

ARABLE NINTER 2023

THE JOURNAL FOR THE CEREALS AND OILSEEDS INDUSTRY

The new faces in your on-farm network

Fifty years of **RB209**

AHDB Monitor Farme

SUPPORTING DECISIONS

Your sector plan in action

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AHDB is a statutory levy board, funded by farmers, growers and others in the supply chain. We equip the industry with easy to use, practical know-how which they can apply straight away to make better decisions and improve their performance. For further information, please visit **ahdb.org.uk**

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Cover image: © Gary Naylor Photography

Welcome

Days of rain and cold ensured a slow start to harvest everywhere – a contrast to 2022, when fields were in flames as tinder-dry crops and record temperatures meant a speedy, but nervy, harvest.

Farmers have always been at the mercy of weather. We are used to risk. We are also used to clumsy or flawed regulations. We know the perils of being price-takers for our produce, and our inputs too. But these challenges will become harder. Climate, subsidy, markets, supply chains, politics and regulation are all becoming more hostile, extreme or volatile. Farmers often wonder who is on their side. My answer, and my hope, is that we are on each other's side. We can learn from one another, discover better ways to work, challenge the power of 'Big Ag' and shape our own environment.

AHDB belongs to its levy payers – it's your organisation, and it is on your side. The levy can, and should, be used to help farming do better, especially by investing in work that a fragmented industry fails to provide.

The Cereals & Oilseeds sector council, which I chair, aims to make sure that everything AHDB does delivers for levy payers. It may not have been obvious, but things are changing. For example, we want to boost research funding – which has dwindled by 75% since 2011.

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The research agenda will be driven by you. Get in touch and tell us what you need. We've set up a new Research Committee to prioritise and scope out activity. This could include scouring global literature or commissioning demonstrations, on-farm trials or research to address knowledge gaps.

We will work with other research bodies, farm networks and pioneering farmers to make sure we get it right. We won't be fussy or defensive about working with others, but we will fiercely defend our independence and impartiality. Crucially, we'll make the results available in a format farmers can absorb and implement. The solutions will be straightforward, practical and timely – so you don't have to pay for them via commercial services.

This is just the start. All we need is your support and we can deliver a clear return on your levy investment.

Let's fund our own future.

Tom Clarke

Cereals & Oilseeds sector council chair and AHDB board member cerealsandoilseeds.sectorcouncil@ahdb.org.uk



Putting YOUR GRAIN to work

Your sector council is listening to make sure every levy penny is put to good use.

Last year, we asked levy payers to rank the importance of AHDB work activities to the cereals and oilseeds sector. The results (presented in the winter 2022 edition of Arable Focus) were the foundation of the current AHDB Cereals & Oilseeds sector plan (2022–2027).

You told us that most aspects of our independent work are valuable. However, you also sent a strong message that we must improve the effectiveness of our activities. The plan has four areas of activity to guide levy investment.

1. Trusted variety and product testing

Commercial innovation is strong in the UK. Farmers need a trusted information source to help them identify the varieties and products that best fit their systems. We will continue to invest in the Recommended Lists (RL) and fungicide performance trials. You can learn how we intend to improve these services on pages 16 and 22. We will also fund trials to test other products (when levy-payer demand for such work is clear).

2. Independent, practical research and market intelligence

AHDB has a clear role in supporting on-farm decisions. We aim to reverse the long-term decline in research investment to give levy payers solutions to key challenges. We will also maintain and improve existing key services, such as the provision of nutrient management guidance through RB209. AHDB's recent investment in RB209 is outlined on page 18.

However, nutrient management never stands still. Fertiliser price swings and new rules on the use of urea-based fertilisers (in force after 1 April 2024) provide recent evidence of this. Amanda Bennett, who leads on RB209 at AHDB, said: "We plan to review RB209, with activity getting underway at the end of 2023. We will gather views on the guidance, which will be used to help to direct research and knowledge-exchange activities and support nutrient management decisions."

AHDB will also invest in ways to help farmers reduce dependence on costly inputs, for example, via soil management and integrated

MARKETS AND INSIGHTS

pest management (IPM). We will work more closely with farmers to ensure that the right activities are commissioned and remain focused on levy-payers' needs (see page 3).

3. Work across the supply chain

AHDB is uniquely placed to facilitate industry discussions. We also work in partnership with industry to help educate schoolchildren about food and farming (see page 12) and defend the industry from unfair criticism. Levy funds will also continue to support access to export markets.

4. Knowledge exchange

The Knowledge Exchange team (see pages 24 to 32) will continue to listen to farmer needs and support on-farm learning through the network of Strategic Farms, Monitor Farms and Arable Business Groups. Our team of economic and analysis experts will improve the information it provides, which covers traditional (core market and price data) and emerging (such as carbon and biodiversity markets) areas.

PURPOSE OF THE LEVY

The levy empowers all levy payers to act together to tackle challenges and opportunities that cannot or will not be addressed by individuals or commercial organisations alone.

We invest in agricultural expertise and conduct activities, including rapid evidence assessments, on-farm trials and demonstrations and full-scale research, to provide answers to important levy-payer questions.

Levy investment

There is strong support for our services and for them to be improved. However, there has been no increase to the Cereals & Oilseeds levy rate in over a decade. Combined with inflation and changes to AHDB's tax status, levy spending power has been reduced by up to 40%. That's why AHDB's sector councils are discussing levy rates with levy payers. There is never a right time to recommend a levy increase. However, irrespective of income, the sector council will always look after every penny and drive for value.

