

Agronomists' Induction: Session 4

Philip Dolbear, Senior Knowledge Exchange Manager (South West), AHDB





South West



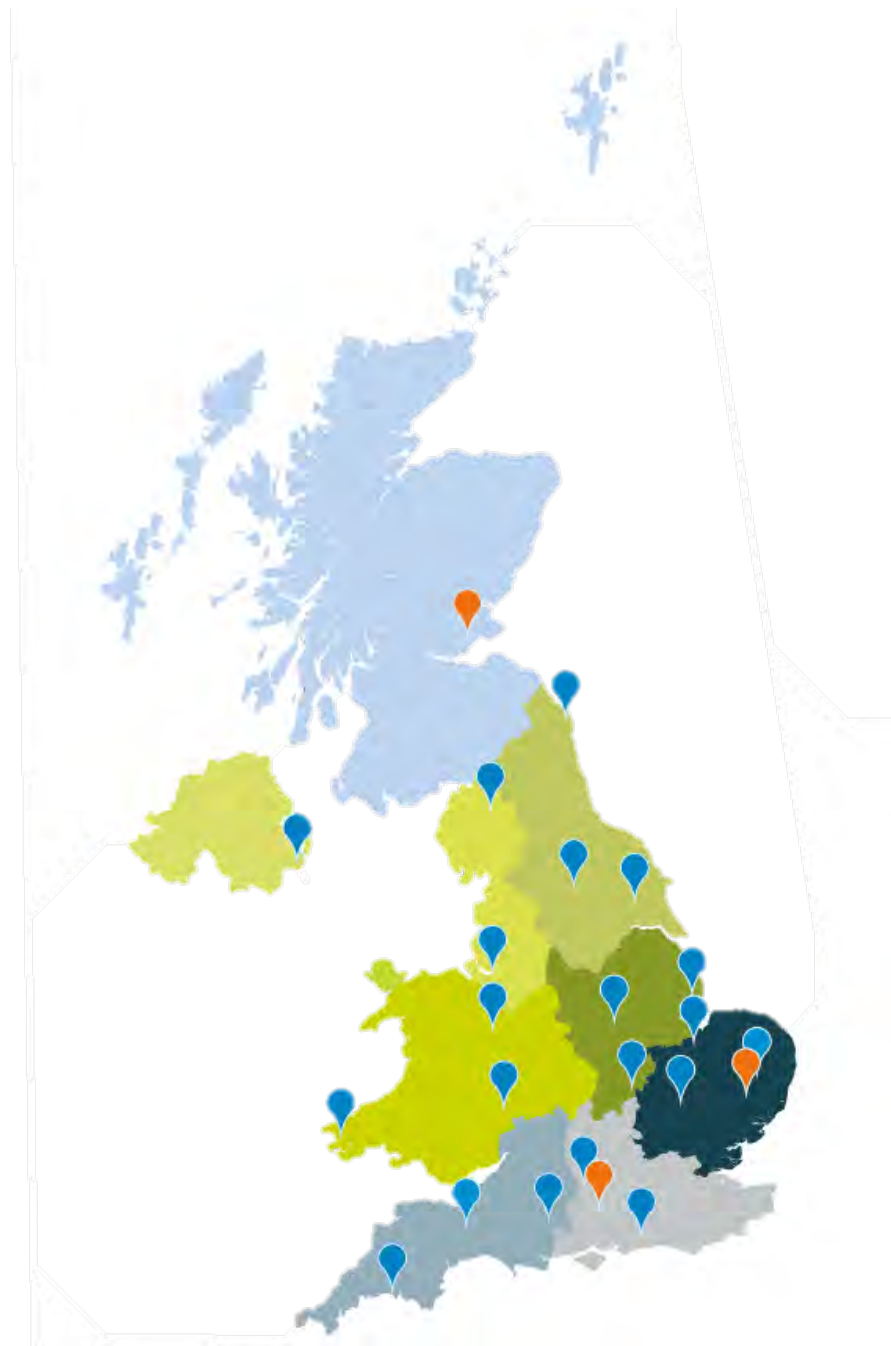
Salisbury
Ben Jeans



Taunton
Richard Payne



Saltash
Ashley Jones



Agronomists' Induction: Session 4

Wheat fungicide margin challenge

Philip Dolbear, Senior Knowledge Exchange Manager (South West), AHDB

YEN & YEN nutrition

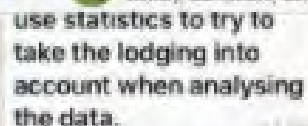
Emily Pope, Senior Knowledge Transfer Manager, AHDB

