in the audience grow peas or beans?

Pulse YENs - The Networks



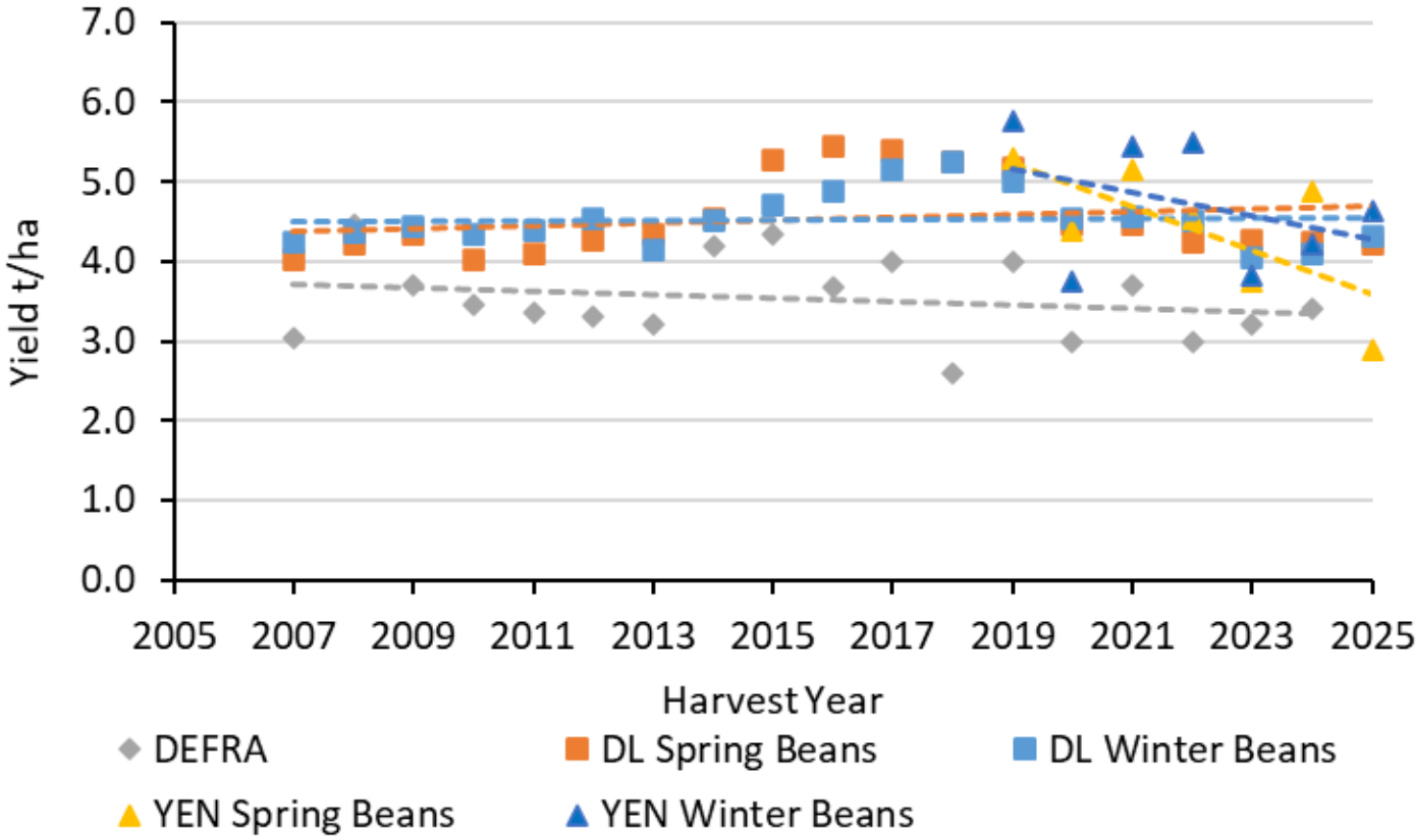
- Pea YEN (2016 – 2025) = 127 Yields
  - 72 Non-marrowfat, 45 Marrowfat
  - YEN Average Yield 3.8 t/ha
  - UK National Average (last 8 years) 3.3 t/ha
- Bean YEN (2019 – 2025) = 215 Yields
  - 132 Spring Bean, 77 Winter bean, 6 unknown
  - YEN Spring Bean average yield 4.4 t/ha
  - YEN Winter bean average yield 4.7 t/ha
  - UK National Average (last 6 years) 3.4 t/ha

UK Pea Yields



- UK Pea yields decreasing
- Descriptive List (DL) Pea yields decreasing
  - Genetics needs attention
- YEN Pea yields maintain but variable
  - Fewer growers in recent years, growing peas well

UK Bean Yields



- UK Bean yields slight decrease
  - Yields more variable, since ~2015
- DL Bean yields slight increase
  - Yields more variable, since ~2015
- YEN Bean yields decreasing
  - Genetic potential not being realised on farm

High Yielding YEN Crops

- Pea YEN Record 6.7 t/ha in **2025** grown by Ed King
  (World record 7.48 t/ha by Tim Lamyman 2019)

- Bean YEN Record 9.1 t/ha in **2024,** winter beans, grown by Richard Budd
  (No world record)

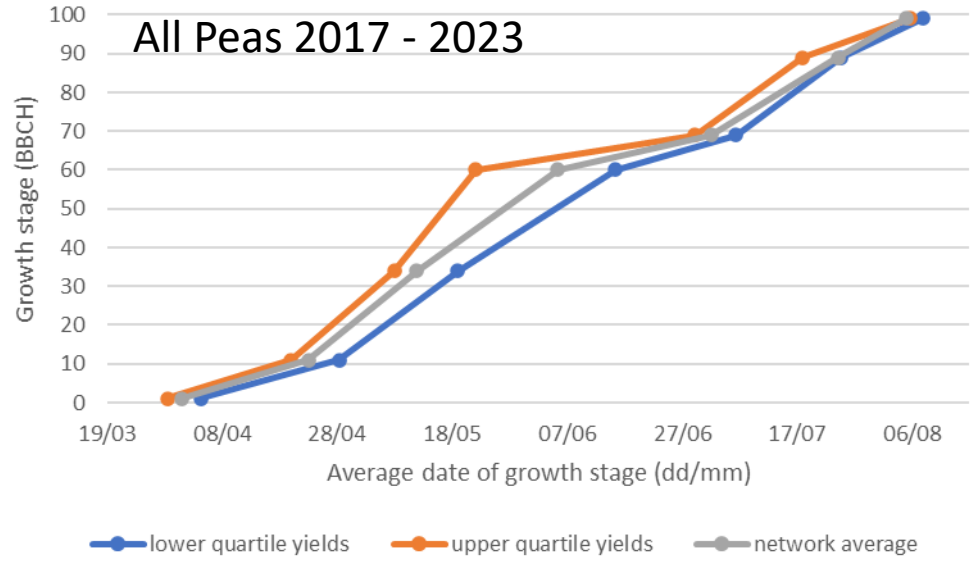
High yields are possible!

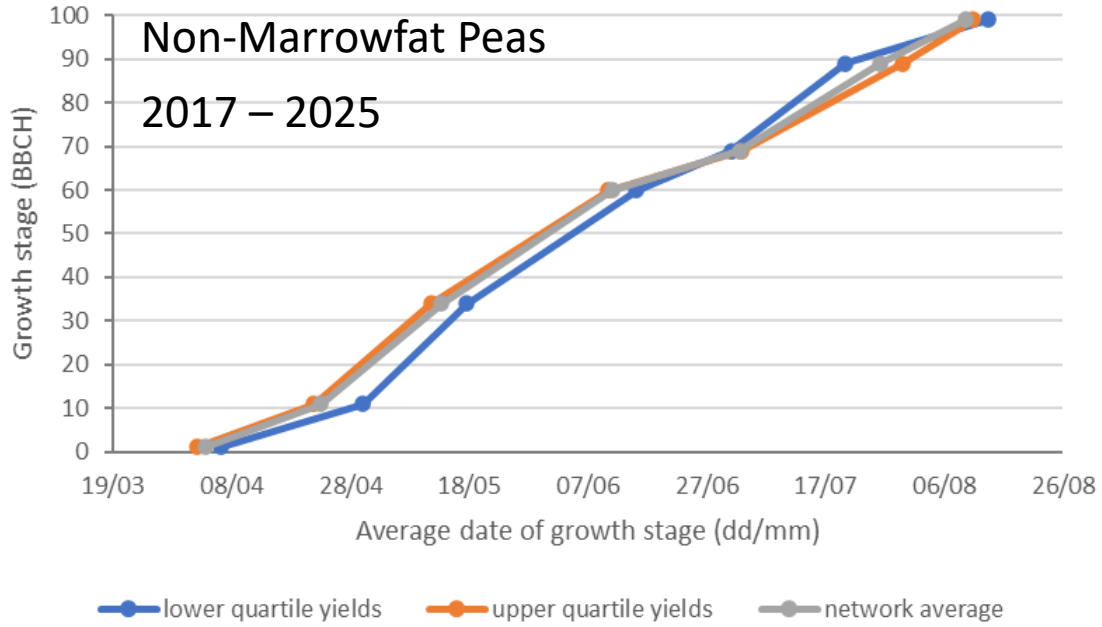
Pea crop development

- Higher yielding crops flowered earlier
  - Impact of the wet & dry springs in 2024 & 2025
- Higher yields associated with lower temps in June
  - Link between critical periods (flowering/pod fill) and coinciding high temps and drought