For information on levy investment, visit: ahdb.org.uk

About your sector council chair

Tom Clarke is a fourth-generation fenland arable farmer. He has a degree in Economics, an MBA and business consultancy experience. He has held several board-level positions, including on the NFU Sugar Board (since 2018) and is a member of the NFU net-zero steering group. You can follow Tom on 'X' (formerly known as Twitter) @Tom_Clarke.





Source: AHDB

Figure 1. Levy income splits for 2021/22. Gross levy income £10,288,000 (2021/22) and £11,206,000 (2022/23)



Source: AHDB

Figure 2. AHDB Cereals & Oilseeds planned spending 2023/24. Non-levy income, e.g. grants and funding, offers extra value to levy payers in addition to their investment

Understanding CARBON MARKETS



Carbon emissions. Soil carbon. Carbon markets. Carbon may feel like a buzzword, but if approached in the right way, its management could provide in-field benefits, a valuable income stream and a solution to greenhouse gas emissions.

What are carbon markets?

Changing agricultural policy and net-zero commitments have stimulated carbon markets. These provide a way to buy and sell carbon credits, with one carbon credit equivalent to one tonne of carbon.

Farmers can capture (sequester) carbon or reduce emissions on their farms to generate carbon credits. These can be held on to or sold into schemes (to help companies offset their emissions).

There are two broad types of carbon markets: voluntary markets and compulsory markets. The former provides the best opportunity for farmers to sell carbon credits. The latter is government regulated, with carbon credit quality audited and verified. As this increases the confidence of buyers, credits from compulsory markets currently trade at higher prices. However, voluntary-sector credits are set to increase as companies work towards net zero and the market becomes more regulated.

What can you do today?

- Use a carbon calculator to measure your footprint: with many carbon calculators available, it is important to pick one that works for your business and stick with it
- Explore the schemes: make the most of AHDB's information
- Keep on top of potential requirements for your business. For example, will you be required to be net zero?

Before you commit to a scheme, you should seek legal advice.

Learn more about carbon markets at: ahdb.org.uk/carbon-markets or contact carbon.markets@ahdb.org.uk

TOP TIPS

What to look out for when considering carbon market schemes:

- Read the contract carefully: each one is likely to differ by length, cost and minimum requirements
- Understand the minimum requirements: some schemes require certain conditions to be met. These could relate to cultivation practices, acreage and the provision of baseline data
- Know the payment terms: although most schemes pay the market rate, payments vary and fluctuate. At present, the price is £20 to £40 per carbon credit. Some schemes guarantee a minimum price per credit (which will increase with the market value)
- Be aware of early-payout schemes: these offer payment (based on an estimate) before credits have been certified – pay attention to the price offered and any additional fees
- Understand buffers: unsold credits kept by the carbon-offer company are called buffers, with varying levels of buffers offered. Buffers help ensure that practices that could invalidate the carbon credits are not used
- Be prepared to analyse soils: some schemes require an analysis to provide information on soil carbon levels (the baseline quantity)
- Know the monitoring requirements: schemes have a 'sliding scale' of monitoring methods, from the use of on-farm testing kits to satellite technologies and artificial intelligence
- Read the restrictions: a carbon offer could limit options for your land, such as not permitting soil disturbance or requiring the (continued) use of cover crops and green manures

What does a tonne of carbon dioxide look like?*

*Figures include carbon dioxide GHG equivalents. Actual figures are highly variable.



About two tanks of tractor fuel (382 L diesel)



13 m² of native woodland vegetation



0.1% increase in soil organic matter, on just over a quarter of an acre

NATURAL CAPITAL MARKETS

By Isabelle Shohet, AHDB Analyst

The wider natural capital market is also developing quickly, with payments for practices that deliver environmental benefits, including carbon sequestration, water quality and biodiversity net gain (BNG).

In England, there are two funding streams for environmental benefits: government schemes and private markets. In some cases, you can access both at the same time (to meet different objectives).

Defra is developing new schemes to increase private investment. These include the upcoming BNG regulations, which allow the use of cropland and hedgerows (and other habitats) to generate BNG credits for sale to developers.

Defra's Nature Markets Framework aims to scale up current nature markets. Over the next few years, the development of nature investment standards (with the British Standards Institute) and consistent measurement approaches aim to attract private investment.

For further information, contact:

Jess Corsair Senior Economist (Trade & Policy) jess.corsair@ahdb.org.uk



About half a bag (327 kg) of ammonium nitrate (33.5% N) fertiliser

A rough ride for wheat?

With the wheat harvest delivering a mixed bag of yields and quality, Helen Plant examines the potential supply impacts and demand trends.

Harvest 2023 was somewhat challenging (to say the least). The weather caused an (im)perfect storm. The hot and dry conditions in the late spring/early summer accelerated crop growth and development, and then the rain struck, delaying the start of harvest. This was followed by stop-start progress until mid-to-late August when the pace finally picked up.

Supply slumps?

There is no official data yet. However, information from AHDB harvest reports and regional staff suggests that crop yields are highly variable (depending on variety, soil type and region). By 12 September, estimates suggested that almost all (99%) of the GB winter wheat area was harvested. Yields ranged from 5 t/ha to 13 t/ha, averaging out at 7.8–8.2 t/ha (the Defra 2018–2022 average is 8.01 t/ha).

So, what does production look like for the 2023/24 season? The harvest 2023 wheat area in England was lower than initially anticipated (based on Defra June survey results), with the latest estimates at 1.580 Mha (down 5% on the year). Using AHDB Planting and Variety Survey results and an estimate for Wales, we project that the UK wheat area is around 1.713 Mha (6% lower than in 2022). Based on this estimated area and the average yield range mentioned, UK wheat production for harvest 2023 could be between 13.362 Mt and 14.047 Mt. Anecdotal comments from the trade and regional staff suggest production may be nearer the higher end of the range.