On-farm trials

Michelle Nuttall, Knowledge Exchange Manager (North West & NI), AHDB

Innovative Farmers field labs

Fiona Geary, Knowledge Transfer Manager, AHDB



Unstrawed	Unstrawed		Banyoar XE 0.9
Unstrawed	Avalon 0.9		Mendosa 0.65
Unstrawed	Unstrawed		Banyoar XE 0.8
Unstrawed	Mendosa 0.66 + Distance NT 1.5		
Unstrawed	Phosibis 1.0		
Unstrawed	Torcher 0.65 + Conest 200 0.3 + Mendosa 0.25 + Phosibis 1.0		
Unstrawed	Alora Agro 1.15		
Unstrawed			

*Based on the average grain price between the 1st January 2020 and 21st August 2020 (£165.09/t).

cv Skyscraper, sown 23rd October, light brashy soil with fairly high day content

Agronomists' Induction 2021

YEN & YEN Nutrition

Emily Pope, Senior Knowledge Transfer Manager, AHDB





Sponsors
and funders





What do I get?



Comprehensive personal report on natural resources, crop growth and any apparent yield constraints



Free soil health check and free grain analysis, for cereal and oilseed members



Technical sessions on yields with leading crop experts along with newsletters, monthly actions and networking sessions



Entrant's Report

Harvest 2020

YEN User ID: CF00001

Entrant name: Example

Main contact email:
xxx.xxx@home.com

Sponsor/supporter: Gt Help

Sponsor/Supporter email:
gt.help@sponsor.com

Field/Site name: Home

Location: East Anglia

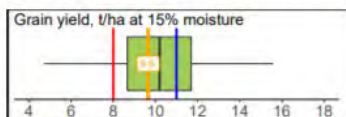
Incident energy 2019-20: 35 TJ/ha

Available water: 416 mm

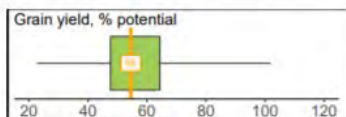
Crop: Winter wheat

Variety: KWS Lili

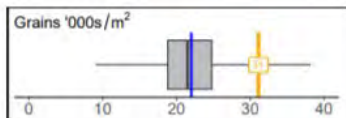
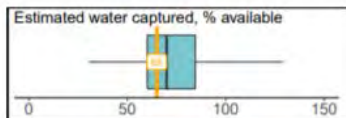
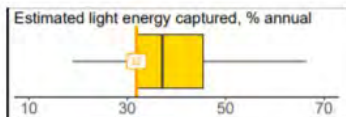
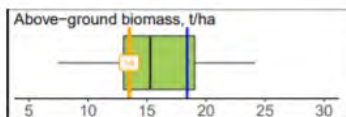
SUMMARY: YEN entries were completed from 168 fields and 17 trials in 2020. Headline results for your entry are shown in benchmark diagrams below. Your yield of 9.6 t/ha ranked 90th within all YEN entries. This represents 55% of its estimated yield potential of 17.7 t/ha, which ranked 78th within all YEN entries in 2020.



Yield rank:
90th



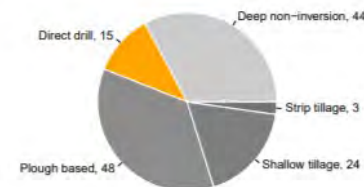
Potential yield rank:
78th



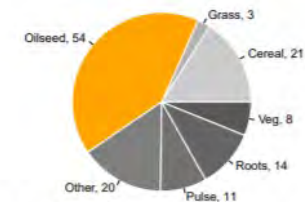
Husbandry

Orange segments or bars in the following diagrams indicate the agronomy of your crop, if known, and shows how common this practice was amongst all YEN entries.