Encourage deep rooting to aid water uptake & stress avoidance by:

- Early cultivations & timely drilling
- Good establishment guidelines – sow into moisture, good seed/soil contact
- Maintain for good soil structure





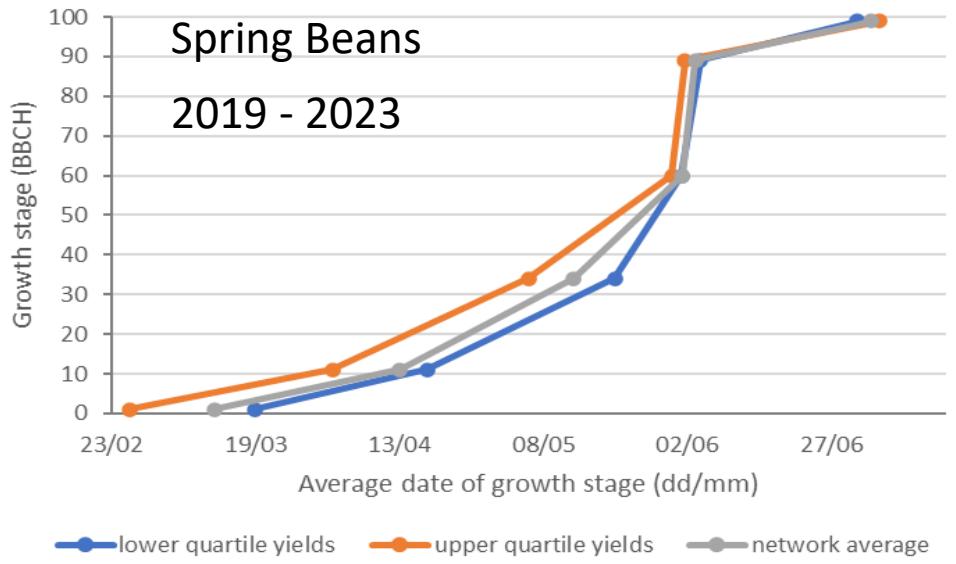
Bean crop development

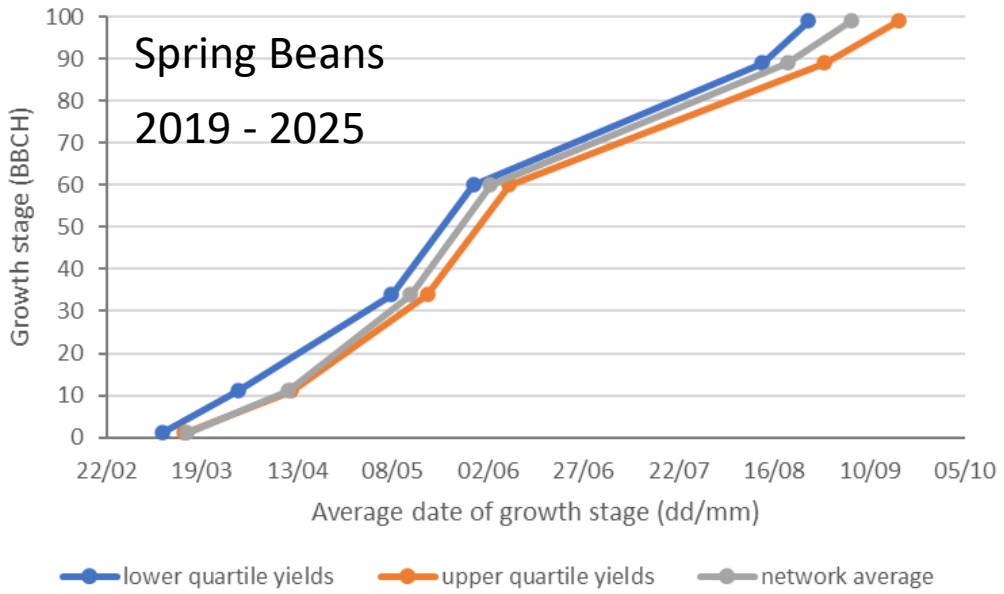
- Earlier sown crops tended to be higher yielding
  - Impact of wet & dry 2024 & 2025 springs

- Higher yields associated with:
  - More rain in May & lower temps in Apr- June (S. Beans)
  - Less rainfall in Oct – May & lower temps Sept – Feb (W. Beans)
  - Link between critical periods (flowering/pod fill) and coinciding high temps and drought.

Encourage deep rooting to aid water uptake & stress avoidance by:

- Early cultivations & timely drilling
- Good establishment guidelines – sow into moisture, good seed/soil contact
- Maintain good soil structure





Peas Inputs - Analysis & Insights

- Higher yields
  - More P & S applied
    - Seed nutrition, no deficiencies on average
  - More Herbicide applications (Non- MFs)
  - Increased crop protection spend, not fungicides (Non-MFs)

- Attention to detail:
  - Crop nutrition to support growth
  - Adequate weed control to prevent competition in Non-Marrowfats

			Non-Marrowfats		Marrowfats	
	No. of crops Non-MF / MF	Direction of correlation with yield	Lower 25% mean	Higher 25% mean	Lower 25% mean	Higher 25% mean
			(3.0 t/ha)	(5.3 t/ha)	(2.1 t/ha)	(4.4 t/ha)
P_2O_5 applied (Kg/ha)	40 / 30	↑	12.1	12.3	25.1	46.6
SO_3 applied	39 / 28	↑	12.1	28.9	9.3	12.6
No. Herbicide applications	46 / 33	↑	1.6	2.3	1.8	1.8
Total crop protection spend	20 / 18	↑	91	203	118	111

T-Tests not significant, but strong trends
Significant correlations with yield & previous REML

Beans Inputs - Analysis & Insights

- Higher yields:
  - More K & S applied to winter beans
    - … Seed nutrition, no deficiencies on average
  - More insecticide & fungicide applications to spring beans
- Attention to detail:
  - Crop nutrition to support growth esp. winter beans
  - Pest & disease management for spring crops
  - No association between bruchid beetle damage and No. insecticide applications

			Winter		Spring	
	No. of crops (W/S)	Direction of correlation with yield	Lower 25% mean	Higher 25% mean	Lower 25% mean	Higher 25% mean
			(2.6 t/ha)	(4.9 t/ha)	(2.4 t/ha)	(6.4 t/ha)
K2O applied (Kg/ha)	62 / 108	↑	**10**	**38**	32	41
SO_3 applied	61 / 108	↑	**6**	**37**	22	8
No. Insecticide applications	59 / 113	↑	0.4	0.0	**0.6**	**1.3**
No. Fungicide applications	60 / 114	↑	1.1	1.2	**0.9**	**1.7**
Total crop protection spend	42 / 77	↑	94	128	**103**	**152**

Figures in bold statistically significant

Peas, The crop - Analysis & Insights

- Higher yields
  - Taller crops
  - Greater biomass
- Yields limited by the number of seeds set. Determined during critical flowering period

			Non-Marrowfats		Marrowfats	
	No. of crops Non-MF / MF	Direction of correlation with yield	Lower 25% mean	Higher 25% mean	Lower 25% mean	Higher 25% mean
			(3.0 t/ha)	(5.3 t/ha)	(2.1 t/ha)	(4.4 t/ha)
Height (cm)	44 / 26	↑	**70**	**87**	67	86
Harvest Index	55 / 32	↑	0.50	0.55	0.45	0.48
Total plant biomass (g)	55 / 32	↑	**12**	**15**	**11**	**17**
Shoots/m^2	54/ 32	↑	53	63	47	57
Seeds/m^2 (Seeds set)	61 / 35	↑	**1219**	**2120**	**565**	**1099**
TSW	62 / 35	↑	247	258	357	385

Figures in bold statistically significant.