Even at the higher end, production would still be around 1.5 Mt lower than last season. This projected drop in output will likely outweigh the rise in carry-in stocks, leading to a smaller domestic availability. However, does this mean we will need to import more wheat?



Lacklustre demand?

The quality of the domestic wheat crop is expected to be mixed, even within regions. Although it is not likely to be a 'disaster', lower quality and production will reduce the pool of high-specification milling wheat, and millers may need to import more to address any shortfalls. In terms of demand, milling wheat demand has been relatively stable for several years, and this is expected to continue. No monumental demand shifts are expected in 2023/24 for other human and industrial sectors. Of course, bioethanol usage will remain a watchpoint. Bioethanol demand for wheat is expected to remain relatively stable this season, with strong demand from the starch and distilling sectors set to continue.

Conversely, animal feed demand is expected to remain lacklustre.

66 The UK is likely to have a tighter wheat supply this season despite higher opening stocks

MARKETS AND INSIGHTS

Last season, animal feed production fell, which led to a decline in wheat usage in rations. The poultry industry, the largest consumer of wheat across the animal feed sectors, recorded the biggest feed production drop. While lower input costs (for both layers and broilers) have eased the tight squeeze on margins seen last year, they remain relatively tight. The industry is unlikely to recover fully this season, and feed usage will likely remain below the previous five-year average.

No major recovery in the UK pig herd is expected this calendar year either, with clean pig throughputs currently forecast down 14% on the year in the second half of 2023 (AHDB estimates). While the UK breeding herd is expected to recover slowly, it's unlikely to impact feed demand until the latter part of the season.

In terms of ruminant feed demand, reports of good forage availability from this summer may lead to less substitute feeding. With milk prices still subdued, we could see this also capping feed demand. However, as always, spring weather is a big watch point for ruminant feed demand – a soggy spring could soon stimulate feed demand.

Steady demand to counter lower supply?

The UK is likely to have a tighter wheat supply this season despite higher opening stocks. Whether more imports are required depends on the final quality, but there could be a higher requirement for imported hard wheats for the milling sector.

While supply may be lower, demand could also be relatively low, driven by another year of subdued animal feed demand, with producer margins continuing to be relatively tight and only slow recoveries in the monogastric sector expected.

However, with a smaller crop and surplus, exports will likely slow. This will leave a relatively ample balance if demand does remain subdued this season.

ahdb.org.uk/markets

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Farmbench can boost business performance

If you want to improve farm profitability, put benchmarking at the top of your to-do list. Julie Clark explains why.

With global weather events increasing in frequency and the war in Ukraine continuing, volatility in commodity markets is unlikely to go away. Input costs have also been volatile, and agricultural payment policy continues to change.

With so much outside of growers' control, getting to grips with production costs and understanding break-even points is important. It will help you to know the price needed to make a profit and highlight ways to improve net margins.

Why benchmark?

An analysis of farm business data by AHDB and the Andersons Centre in 2018 identified eight key factors that differentiate top-performing farms (top 25%) from the rest (middle 50% and the bottom 25%).

Benchmarking can help improve farm performance against several of these factors, including the first three bullet points from the blue box.

Farmbench – AHDB's online benchmarking tool – compares your business' performance figures against similar businesses. It can be used to help evaluate costs and identify business strengths and weaknesses.

TOP-PERFORMING FARMS

- Minimise
 overhead costs
- Set goals and budgets
- Compare yourself
 with others
- Understand the market
- Focus on detail
- Have a mindset for change and innovation
- Continually improve people management
- Specialise

Arable Business Groups

Farmbench powers numerous discussions at AHDB's Arable Business Groups (ABGs). There are over 40 ABGs across the UK digging into production costs and improving members' businesses. They consider all business matters, including environmental scheme options and pricing strategies.

Many growers (60% who submitted feedback forms after 2022/23 ABG meetings) intended to make changes because of the lessons learned at an ABG. The changes cited were varied but included marketing crops, buying inputs, machinery investments and closer cost monitoring.

Big data

Farmbench data is powerful, especially when anonymised data from multiple farms is analysed.

In the following analysis, we use conventional combinable crop enterprise performance results from Farmbench for five harvest years (2018–22).

Unsurprisingly, production costs per hectare increased for all crops over this period, with a large proportion of the rise in 2021 to 2022.

Overheads are a key driver of profitability (alongside yields). In general, overheads – including a value for unpaid labour, a rental value of owned land, depreciation and finance charges – accounted for around two-thirds of the total cost of production.

The top 25% performance groups recorded the largest increase in overheads from 2021 to 2022 for all crops. Despite this, overheads in the top quartiles remained (on average) lower than the other performance groups.

Although production costs increased over the period, yields and output prices generally went up too. This helped improve full economic net margins. The top 25% had the greatest increases (as expected). For example, a rise of over \pounds 650/ha for winter wheat on the year increased the average net margin to over £1,600/ha in 2022. The bottom 25% also recorded a relatively large increase in net margins for winter wheat in 2022 (of over £450/t). This took total net margins up to £550/ha – still just a third of what the top 25% achieved. Although this group benefited from higher wheat prices, relatively high production costs, lower yields and lower average sale prices held net margins back.

We will analyse harvest 2023 data shortly. However, significantly higher input costs and lower output prices will squeeze margins. That said, historic data shows that the top 25% of growers are likely to stay in the green for most crops.

Get benchmarking

Arguably, there has never been a better time to benchmark. Farmbench helps you explore options to optimise income and mitigate cost increases.