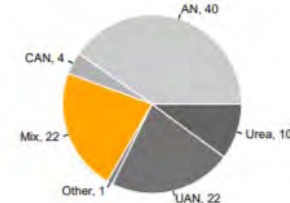
Main cultivation strategy



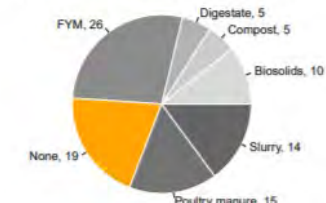
Previous Crop Type



Main form of N applied



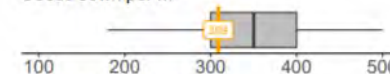
Predominant organic materials applied



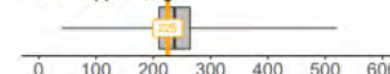
Sowing date



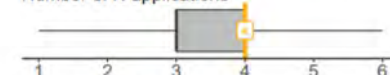
Seeds sown per m²



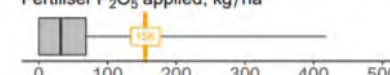
Total N applied, kg/ha



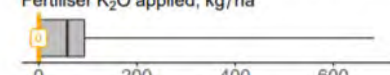
Number of N applications



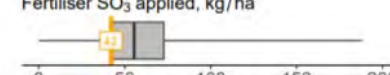
Fertiliser P₂O₅ applied, kg/ha



Fertiliser K₂O applied, kg/ha



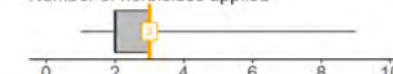
Fertiliser SO₃ applied, kg/ha



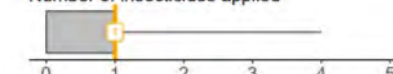
Number of PGRs applied



Number of herbicides applied



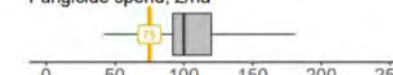
Number of insecticides applied



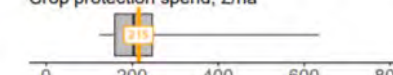
Number of fungicides applied



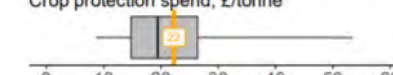
Fungicide spend, £/ha



Crop protection spend, £/ha



Crop protection spend, £/tonne



YEN Awards



2018

- **Highest wheat yield South West:** Howard Emmett of Cornwall, 10.3t/ha
- **Best % of Potential Yield in % of t/ha Bronze:** Mark McCallum

2019

- **Best % of Potential Yield in % of t/ha South West:** Howard Emmett of Cornwall, 74% of 14.1 t/ha

2020

- **Best % of Potential Yield (Field) Bronze:** Ashley Jones of Cornwall, 92% of 13.9 t/ha
- **Regional Awards for field entries for the Highest % of Potential Yield The West:** Ashley Jones of Cornwall, 92% of 13.9 t/ha



Grain Nutrient Concentrations... as recieved from the lab

Below are your nutrient concentrations in grain dry matter as received from your chosen Lab (NRM). Your **Benchmarking Report** in November will show in more detail how each nutrient level compared to all other samples of this crop type analysed **from this season**. Note that you can also now assess your data using **YEN Dynamic Benchmarking** available from the member's area on the [YEN website here](#).

KEY to nutrient concentrations:

Low: Grain concentration is less than 75% of all previous YEN results for this crop type¹

Grain nutrient concentration not low (or high for N)

High: For grain N, the value is more than 75% of all previous YEN results for this crop type²

Field	Crop	N ¹ %	P %	K %	S %	Mg %	Ca %	Fe mg/kg	Mn mg/kg	Zn mg/kg	Cu mg/kg	B mg/kg	Mo mg/kg
Tile Kilns	Spring Beans	4.15	0.44	1.19	0.17	0.12	0.12	51	23	37	8.7	8.6	2.9
Pinpoints	Spring Oats	2.26	0.39	0.44	0.17	0.13	0.07	90	70	25	3.2	1.1	2.8
Top Common	Spring Oats	1.95	0.39	0.45	0.17	0.13	0.08	78	35	23	3.1	1.0	2.4
Motorway 1	Winter Wheat	1.78	0.33	0.53	0.12	0.10	0.04	35	31	19	4.0	0.8	0.4
Merrythought	Winter Wheat	1.77	0.30	0.54	0.12	0.10	0.03	25	29	26	2.5	0.8	0.5
Robinson House	Winter Wheat	1.63	0.26	0.50	0.11	0.09	0.04	33	21	13	2.7	0.8	0.5

¹YEN-Low values for wheat from 2016 to 2020 relate well to the few Critical Values that we know from the literature for wheat (i.e. where researchers showed that adjacent treatments achieving greater grain nutrient levels than this value also generally gave greater yields).

²% protein is estimated from % N, as N x 5.7 for cereals or N x 6.25 for oilseeds & pulses. Grain N% is variety-dependent; variety norms for grain N% of cereal species are best taken from the average protein (or N) concentrations reported in the AHDB Recommended Lists. A difference of 0.2% in grain N from the norm relates approximately to a difference from optimal N supply of 60 kg/ha.