Beans, The crop - Analysis & Insights

- Higher yields
  - Taller crops
  - Greater biomass & HI
  - Increased pods/shoot & seeds/pod
  - Less N in straw & chaff (Spring)

Build a robust & healthy crop before flowering

  - Supplied with N from nodules
  - Avoid stress during flowering

			Winter		Spring	
	No. of crops (W / S)	Direction of correlation with yield	Lower 25% mean	Higher 25% mean	Lower 25% mean	Higher 25% mean
			(2.6 t/ha)	(4.9 t/ha)	(2.4 t/ha)	(6.4 t/ha)
Height (cm)	67 / 122	↑	89	99	**84**	**123**
Harvest Index	67 / 123	↑	**0.46**	**0.56**	**0.55**	**0.62**
Total plant biomass (g)	67 / 122	↑	34	45	**18**	**37**
Shoots/m^2	65 / 122	↑	**24**	**37**	27	30
Seeds/m^2 (Seeds set)	62 /108	↑	**440**	**740**	**544**	**1077**
TSW	68 / 123	↑	592	639	**467**	**606**
N in straw & chaff (%)	66 / 93	↓	1.2	1.1	**1.2**	**1.0**

Figures in bold statistically significant

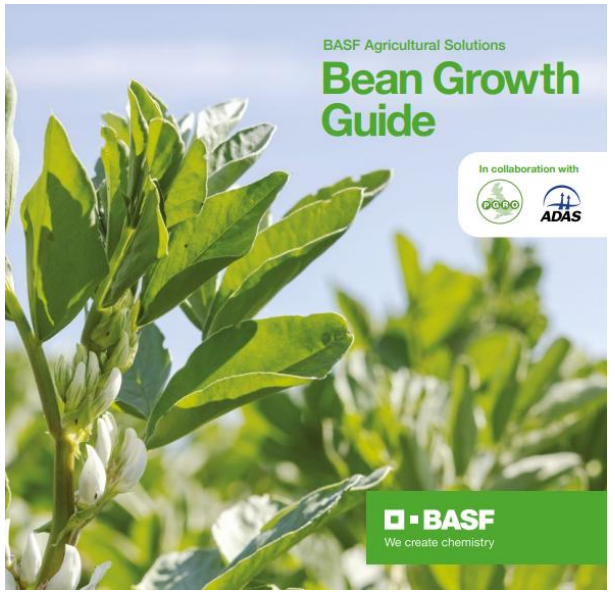
What's the ideal?

- Large well podded plants with deep roots
  - Maximise light capture & avoid stress through flowering to increase sink size
  - Avoid stress during seed fill
  - Maximise canopy duration

Pulse YEN benchmarks in development

Spring 2025

Spring 2024



Lessons from the Pulse YENs

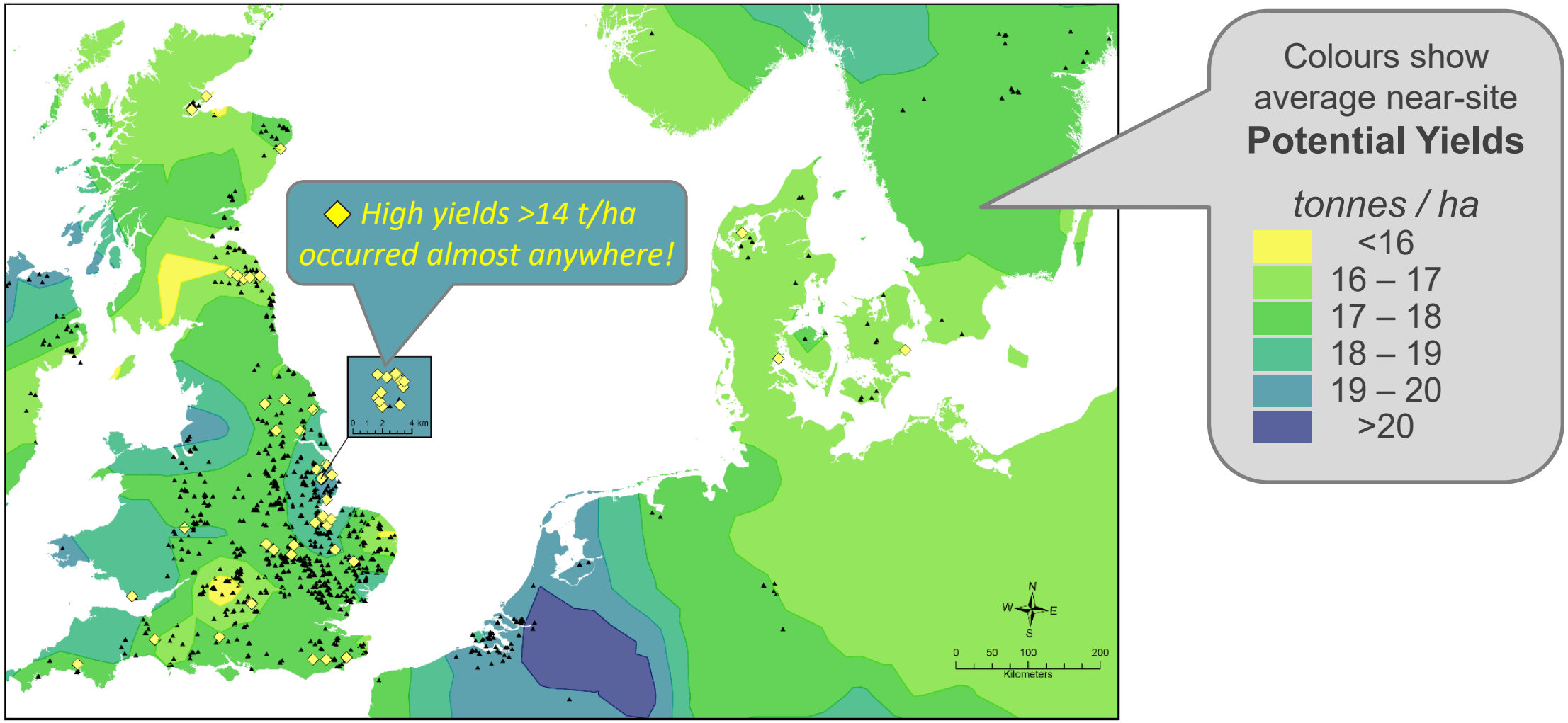
- High pea and bean yields are possible
- Heat stress during flowering a key issue
- Key principles of ‘good’ crop management & attention to detail
  - Pulses benefit from additional nutrition!
    - check nodulation
  - Prolong canopy greenness to support seed set and fill
- Highlights areas for Research & On-Farm Testing e.g. …
  - Test applying P, K, S if not already doing so
  - Spreading flowering dates to mitigate the risk of heat stress
    - Sowing date / variety maturation
- What next: Benchmarks & REML analysis

The Pulse YENs are continuing in 2026 & beyond!