From crop rotation changes, to locking into futures prices, to evaluating potential inputs and equipment investments, why not consider using Farmbench or joining an ABG?

ahdb.org.uk/farmbench ahdb.org.uk/arable-business-groups

For further information, contact:

Julie Clark Lead Farmbench Manager (Cereals & Oilseeds) julie.clark@ahdb.org.uk



Figure 1. Five-year average (2018-22) net margins (£/ha) by crop and performance group

FULL MARKS for school education programme

UK schoolchildren are more aware of where food comes from, cooking and healthy eating, thanks to a unique partnership. Roz Reynolds explains.

Busy teachers welcome free resources that comply with the UK curriculum and slot seamlessly into lesson plans. It is one of the reasons why AHDB supports Food – a Fact of Life (FFL).

About FFL

FFL provides accurate food messages to those involved in education. It promotes where food comes from, helps develop cooking skills and encourages young people to eat more healthily. Critically, it supports key food curricula and qualifications across the UK for young people (aged 3–16 years).

Younger generations are the consumers of the future. By learning the real story behind the contents of shopping baskets, we bring

consumers closer to the food they buy while leaving less room for inaccuracies and mistruths often seen in wider society.

The initiative is a partnership between the British Nutrition Foundation and AHDB, which provides expertise in nutrition and healthy eating, and UK farming and food production, respectively.

"Introducing healthy eating habits early on can help children develop a good relationship with food and equip them with information to have a healthy balanced diet later in life." – Frances Meek, Education Services Manager at British Nutrition Foundation.

The programme covers various topics, such as 'cooking on a budget', 'basic food skills', 'where food comes from' and 'food science'.



The website (**foodafactoflife.org.uk**) is its hub for teaching materials, which have been downloaded more than 4 million times in the last three years. The healthy figure includes a surge associated with home learning during the pandemic. Since the return of classroom learning, numbers have remained high, with 1.3m downloads in 2022/23.

The programme also delivers face-to-face and virtual training to help teachers feel more informed, confident and inspired to run food-based lessons. In 2022/23, physical events took place across England, Wales and Scotland. Delegates felt more informed about food education and had new ideas to take back to the classroom. Online conferences, webinars and practical workshops also took place, including an online conference hosted in Northern Ireland in 2022/23. Overall, FFL training reached almost 800 delegates in 2022/23. The events often feature farmers, who provide their perspective on food production. It is often cited as the most enjoyable element by delegates.

FFL's social media channels are also popular. The X (Twitter) handle (**@foodafactoflife**) has over 10,000 followers, and its YouTube channel (**youtube.com/@food-afactoflife6236**) has clocked up nearly half a million views. Additionally, about 20,000 people subscribe to FFL's monthly newsletter – Education News.

Why invest in education?

In 2022, we asked levy payers to score the importance of AHDB's activities. The Recommended Lists (RL) finished top (4.2/5.0), but 'education' finished a close second (4.0/5.0). In response, the AHDB Cereals & Oilseeds sector council made clear its intention to support related activities in its sector plan:

"AHDB will educate schoolchildren and students, by working with partners, to ensure they are informed about nutrition, where food comes from and how to cook, so they foster a positive attitude towards food and the UK farms it comes from."

Learn more about this activity at ahdb.org.uk/education

For further information, contact: **Roz Reynolds** Head of Education **roz.reynolds@ahdb.org.uk**

FIVE WAYS FARMERS CAN SUPPORT EDUCATION

Raise awareness

In addition to FFL, Countryside Classroom helps teachers find farms to visit and provides schools with support on food, farming and the natural environment. It also creates tailored resources for every school subject (from art to languages and science). It is managed by Linking Environment and Farming (LEAF), in partnership with industry organisations, including AHDB.

Order resources

To support farm visits, download or order AHDB posters that show life on the farm, how animals are reared and cared for, and how crops are grown and harvested. Additional resources include stickers and activity sheets.

Engage with schools

The NFU Farmers for Schools programme trains farmers to visit schools to spark thought-provoking debates. The Farmer Time initiative uses live chat to connect classrooms with farmers.

Host visits

The Countryside Educational Visits Accreditation Scheme (CEVAS) is a learning programme for farmers who want to provide education or therapeutic (care farming) experiences on their farms. CEVAS-trained farmers welcome 500,000 schoolchildren every year. This autumn, an AHDB pilot project will support 20 farmers (across agriculture) through CEVAS.

Open Farm Sunday

AHDB also sponsors the annual LEAF Open Farm Sunday, which took place on 11 June this year. The day provides an opportunity to talk to the wider public about farming and the countryside and why farmers are proud of British food and farming.

66 Introducing healthy eating habits early on can help children develop a good relationship with food and equip them with information to have a healthy balanced diet later in life **99**

MARKETS AND INSIGHTS

Grain passport: is it time to go digital?

Derek Carless outlines progress with the initiative that aims to track grain movements more efficiently.

The physical grain passport is a core part of the grain supply chain. It records evidence and traceability information associated with food and feed safety. Importantly, it provides transparency.

However, some industry members question the need to print and manually fill in multiple paper passports. They feel the process is rooted in a pre-digital era and increasingly out of place in the modern supply chain.

As a result, industry stakeholders have discussed a Digital Grain Passport (DGP) over recent months, including what would be required to develop a system that works for everyone in the supply chain.

What could a DGP provide?

The supply chain believes a DGP could provide:

- An efficient, transparent, secure and free flow of accurate crop data from grower to receivers
- A rapid return of intake weight and quality data to growers
- An enhanced system that better meets assurance scheme and food and feed safety legislation requirements

Getting it right

Since the start of the year, a Leadership Group has driven the development of a formal DGP business case.

The group comprises key organisations from across the supply chain, including representatives from NFU, NFUS, AIC, UKFM, MAGB and SCOPA. The group is chaired by AHDB Board Member Stephen Briggs, with AHDB providing support with secretariat functions.