Independently analysed by NRM, a division of Cawood Scientific Ltd, Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS Tel +44 (0) 1344 886338 Fax +44 (0) 1344 890972.
E-Mail enquiries@nrm.uk.com Web www.nrm.uk.com Registered in England No. 2577148. Registered office: Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS



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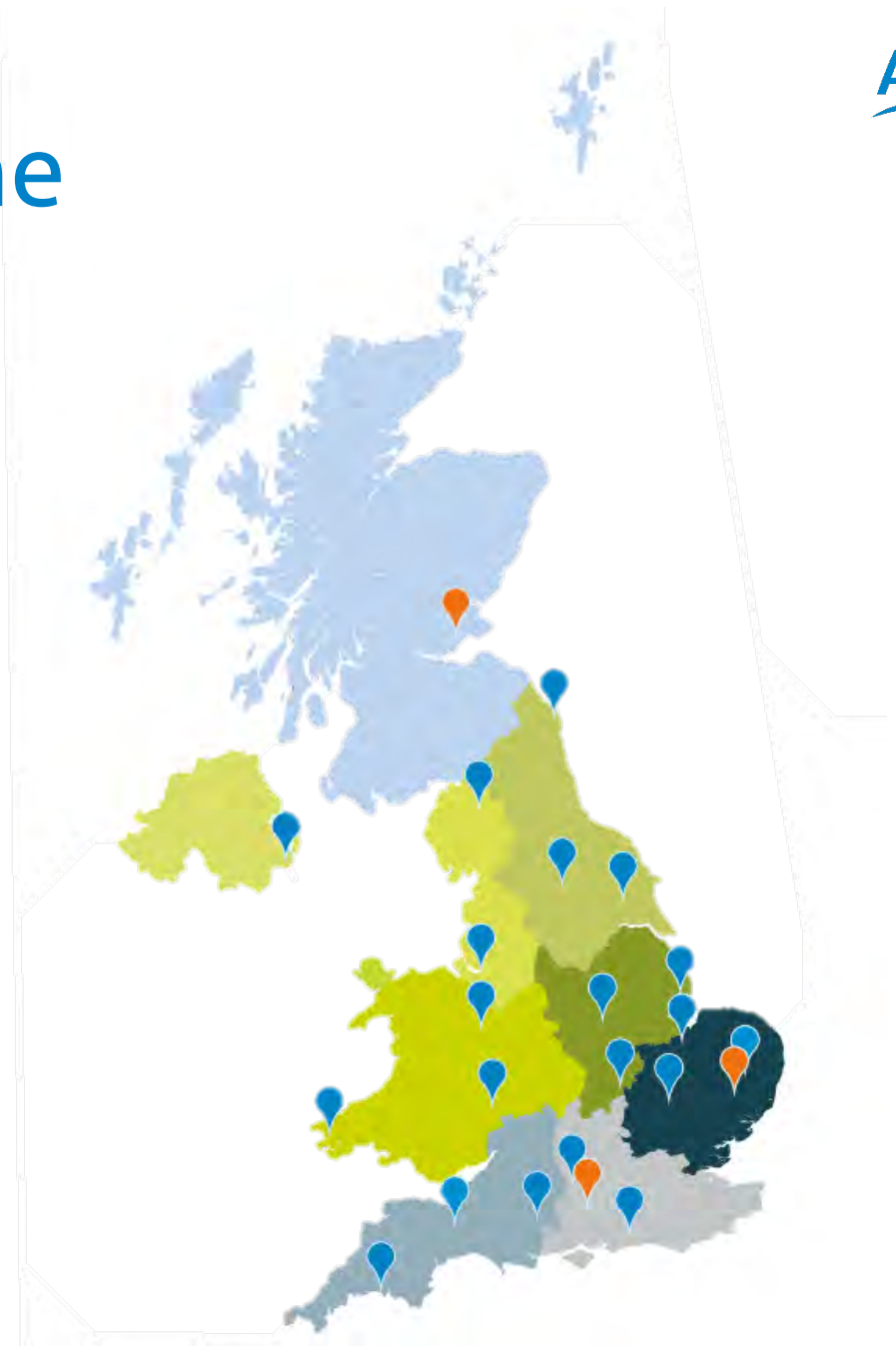
Monitor Farm Try-outs