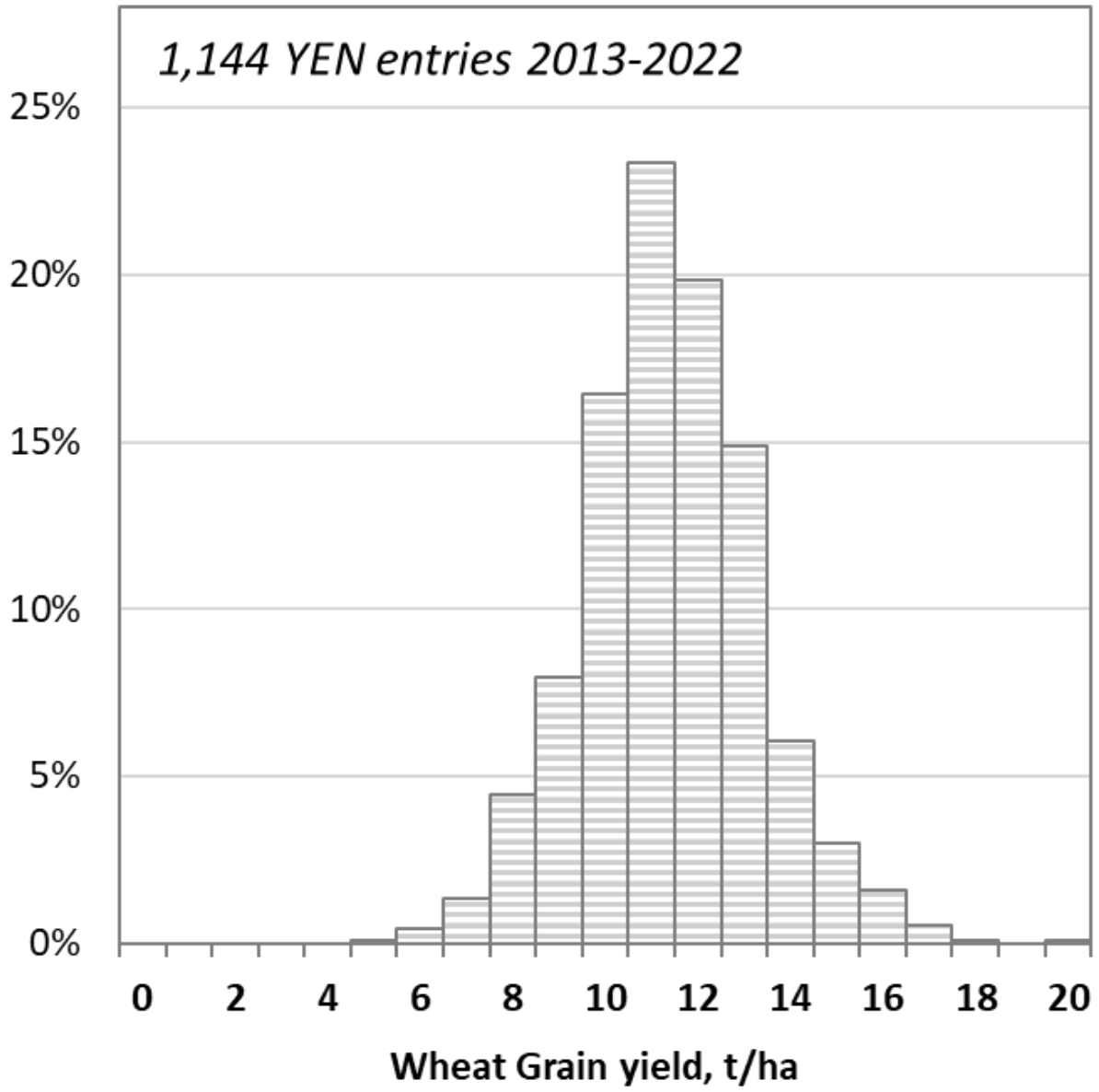
YEN lessons : Wheat & other cereals

Roger Sylvester-Bradley

The 1,144 recorded wheat yields were from near & far …



▲ *YEN entry providing a wheat yield between harvest 2013 and 2022*

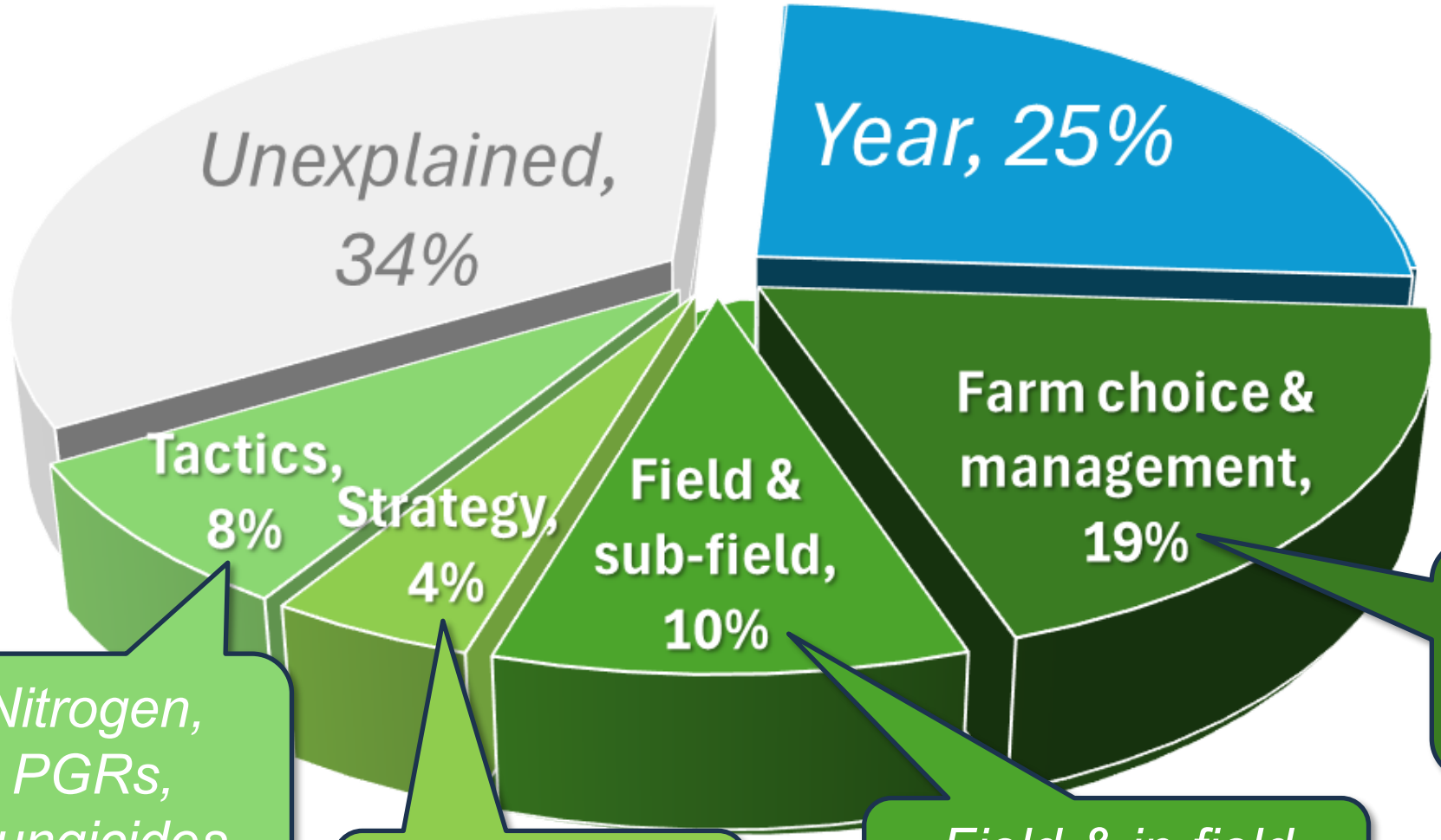


Lots of Wheat Yield Variation

- Average YEN wheat yield 10.89 t/ha
  - Similarly variable to Defra farm yields
  - No 'yield ceiling'
- *00's of explanatory metrics*
  - *Analysed using REML*
    - *(Restricted Maximum Likelihood)*
    - *Avoids 'double-counting'*
- *Identifies main contributors to total variance*

How much control do you think YEN farms had over wheat yields averaging around ~11 t/ha **?**