Additionally, two subgroups were set up to help address all industry questions and requirements in the business case. These groups include farmers, merchants, hauliers, end users and experts in data and supply chains. The Development Group, chaired by George Mason of Heygates flour mills, has developed a relatively simple process that largely replicates the current paper passport. The only addition to the current approach is that the DGP would return data from end receivers back to the farm.

The Data Group, chaired by Matt Culley, NFU Crops Board Chair, has worked on the complex subject of data governance. During regular meetings, this group has created a well-structured approach to ensure data is protected and managed securely in a digital system.

The Leadership Group is using information from all discussions to prepare the business case. It is working at pace to develop a clear plan for sustainable ownership, data governance and funding.

The business case will underpin an industry-driven consultation this autumn – the outcome of which will help determine whether the DGP gets the green light.

If the final business case requests AHDB funds, this will be considered by the AHDB Cereals & Oilseeds sector council.

For the latest information, visit: ahdb.org.uk/grain-passport

For further information, contact:

Derek Carless Digital Grain Passport lead derek.carless@ahdb.org.uk

Conferences



Catch up with the latest thinking...

Grain Market Outlook

28 November, York

Join us for insight into the potential direction of domestic grain and rapeseed prices.

Agronomy Conference 7 December, online

Discover the latest evidence-based agronomy for the whole rotation.

ahdb.org.uk/events



Improving the **RECOMMENDED LISTS** (RL)

Jenna Watts answers questions about the RL review, the results and the next steps.

Recommended Lists review and the storm of the start of the storm of the store of th AHDB Recommended Lists for cereals and oilseeds 2023/24 AHDB ed in partnership with Ibspb innie feto UK FLOUR

Why review the RL?

We review the RL during each project phase. The reviews cover many aspects, from the type and nature of the trials to the way data is analysed and variety decisions are made. They also explore how results reach farmers and ensure that the RL continues to deliver the best value to industry.

In 2022, the project received a score of 4.2/5.0 for importance during the Shape the Future process. With investment secured to continue the work, the AHDB Cereals & Oilseeds sector council (as part of its five-year sector plan) is reviewing the current RL project phase (2021–26).

How did you approach the review?

We wanted to get as many views as possible and ran three initial activities. The main one was a questionnaire, which was available online and mailed out with the RL booklet. We received over 900 responses, with most (75%) responses from farmers, which is fantastic. Online focus groups also provided a forum for detailed discussions with farmers and agronomists (32 participants), and stakeholder interviews canvassed opinions from the wider supply chain.

The RL is consistently ranked as one of the best-known AHDB products. Did the review reinforce previous findings?

Absolutely. Most people (79%) scored the RL as 4 or 5 (out of 5) in terms of its importance as a source of variety information. It was a joint-first finish, with personal experience rated equally important. However, it also confirmed that people get variety information from a wide range of sources, including end users, agronomists and on-farm trials.

The previous RL review detected a shift in attitudes, with farmers looking beyond treated yields, with much more interest in resilience. Have such trends continued?

Definitely, for example, disease and pest resistance was rated as the most important variety feature (62% of respondents rated this 5 out of 5 for importance). It was also highlighted as a major reason why people switch to a new variety. Other features that scored highly included agronomic features, followed by farm-system yield, fungicide-treated yield and untreated (no fungicide) yield.

Strict procedures and criteria are followed to ensure that the 'right' varieties make it onto the lists. Is the recommendation approach working?

About 80% of farmers thought that the number of varieties on the RL was about right. Although, the result was not as clear-cut in non-farmer groups. The focus group discussions also raised questions about the processes by which varieties are added and removed from the lists. We are going to make it easier for people to learn about the trials and the variety selection process.

The review encouraged people to suggest ways to improve the trials. What did you find out?

There is a lot of varied demand for new information, so we allocated responses to broad groups. Performance under lower inputs – reduced fungicide, fertiliser and cultivation – was the strongest group. New attributes were also raised. This included vigour, which we've looked at before. It is a complex topic, but we will revisit it. There is also a demand for more regional information. This extends beyond local trials to finding sites with similar soil types or weather conditions. There's also some concern about consistency and stability of performance. Bearing in mind the 2021/22 season, it was not too surprising to see drought tolerance frequently mentioned in the free-text responses.

The review also looked at how RL data is communicated, didn't it?

Most people use the RL booklet, so we will continue to produce it. However, the review has made us look closely at how data is presented. At events this summer, our team showed alternative designs that simplify the tables. Look out for the changes in the next booklet, which is due early next year. We also plan to improve our digital tools.

With the RL limited by its resources, how will you decide how to improve the project?

We are investigating the feasibility, the costs and the benefits associated with the opportunities uncovered by the review. Of the strongest options, we will identify what could be implemented straight away and what would need more time. Over the next few months, we will also conduct some focused knowledge-gathering exercises. We aim to release a detailed action plan towards the end of 2023.

This article is based on a podcast available at: ahdb.org.uk/rl-review

GET INVOLVED

If you have a passion for cutting-edge crop variety trials, find out about the three crop committees that support the RL Project Board:

- Wheat crop committee
- Barley, oats and other cereals crop committee
- Oilseeds crop committee

ahdb.org.uk/rl-board-and-committees

For further information, contact:

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Coming soon RL 2024/25 online tables – 27 November 2023

A golden year for NUTRIENT MANAGEMENT

Jason Pole reflects on 50 years of the Nutrient Management Guide (RB209).

In 1973, Reference Bulletin 209 hit the shelves. It was the first comprehensive set of fertiliser recommendations for the UK's major crops and the dawn of a new era.