Michelle Nuttall, Knowledge Exchange Manager (North West & NI), AHDB



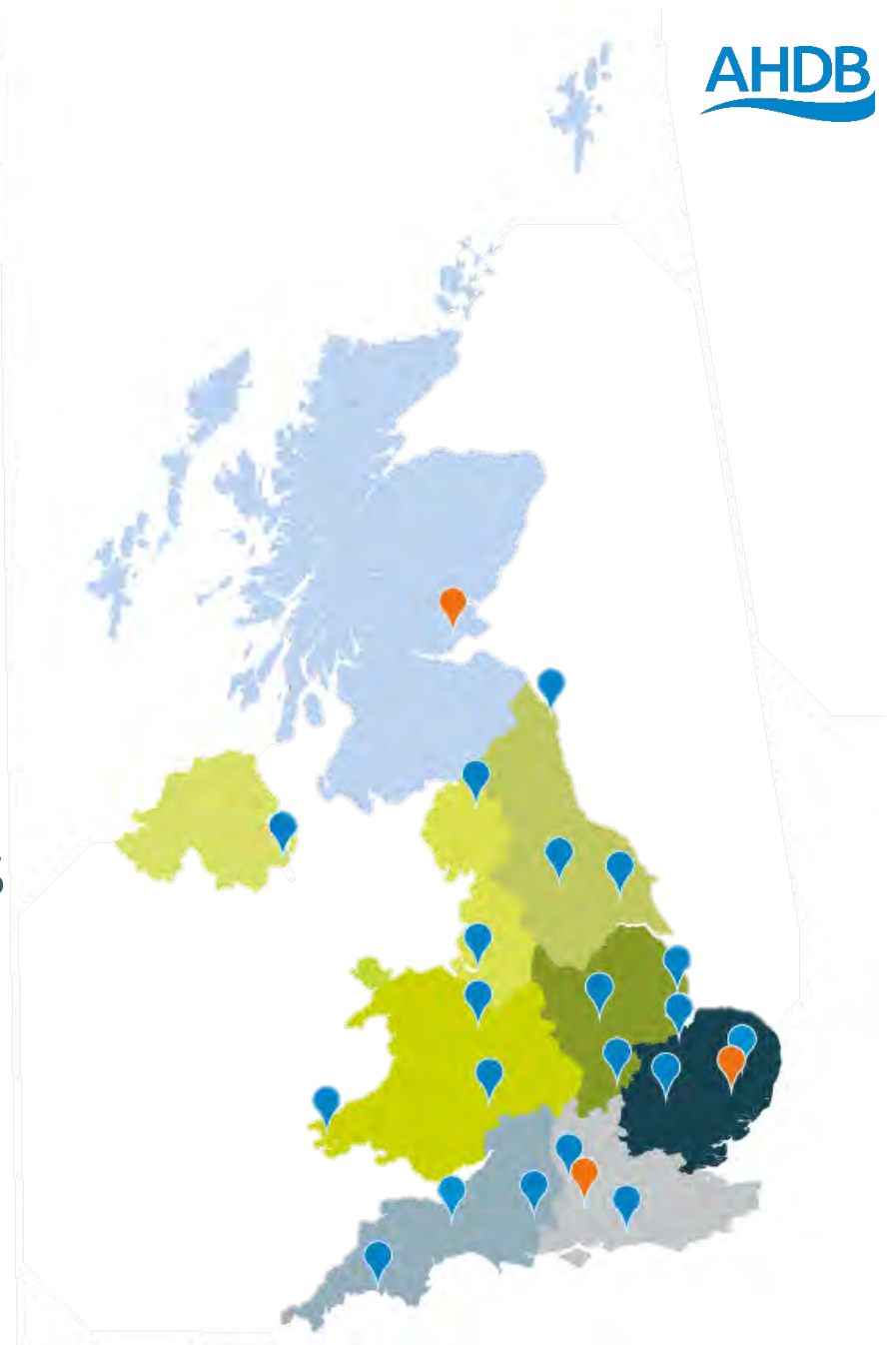
The Monitor Farm Programme

- Interactive, independent and open
- Farm and regional focus
- Analyse real decisions
- Share best practice
- Opportunity for knowledge exchange



Monitor Farm Try-outs

- Local
- Independent
- Putting research into practice
- Allow a group of people to try something without risk
- The whole group can see the impact/results
- Sparks ideas and conversations



[Home](#) > [News](#) > Could blending wheat varieties help reduce risk on your farm?

Could blending wheat varieties help reduce risk on your farm?

Thursday, 22 October 2020

Six AHDB Cereals & Oilseeds Monitor Farm hosts in Wales and the West of England are testing out whether growing a blend of wheat varieties could have benefits for the bottom line of their farm businesses.

Six AHDB Cereals & Oilseeds Monitor Farm hosts in Wales and the West of England are testing out whether growing a blend of wheat varieties could have benefits for the bottom line of their farm businesses.