YEN data says: ~40% CONTROL– *from Fast to Slow response*



- only 12% variation links to season-specific decisions

Region, Climate, Farm strategy & Approach

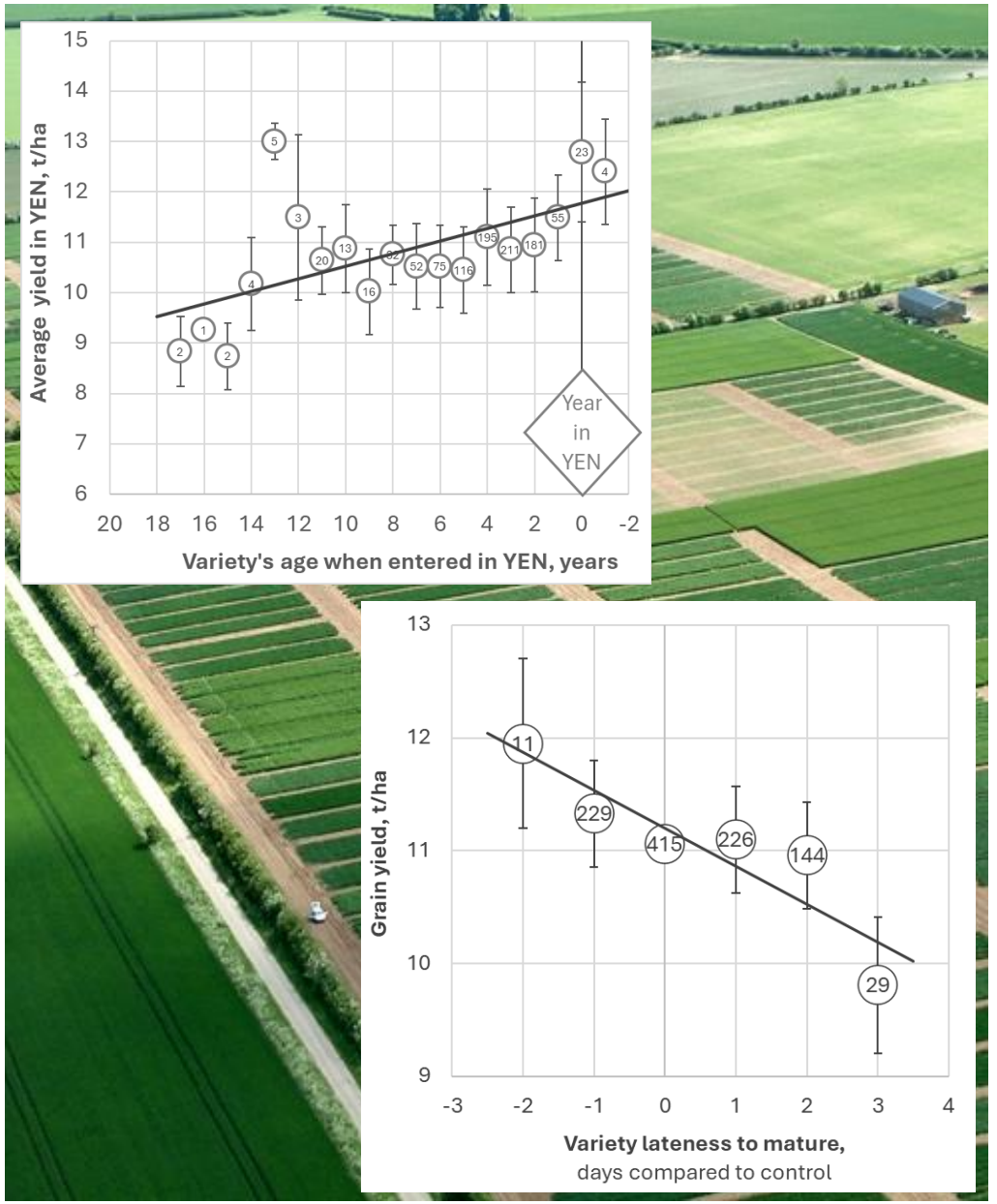
Field & in-field differences, Soil

Rotation, Variety, Sowing

Nitrogen, PGRs, Fungicides

Hooray for genetics !

- Research & Plant Breeding,
  Variety testing &
  Variety choice by farms .. did us proud
  - Average YEN benefit was **97%** of AHDB RL yields
- Newer varieties were better than old
  - +0.5 t/ha per decade of 1st listing on RL
  - -1.2 t/ha per decade of variety's age
- Early & 'normal' varieties were better than late
  - e.g. Cordiale & Gallant
- But on-farm genetic yield gains are slow & small
  - Only 1% of total yield variance
  - Less important than weather or husbandry