The initial 'Fertilizer Recommendations' (with a 'z') were developed by the Ministry of Agriculture, Fisheries and Food (MAFF). Thankfully, the authors did not need to start from scratch. Nutrient management research had been conducted for well over a century. The ongoing Rothamsted Research 'Broadbalk' wheat nutrient experiment provides a well-known example (which started in 1843).

Previous nutrient management bulletins had been issued too, with the earliest – 'Artificial fertilisers in modern agriculture' (RB28) – published in 1931. Interestingly, 'Manures and manuring' was not allocated a bulletin number until its seventh edition in 1937 (RB36).

During the MAFF and Defra eras, the environment was increasingly at the heart of the recommendations. Keen to reduce diffuse and point sources of pollution, the guidance emphasised the precise use of nitrogen. The final government-led (8th) edition of RB209 was published in 2010.

RB209 and the AHDB era

AHDB announced it would pick up the mantle in 2015. It formed the UK Partnership for Crop Nutrient Management and tasked UK experts to comprehensively review the guidance. Crop productivity took centre stage. Farmers, agronomists, breeders, researchers and fertiliser companies all fed into its review. Research was commissioned to fill gaps and provide the robust evidence required to change RB209.

In 2017, AHDB launched its inaugural RB209 edition. Headlining the changes were yield adjustments for nitrogen (for wheat and barley). This allowed an increase or decrease (relative to reference yields) in nitrogen rates based on expected cereal yields. By accounting for past performance and the influence of the current season on potential yields, the strategy unlocked new nutrient management flexibility.



Celebrating 50 years of the RB209 Nutrient Management Guide

THE GOLDEN ANNIVERSARY EDITION

In 1973, a hard copy of RB209 would have set you back 68 pence. In 2023, the 50-year anniversary edition is free to download and to order via ahdb.org.uk/rb209

Sulphur and phosphorus

Most notably, the 2019 edition updated sulphur recommendations, which had remained largely fixed since the mid-90s. With atmospheric deposition decreasing and yield potential of modern varieties increasing, it was assumed that a sulphur boost was long overdue. However, experiments in winter oilseed rape revealed that only a modest increase was needed. The research also discovered that crops used sulphur from organic sources more efficiently than previously thought.

The most significant revisions to phosphorus management guidance since the 1980s occurred in the 2020 revision, with improvements to soil analyses, target indices and grain offtake values.

Costly nitrogen

In 2021, RB209 entered uncharted territory. An energy crisis triggered unprecedentedly high fertiliser prices that worsened with the war in Ukraine. It produced new 'economic optima' (break-even ratios) – the point at which the value of extra grain produced is not worth the cost of the extra nitrogen applied. To help farmers adjust rates in the 2021–22 season, AHDB invested in reactive work and swiftly issued updated guidance and released the nitrogen fertiliser adjustment calculator for cereals and oilseeds.

Spring barley was in the spotlight in 2022, with recommendations revised following an analysis of 15 years of trial data. It led to a boost to the crop's expected yield benchmark (from 5.5 t/ha to 7 t/ha) and new yield-adjustment guidance. The edition also provided a long-overdue refresh of liming guidance.

Despite centuries of investment in research, the nitrogen management puzzle is far from being solved. The hazy – but influential – 'farm factor' means RB209 guidance and field-level experience always need to go hand in hand.

Milling wheat is a particularly fickle crop, as protein specifications add a further layer of complexity. The 2023 edition features improved guidance. It states that an extra 40 kg N/ha could increase grain protein by up to 0.5%, with a late foliar urea application during the milky ripe stage (GS73) generally better at increasing grain protein than the soil-applied stage. The edition also includes points to consider before committing to a milling wheat strategy.

The first AHDB edition included more robust nitrogen rate recommendations for modern winter oat varieties. In 2023, the guidance for both winter and spring oats was improved. For example, RB209 now supports yield adjustment for nitrogen in both crops and features better information on managing oat quality.

Over the last 50 years, RB209 has adapted to changes in crop production and the environment. The good news is that the current AHDB Cereals & Oilseeds sector plan pledges to keep supporting RB209. It secures its future until at least 2027. I wonder what it will look like in 2073!

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Unearthing **SOIL'S SECRETS**

A full picture of soil health can be captured by a new 'scorecard'. Jason Pole investigates.

Not everything that matters can be measured. Not everything that can be measured matters. Wise words. Nobody would dispute that soil health matters. Now it can be measured.

For more than five years, the AHDB/BBRO soil biology and soil health partnership has picked apart the muddy topic of soil health and meticulously put it back together again.

The partnership explored how to measure the condition of soils and developed a set of core soil health indicators covering physical, chemical and biological properties. With an eye on practical application, the team developed indicators already commonly used to assess soil to ensure that they slot in with farm practice.

Critically, the partnership determined each indicator's typical range(s) for the UK's main cropping and lowland grassland systems.

The ranges act as benchmarks and can help reveal if a soil is healthy, getting sick or poorly.