The six farmers – Tom Rees (Pembrokeshire), Adam Lewis (Herefordshire), Jack Hopkins (Herefordshire), Martin Carr (Herefordshire), Rob Beaumont (Herefordshire) and Rory Lay (Shropshire) – are growing Gleam, KWS Extase, Graham and LG Skyscraper all in the same field, for harvest 2021. Each participating farm will be making comparisons between each other's experiences and also with a field of Graham on their own farms.

Adam Lewis, Hereford Monitor Farm host:

- Farm name: Hampton Wafre Farm, Leominster
- Varietal mix: Gleam (25%), KWS Extase (25%), Graham (25%) and LG Skyscraper (25%)
- Drilled: 5 October 2020
- Area planted: 28 acres
- Five-year average feed wheat yield: 4.2t/ac
- Rotation of the try-out fields: second wheat, wheat after spring oats, wheat after oilseed rape
- Soil types: silty loam, gravel, heavy clay

Cover Crop Try-out

What are we testing?

- 6 different cover crops
 - DSV Beta Sola (egyptian clover, three varieties of nematode resistant fodder radish, niger, bristle oats, common vetch)
 - Rye
 - Vetch
 - Phacelia
 - Mustard
 - Bare soil
- Soil health scorecard
- Yield in following spring barley crop
- Cost of production



Nitrogen use efficiency try-out

With an aim to look at improving nitrogen use efficiency on-farm, Richard has been trialling one option of a nitrification inhibitor, AdvaNShield, this season, with a few different treatment options.

AdvaNShield is an itaconic copolymer, typically applied with UAN fertiliser and is not known to affect soil bacteria. The aim is a 4% yield increase compared to using standard UAN/AN, up to a 24% reduction in nitrate leaching and a 54% average reduction in nitrous oxide emissions.

All of the area has received the farm standard of 210kg N/ha in 3 applications, with one tramline 15% less (180kgN/ha) and one 30% less (150kgN/ha). In addition, half the plots have received the AdvaNShield product and this has been tested in different areas at the three different application timings. The plots will all be taken to yield and analysed for the results.



Companion cropping and FYM use for cabbage stem flea beetle control

Last autumn (2020), building on methods tried in the previous year, Richard has tested a variety of options of companion cropping across four fields, to see which might have the best effect on cabbage stem flea beetle (CSFB) control. These have included:

- Control (Blue)
- Berseem clover and buckwheat (Red)
- Berseem clover, buckwheat and fenugreek (Yellow)

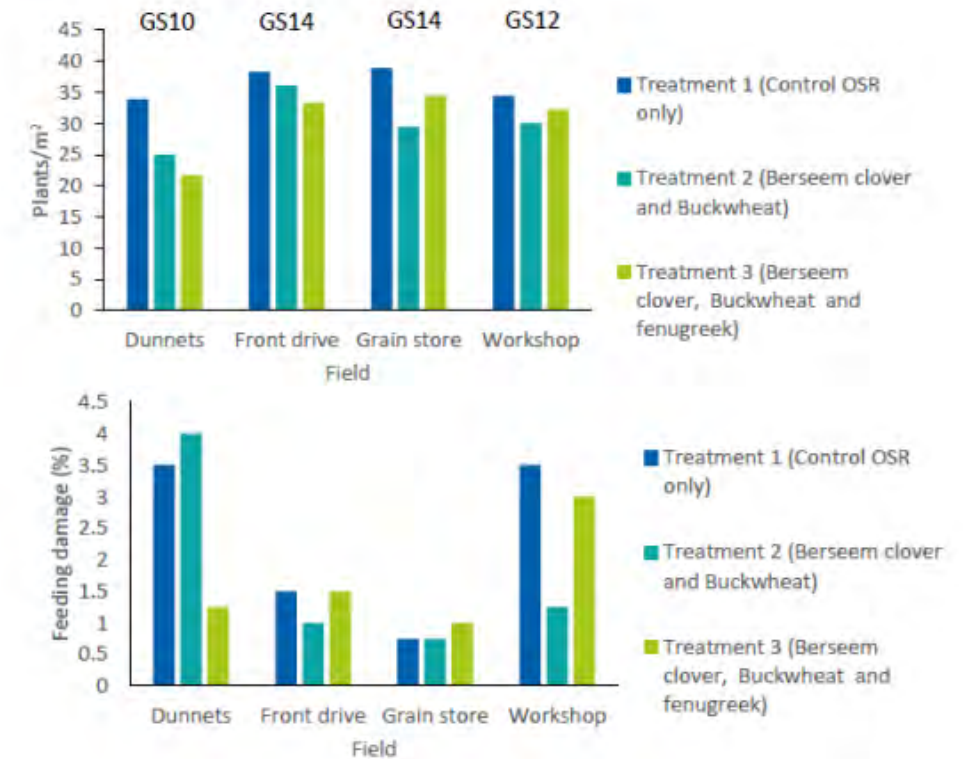


The results from the autumn on plant numbers and feeding damage can be seen in the graphs below.