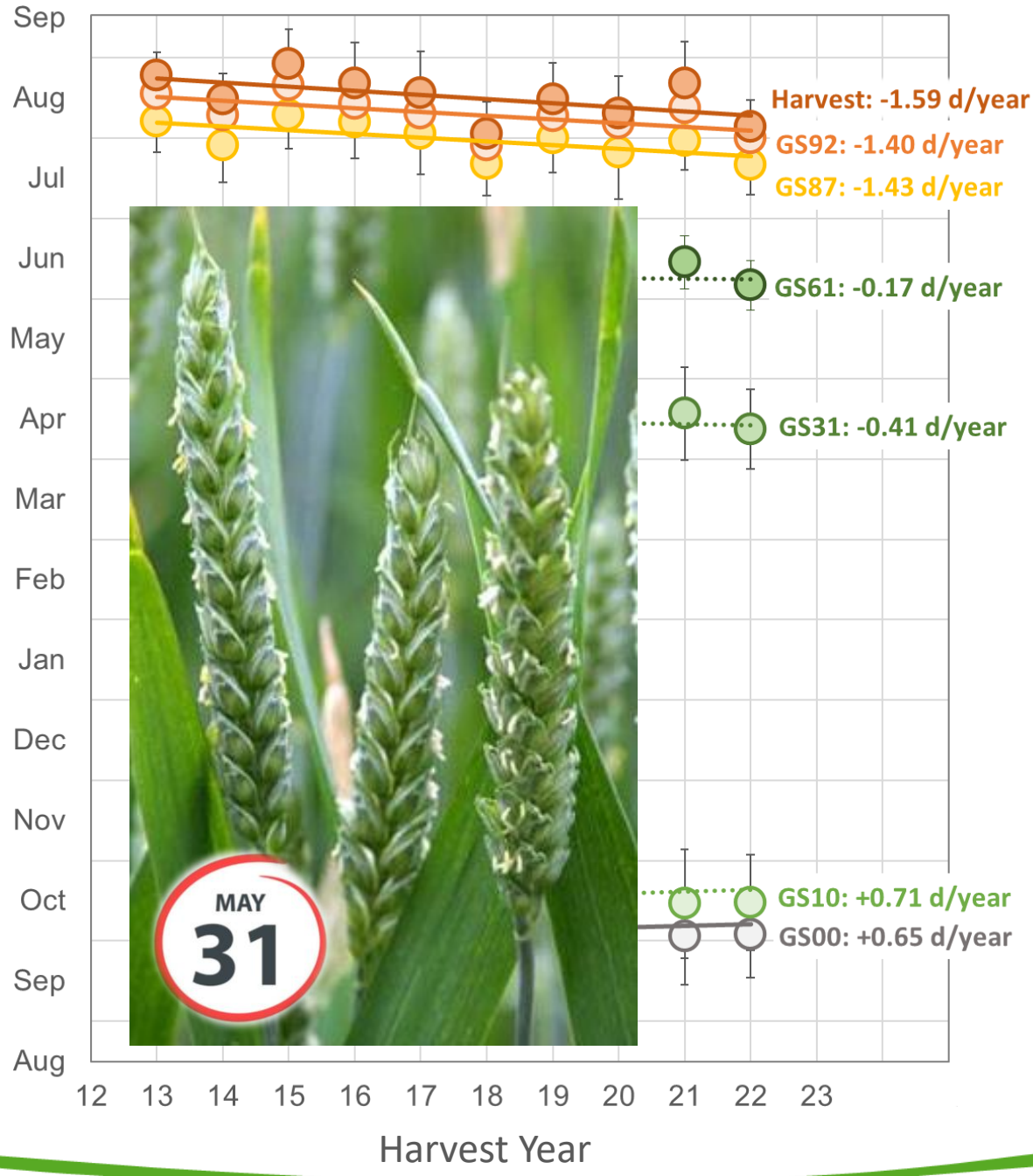
Warming was bad for yield …

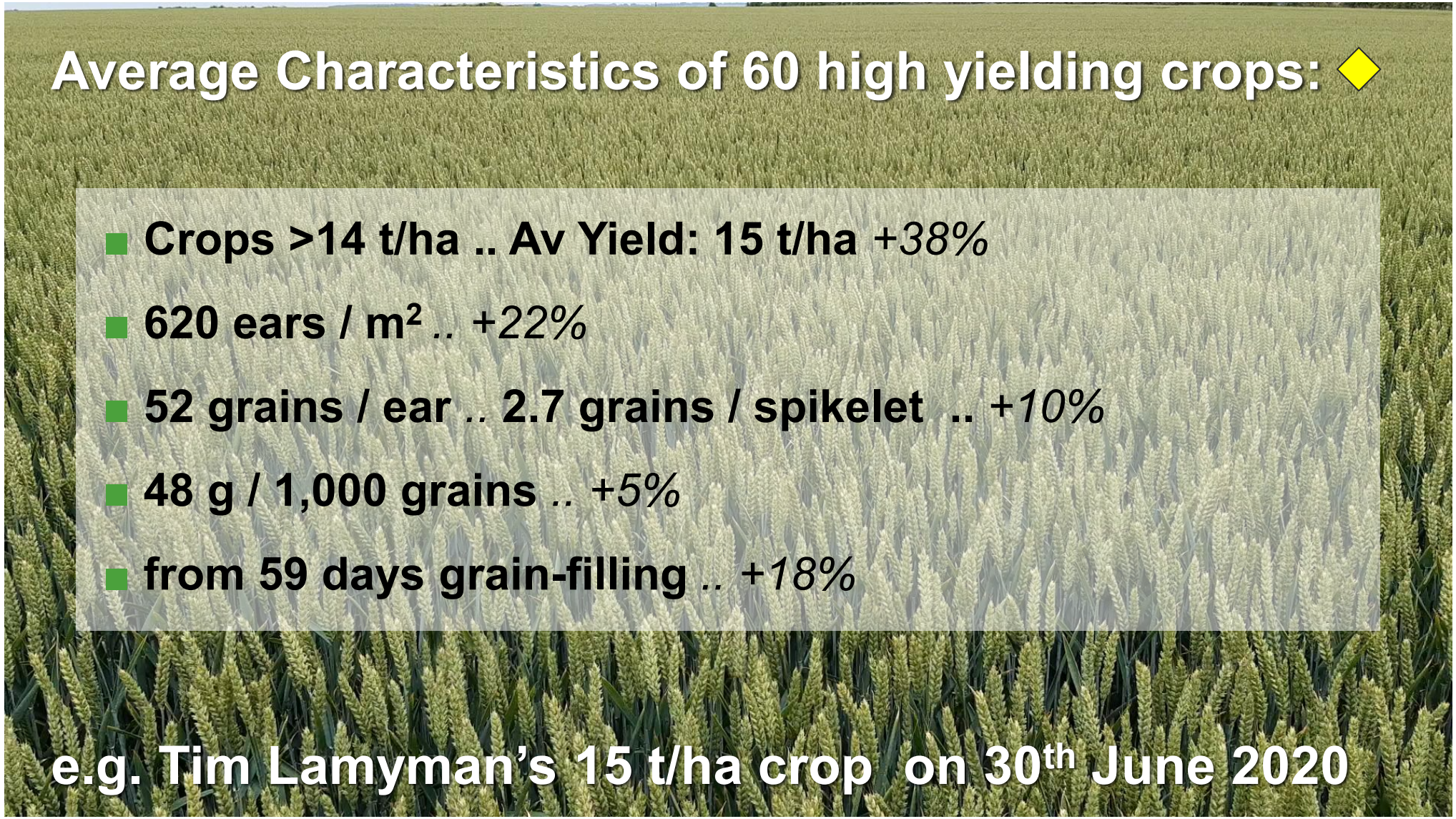
- YEN met. data showed significant warming
  October to July: +0.5°C per decade
  June & July: +0.8°C per decade

- Crop *development* became faster
  - Warmer winters were good for yield
    +0.20 t/ha/ºC .. due to better crop 'foundation' ?
  - Warmer summers were bad for yield
    -0.26 t/ha/ºC .. worse (shorter) grain 'production'

- Earlier harvests are negating all other yield progress e.g. by plant breeding

- Should we adjust our strategy ?
  & let flowering start earlier .. in late May?





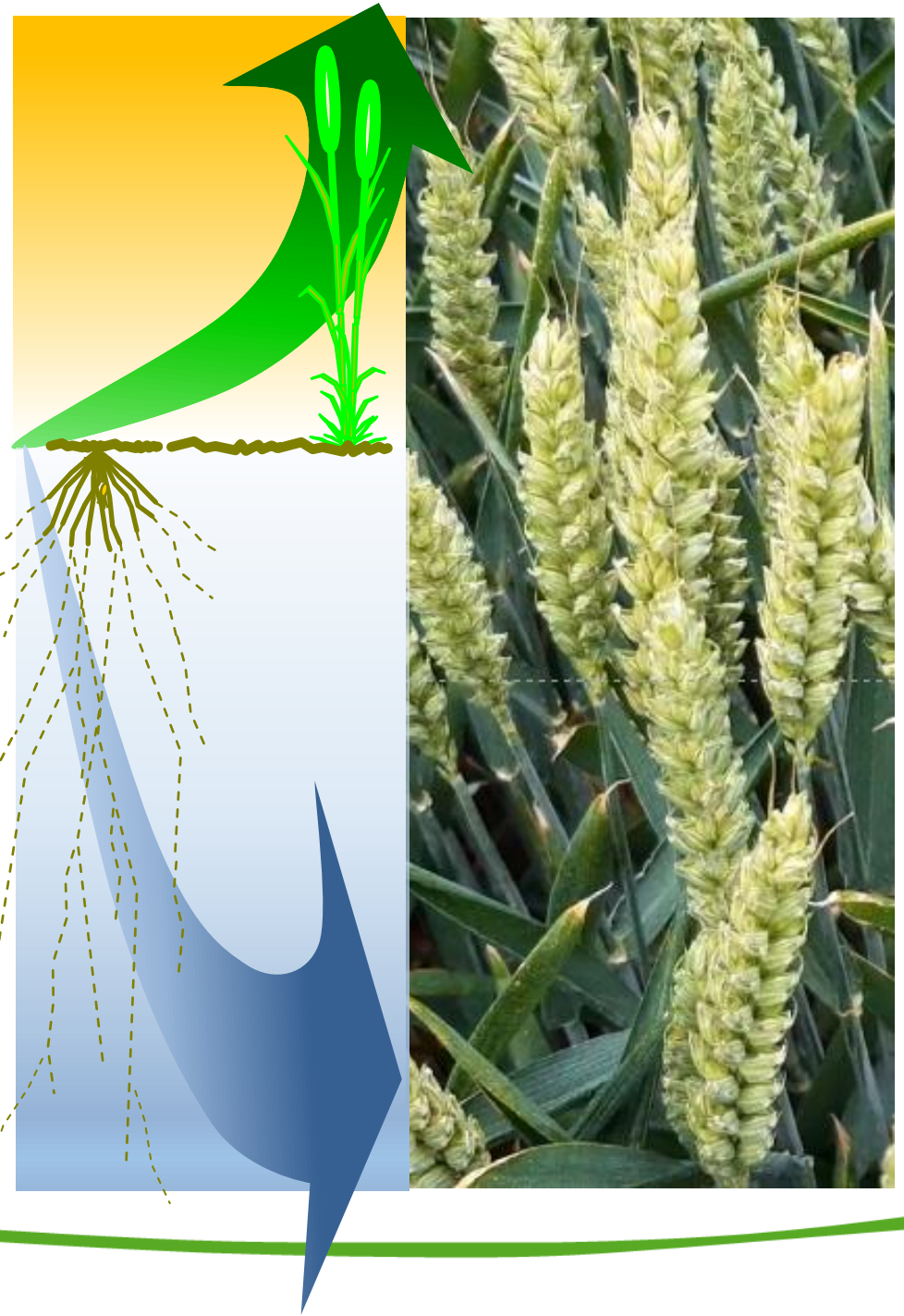
Average Characteristics of 60 high yielding crops: ◆

- **Crops >14 t/ha .. Av Yield: 15 t/ha** *+38%*
- **620 ears / m² ..** *+22%*
- **52 grains / ear .. 2.7 grains / spikelet .. +10%**
- **48 g / 1,000 grains** *.. +5%*
- **from 59 days grain-filling** *.. +18%*

e.g. Tim Lamyman's 15 t/ha crop on 30th June 2020

How to grow ..
.. such *dense* crops with a *long* life

- Exploit the break effect
  - +1.1 t/ha
- Use available organic manures
  - but no clear yield advantage of high SOM, cover crops, or no-till
- Tillering was increased by narrow rows … & P as well as N and S
  - Ear numbers relate to soil P and P applied
- Invest in PGRs & Fungicides to protect the increased value
- Prolong canopy life and water capture
  - Ensure enough inputs to feed 15 t/ha .. esp. N, S & P
  - Check leaf N, P, S, & Zinc at flowering
  - Check apparent rooting depth after seasons like 2025.