Core indicators

Physical indicator: Visual evaluation of soil structure (VESS)

VESS is a simple soil structure test. A spade-sized block of soil (about 30 cm deep) is levered out, leaving a side undisturbed to show horizontal layers of differing structure. The worst-performing (limiting) layer is allocated a soil quality score (1–5 scale, where 1–2 is good).

ahdb.org.uk/vess

Biological indicators: Earthworms

Impacted by pH, waterlogging, compaction, tillage, rotation and organic matter, earthworms are an excellent soil health indicator. A spade-sized soil block is used for earthworm counts. In cropped land, nine or more earthworms is good, and three or less is bad. The AHDB website includes information on how to count earthworms, including species, and adults and juveniles.

ahdb.org.uk/earthworms

Biological indicators: Soil organic matter

Soil organic matter levels depend on many factors, including soil texture, use of organic materials, farming system and environmental factors, such as soil moisture and temperature. This complexity is reflected in the benchmarks, with different values for England and Wales, and Scotland. They also account for soil texture. For organic matter, measuring it periodically (using the same laboratory and method) to determine trends is as important as the absolute value.

ahdb.org.uk/organic-matter

Chemical indicators: pH

A soil's pH affects its chemical (e.g. nutrient availability), biological (e.g. microbial activity) and physical (e.g. clay mineral aggregation) properties. It is easily revealed by an indicator test or laboratory analysis, with pH 6.5 to 7.49 as the ideal range. Higher pHs may result in nutrient interaction issues and/or trace element deficiencies. Lower pHs, especially under 5.5, require immediate investigation and liming plans adjusted.

ahdb.org.uk/soil-nutrients

Chemical indicators: Extractable nutrients

A laboratory analysis of a representative soil sample can reveal phosphorus, potassium and magnesium levels. Compared to England and Wales, Scotland has a different approach to nutrient analyses, which is accounted for in the benchmarks.

ahdb.org.uk/soil-ph

The researchers also established benchmarks for indicators of microbial activity, including potentially mineralisable nitrogen (PMN) and microbial respiration (CO_2 burst). These non-core indicators can help reveal the size and activity of the soil microbial community.

Soil health scorecard

An Excel-based version of the scorecard, developed in partnership with farmers and agronomists, can be used to interpret soil assessment results.

Once results have been added, the scorecard automatically assigns a soil status for each indicator value: monitor (green), review (amber) and investigate (red).

In addition to the indicator values, the scorecard also uses three site characteristics – UK region, land use and topsoil data – and features 'management notes' for each core indicator and soil status.

Commercial success

The scorecard is a powerful tool. Earlier this year, a commercial partnership (ABACO, NIAB, ASDA, Tesco and McCain Foods) launched a digital application to make it even easier for farmers to use the scorecard approach.

The Excel version of the scorecard is available on the AHDB website, which also includes detailed guidance and video walkthroughs.

ahdb.org.uk/scorecard

SOIL SAMPLING TIPS

To obtain the best information, divide fields into representative zones (e.g. to reflect soil textures) and, ideally, sample and gather information:

- At least once in a crop rotation (e.g. after a first cereal)
- At the same time (warm, moist soils in the autumn are often best)
- At least a month after soil disturbance and/or organic material applications
- In a fixed area use what3words (what3words.com) to fix the centre of a site and sample up to 5 m away from it (in all directions)
- Increase sampling in problematic areas

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Improving **fungicide performance**



Jason Pole examines whether AHDB's fungicide efficacy work is making a difference to farmers.

For almost 30 years, a team has tested the efficacy of chemistry used to battle major crop diseases – the fungicide performance project.

The replicated trial series provides insight into the potential power of individual active ingredients. The results can be used to build fungicide programmes (tailored to local disease pressures) and provide evidence to help protect chemistry from resistance.

The wheat trial series is the oldest, going back to 1994, with the barley series beginning in 2002 and the oilseed rape series starting in 2006.

Value for money?

The AHDB Cereals & Oilseeds sector plan has scope to continue funding such independent product testing if it is likely to provide a good return on investment.

However, calculating such returns is a challenge for many research projects, including fungicide performance.

The project's information is just one part of a complex decision-making process. Often, results arrive at the farm indirectly, too (via an agronomist).

In 2021, AHDB commissioned an independent evaluation. The evaluators worked with farmers (150), all advised by independent agronomists, and identified a typical net yield gain worth £17.67 per ha associated with a change to a superior fungicide product.

With this figure in mind, it would only take a few thousand hectares treated with superior products to cover the cost of the project (approximately £125,500 per year).

Although the calculation did not include costs saved/incurred or reduced doses, it did give the sector council confidence to continue investment in the project.

Improving the project

As part of the evaluation, telephone interviews (17) identified ways to improve the project.

AHDB works closely with agronomists because of their role in developing practical field-level recommendations, and generally they feel well informed. Results are released at the AHDB Agronomy Conference each December to ensure agronomists have the latest data at hand to work with levy payers.

However, the review (conscious that agronomic advice often comes at a cost) stated the project is too disconnected from farmers and that AHDB must communicate directly with levy payers and focus on key changes and trends. In response, the sector plan pledges to make fungicide performance data even more accessible, and communicating what the trials do and don't do.

Trial overview

The team follows ground rules to ensure that they produce the most valuable data possible. For example, they compare new (pre-registration) active ingredients against established standards. In spring 2021, for example, this allowed the team to release data for fenpicoxamid – a new mode of action (quinone inside inhibitor) for cereal disease management.

Typically, the trials test single active ingredients. Although unlikely to reflect commercial practice, applying a product 'straight' or 'solo' is the easiest way to measure its efficacy. The trials use highly susceptible varieties in areas most likely to produce high pressure for the target disease(s).

Current disease targets

Wheat: septoria tritici, yellow rust, brown rust and fusarium and microdochium.

Barley: rhynchosporium, net blotch, ramularia, mildew, brown rust.

Oilseed rape: light leaf spot and phoma leaf spot.

The number of trials reflects the economic importance of the disease, with septoria tritici having the most trials.

For cereal and oilseed rape trials, treatments are applied once and twice, respectively. The frequency provides the simplest test of each active ingredient.

Four doses are used. This allows the creation of the classic 'dose-response' curves (see example in Figure 1), which show how much more disease control or yield uplift is associated with higher doses. It also reveals the relative performance between products.

For cereals, the doses are quarter, half, full and double the recommended label rate (the latter improves the 'fit' of curve, but is not published).