The fields also received different organic matter additions to them, including cattle FYM on two fields (Dunnets and Workshop), chicken FYM on Front Drive and organic liquid material on Grain Store.

These amendments had a varying effect on OSR and companion crop establishment, CSFB levels in the autumn and larvae levels seen in the winter.



Agronomists' Induction 2021

Innovative Farmers field labs

Fiona Geary, Knowledge Transfer Manager, AHDB



What is Innovative Farmers?

Farmers + Researcher



Field lab

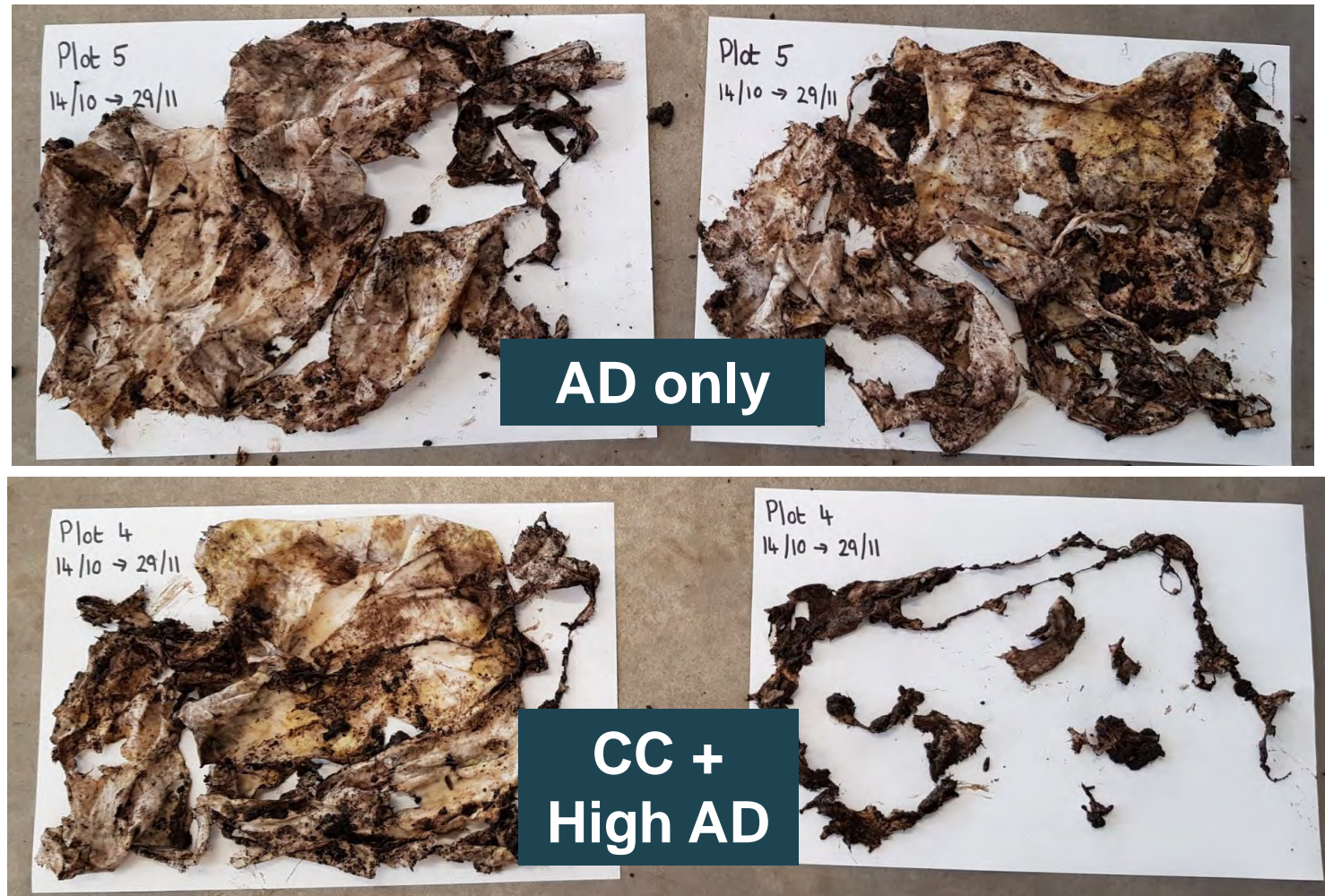


Anaerobic Digestate (AD) on soil microbiology and nitrogen retention

Impact of digestate on soil microbiology and nitrogen retention by cover crops

Treatments at each site:

- Cover crops only
- AD only
- Cover crops + high rate AD
- Cover crops + low rate AD



Defoliation for CSFB control

Defoliation as a control for cabbage stem flea beetle (CSFB) larval populations in oilseed rape

Treatments at each site:

- Defoliated (grazed/topped)
- Control

Results

- Defoliation reduced larval pressure by an average of 68%
- Defoliation resulted in yield losses at all sites
- Most farmers would consider defoliation to manage a forward crop or weed control

No-till with living mulches

Potential for establishing no-till organic/low input arable farming systems using a permanent living mulch understory

Treatments at each site:

- Clover mix under-sown into a cereal cash crop (grazed/topped before direct/strip drilling)
- Control

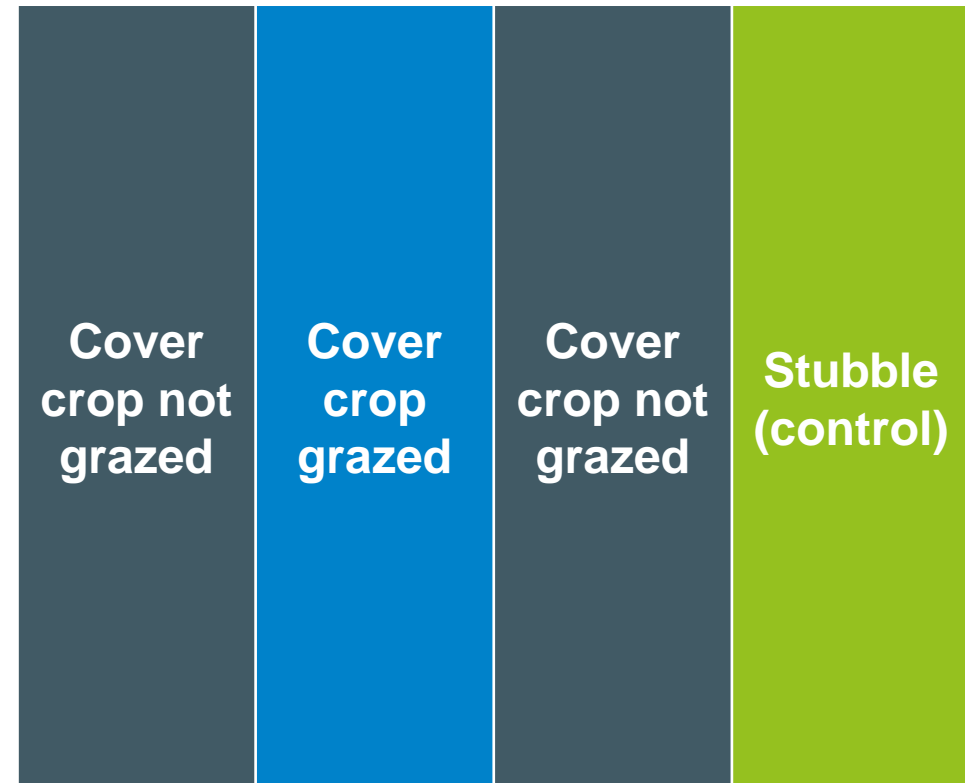


Sheep grazing on cover crops

Impact of grazing sheep on over-winter cover crops on soil properties, crop performance and management of livestock in an arable rotation

Three treatments at each site:

- 1) cover crop grazed
- 2) cover crop not grazed
- 3) stubble



Flowering habitats for pest control

Impact of flowering habitat establishment technique and plant species mixtures on the distribution, diversity and abundance of pest natural enemies

Assessments at each site:

- Flowering strips (in-field or margin)
- Control



Find a field lab

innovativefarmers.org/find-a-field-lab

Tick 'AHDB' to find our sponsored activity.

Start a field lab

Contact AHDB

Ideas can also be submitted by any grower or farmer on innovativefarmers.org

Groups typically comprise 5–15 farmers.



This evening

- 18:30** Meet in bar (cash bar)
- 19:00** Guests to be seated for dinner

Day 2

- 8:45** Session starts