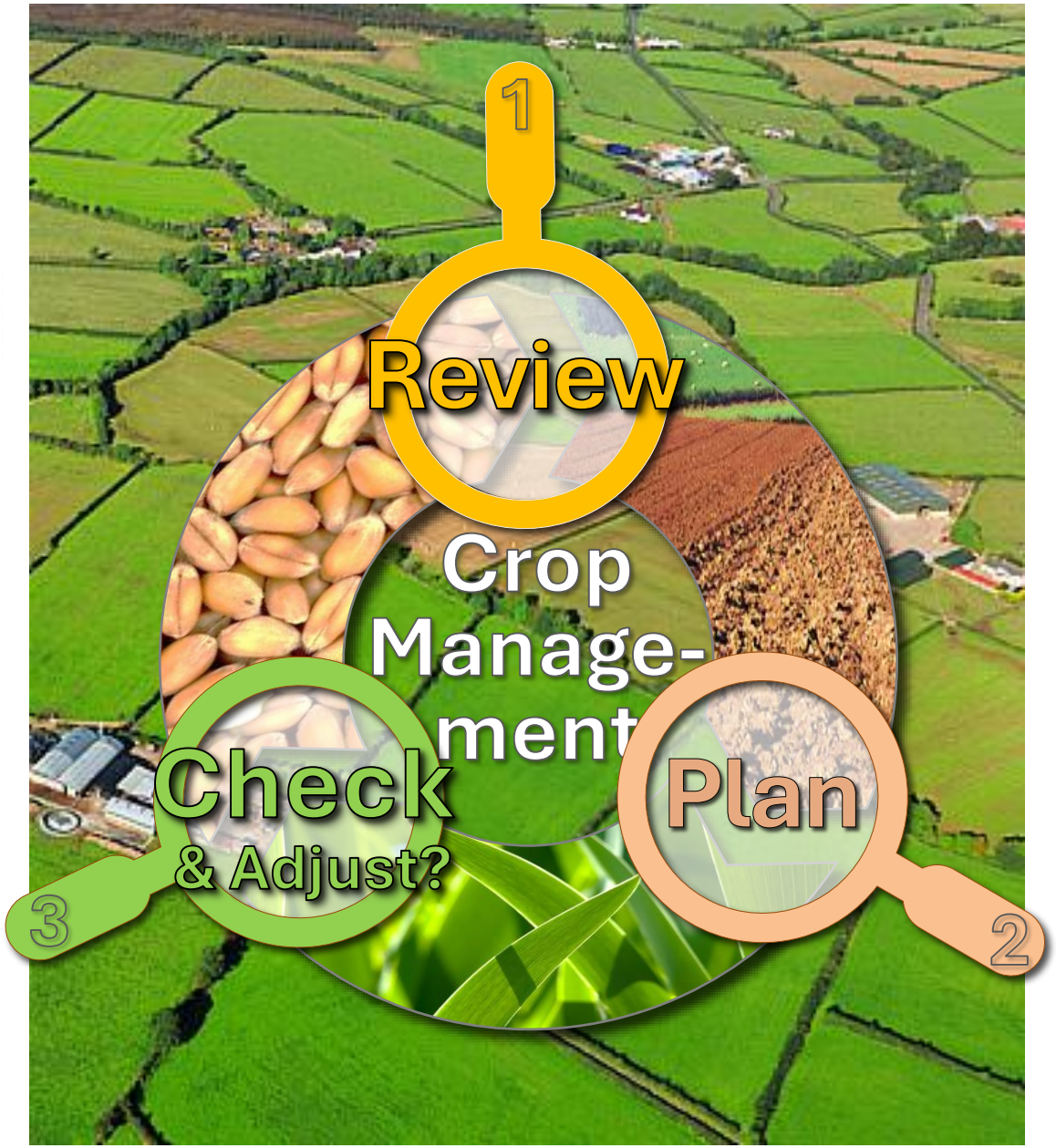


Recognise your ‘Farm Factor’ …

- ‘Attention to detail’ = ***3-step management*** ?
  1. Review by thorough ***Annual, Field-by-field, Benchmarking***
  2. Plan
  3. Check + Adjust

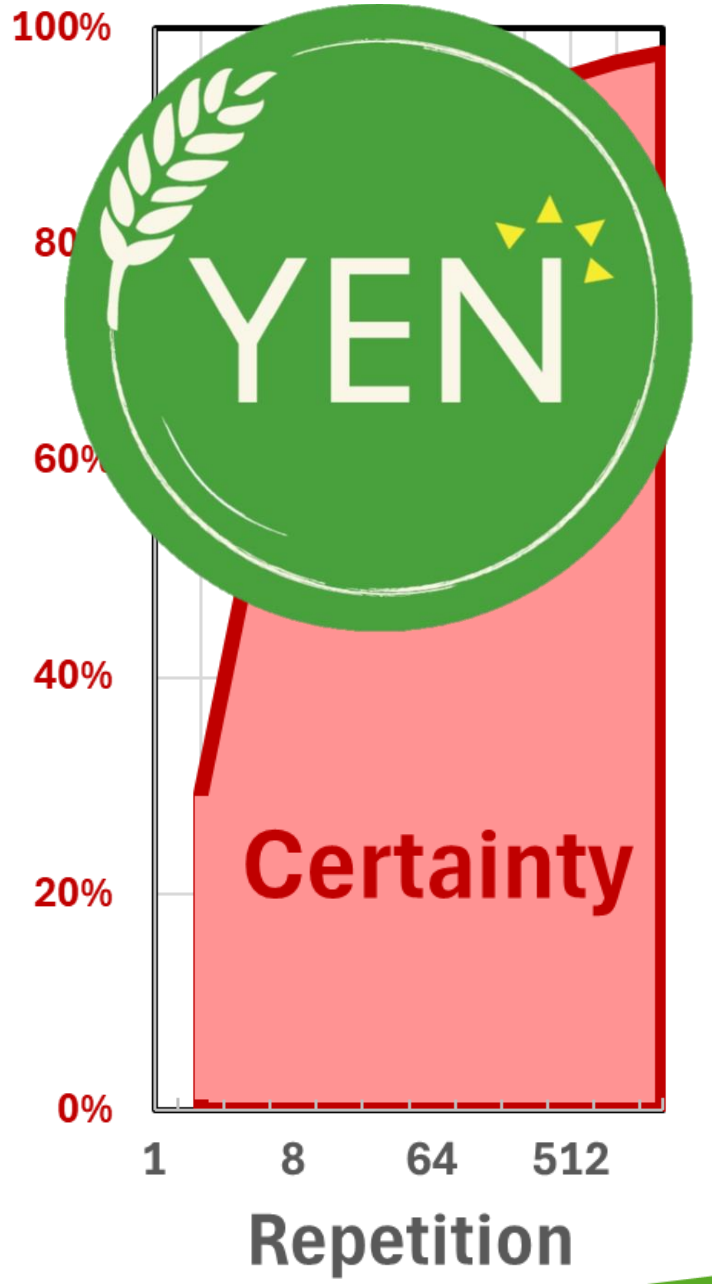
NUTRI-CHECK NET
OPTIMISING CROP NUTRITION

- Gauge & build Soil ‘Productivity’ =
  - *Rootable depth* x resource availability (esp. water)
  - Subsoil rooting begins with effective drainage
- *Save water* from winter to summer
  - via Deep Soil exploration
  - OR: drains > reservoirs > irrigation.!
- Develop better field *uniformity*
  - Work to resolve headland effects, and other low yielding areas
- Look to grow wheat *earlier …* & other crops?
  - Consider (with breeders) developing earlier-flowering crops
  - Keep grain-production long as climates get warmer



Wheat YEN Conclusions

- Lots learned through the last 13 years
  - Huge value has been generated by all YEN entrants & sponsors
  - High yields are possible – plenty of potential goes unrealised
- BUT … little evidence of enhanced wheat yields on farms yet!
  - Warm, dry summers have negated breeders' & growers' 'successes'
  - Later sowings and reduced inputs (e.g. NPK+S use) are of concern
  - Consider crops with earlier grain production
- Don't we need YEN.2 ?
  - Each farm's data has small value compared to multiple farms' data
  - The industry must build collaborations to realise its potential
  - Automate data & its interpretation as much as possible
  - Build trust: so *more* farms share *more* data to achieve *greater precision.*



Thank you

YEN Lessons Session

Q & A

Audience Q&A

BASF
We create chemistry

Working with growers to realise improvements

David Hawcroft, BASF

YEN conference, 27th January

- Traditional family farm – 400 acres
- Diverse arable, chicken and tourism business
- Growing wheat, barley, winter OSR, spring beans, spring oats and let land for potatoes and maize
- Mid-tier stewardship scheme and SFI

BASF
We create chemistry

Working with growers over the last decade

On Track

THE REAL RESULTS CIRCLE

BATTLING BLACK-GRASS TOGETHER

STRONG AGAINST WEEDS TOGETHER

PUSHING PULSE YIELDS TOGETHER

Champion OSR Together

Perfecting Potatoes Together

COMMON GROUND

2014 — 2017 — 2018 — 2020 — 2025

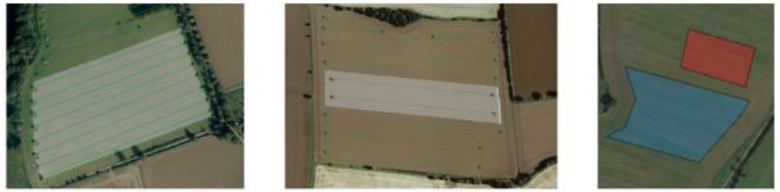
BASF
We create chemistry

The Real Results Circle & Agronomics trials

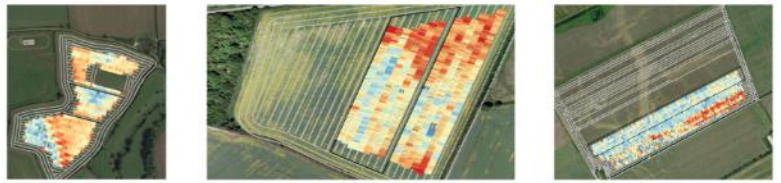
- A grower challenge over a £20/ha claim for Adexar vs. existing standards was the catalyst for the Real Results Circle and extensive use of ADAS Agronomics trials
  - Farm-scale trials without compromising technical validity and statistical power
  - Main objective has been to help growers learn how to get the best from our technology

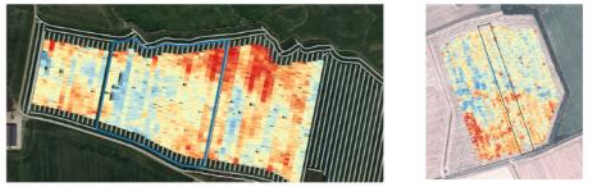
- Since 2017, we have worked with over 100 growers on over 285 Agronomics trials
  - Highly engaged and motivated growers
  - £1.2m investment
  - Cereal Fungicides, OSR, maize & nitrogen management
    - Product comparisons
    - Dose rates
    - Timing

Agronomics: Much more than tramline trials

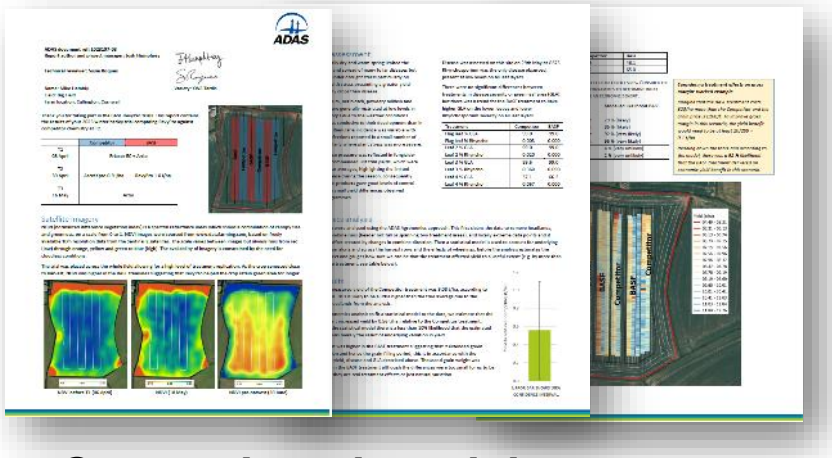


Careful choice of field and site





Statistical validation



Comprehensive trials report

Closing thoughts

- When doing farm scale trials work:
  - Ensure clear comparisons can be made. Marginal gains are hard to record if not replicated
  - Evidence over opinion, some big claims out there
  - Decide what's best for your farm
  - Give yourself more confidence to be sure of correct decision making

2026 activity & resources

COMMON GROUND

- RevyPro Barley Agronomics trials
- Grower Insight Panel - Monthly surveys
- Online spring and autumn technical briefings
- Updated barley agronomy guide
- Pea & bean agronomy guides
- Follow a farmer – Biggest Job on Earth campaign

If you're interested in taking part in any of the above, or would like one of our Agronomy Guides, please see Mai on our BASF stand in the break

BASF
We create chemistry

We create chemistry

Exploiting YEN lessons: Panel discussion

- Paul Barners (farmer)
- Peter Southwell (farmer)
- David Hawcroft (BASF)
- Daniel Kindred (Agronomy Research Circle)

Audience Q&A

Future YEN Plans

Chair: Tim Isaac (Ceres Rural)

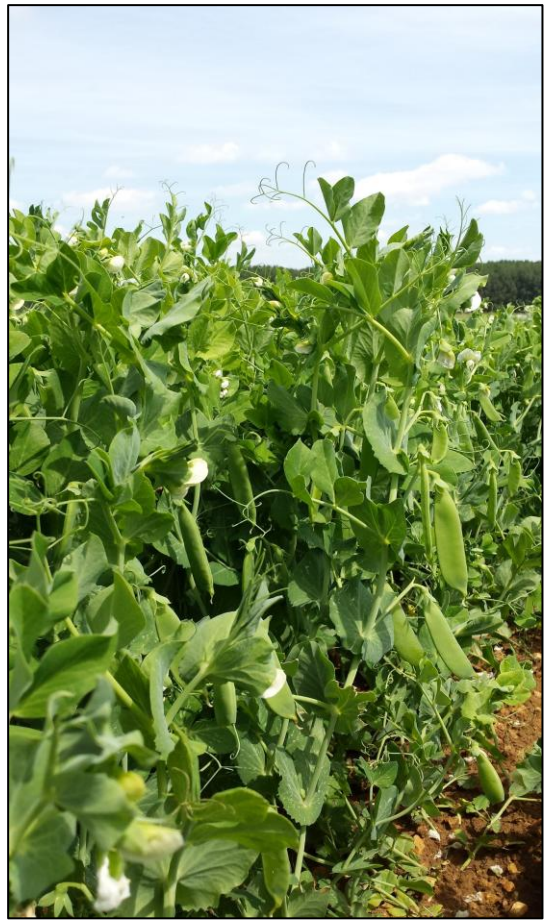
Speakers:

Erin Matlock (PGRO)

Sarah Kendall (ADAS)

Pulse YEN: Moving Beyond 2026

Driving simpler, smarter data for the pulse industry



- We are working to:
  - Simplify and streamline data collection
  - Strengthen insights across the entire pulse industry

Many thanks to our sponsors

YEN

Significant contributors

Roger Sylvester-Bradley

Daniel Kindred

Dhaval Patel

Valued collaborations

What now?

What have we achieved?	An engaged & enthused community	A data collection framework with identified metrics	An extensive database	Value of sharing to learn
What are the challenges?	Data environment is prohibitive	Data overload	Development of actions & achieving change	Sustainable funding strategy
What are the new priorities?	Easy data exchange	KPIs & Farm specific action plans	Kitchen table collaboration & AI	Adoption

Thank you & Close

Chair: Tim Isaac, Ceres Rural