For oilseed rape, the doses are quarter, half, three-quarters and full (higher doses are not used to avoid growth regulatory effects).





Source: AHDB

Figure 1. Fungicide dose-response curves from AHDB trial data help farmers optimise the balance between increased dose rates and disease control and yield benefits

GET THE LATEST RESULTS

Dose-response curves and fungicide activity tables: ahdb.org.uk/fungicide-performance

Fungicide resistance information: ahdb.org.uk/frag

Fungicide programme guidance: ahdb.org.uk/fungicide-programmes

For a regional perspective, the fungicide performance team also presents at many AHDB events: ahdb.org.uk/events

Project scientific partners: ADAS, Harper Adams University, NIAB and SRUC.

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66 I use fungicide performance data to get the best blend between efficacy and cost... Lower rates are also beneficial from a resistance management standpoint – finding the optimum is a win-win situation

David Walston, Thriplow Farms near Cambridge, and grower member of the AHDB Cereals & Oilseeds sector council.

Three Monitor Farms join the network

Ana Reynolds provides an update on the community that connects like-minded farmers.

The 26 Monitor Farms across the UK have one aim: to improve business performance. However, the impact of the network stretches far beyond the hedges of the host farms. The local farming community also reaps the rewards.

Each farm opens its doors for regular meetings (summer farm walks and winter discussion groups) over its three-year tenure. It provides a welcoming and safe space to discuss challenges and solutions. No topic is off the cards, either – from mental health and succession, to cover crops and machinery policy, to grain markets and farming policy.

AHDB supports the farm hosts in numerous ways. We facilitate the meetings, track down the experts and promote the events. But we don't own the events – you do. They are all led by farmers, for farmers.

This summer, three farms joined the network, and the host farmers are keen to try something new.

Bingham Monitor Farm

Farm: Manor Farm in Bingham, Nottinghamshire.

Host: Joe Fisher (farm director), pictured above.

Rotation: 560 ha arable rotation, comprising winter wheat, oilseed rape, beans, quinoa and maize.

Joe wants to build a more resilient and diverse farm enterprise while striving to reduce environmental impacts.

Joe said: "As a regular at local Monitor Farm meetings, I've seen the group evolve and learn. I want to maintain margins, reduce inputs, meet environmental targets and work towards net zero."

Norwich Monitor Farm

Farm: Crown Point Estate in Norwich, Norfolk.

Host: Michael Balls (farm manager), pictured on cover.

Rotation: 1,200 ha arable operation, comprising winter wheat and barley, oilseed rape, spring oats, triticale, peas, potatoes and maize.

By not standing still, Michael aims to maintain the farm's financial margins. The farm's diversity is one of its strengths. It integrates livestock, grows mint and has recently added several ventures, including pick-your-own sunflowers, pumpkins and sweetcorn.

Michael said: "It is an exciting and challenging time for agriculture. I'm always keen to learn from other farmers and trial elements on the farm. Equally, I'm an open book and want to share what's worked and not worked so well."



Beverley Monitor Farm

Farm: Hall Farm in Beverley, East Yorkshire (part of Albanwise Farming).

Host: Harry Huddart (farm manager), pictured above.

Rotation: 2,000 ha arable rotation, comprising winter wheat and barley, oilseed rape, spring barley and beans, peas, forage maize and potatoes.

Harry recently joined the farm and is keen to learn from the local community. He has an ambition to build a profitable and future-proof business, resilient to rising costs and market volatility.

Harry said: "We want to share what we're doing and get new ideas to help us improve. The farm has the flexibility to trial and explore new practices to benefit our farm and the wider community."

Scotland

The Scottish Monitor Farm programme has a unique part in the network. In partnership with AHDB, the farms are managed by Quality Meat Scotland (QMS) and receive funding from the Scottish Government. There are nine Scottish Monitor Farms in the current (2022–26) phase.

Each farm works closely with farm staff, trusted advisers and the programme manager to establish the baseline technical, environmental and financial performance of the business (from which improvements are measured).

Network experiences

Each year, AHDB conducts an annual survey to get feedback on the Monitor Farm programme, with over 200 farmers responding in 2023.

Many farmers who attend the meetings are local (within 30 miles) and highly likely to recommend the meetings to others (on average, 8 out of 10, where 10 is very likely to recommend).

In general (based on free-text responses), farmers benefit from the meetings by:

Broadening knowledge

The evidence-based approach highlights new ways of working in commercial settings. The local relevance, coupled with thoughts from peers and experts, gives farmers the confidence to try new things.

Better decision-making

With cost of production and benchmarking performance at the heart of many discussions, the meetings develop the skills needed to review and improve farming businesses.

Sharing experiences

The open format provides many networking opportunities and helps tackle the isolated nature of farming.

Why people love Monitor Farms

- Farmer-led
- Locally relevant
- Independent
- Good farms, good people and good food

Six Monitor Farms finished the programme in 2023: Diss, Hale Village, Huggate, Loppington, Saltash and Vale of Belvoir.

See map on the back page to find your nearest farm. ahdb.org.uk/monitor-farms

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LEAN THINKING Saves Monitor Farm money

Jason Pole looks at the benefits of applying Lean principles on the farm.

As the old saying goes: "If you look after the pennies, the pounds look after themselves." With the continued squeeze on farm profitability, the pennies matter more than ever. It is one reason why several Monitor Farms have embraced Lean management principles.

What does 'Lean' mean?

Lean management stems from a Japanese philosophy called Kaizen, where the mantra is continued improvement and making relatively small changes that add up. The approach focuses on minimising waste and maximising product value (in any business).

Unsurprisingly, the philosophy chimes with monitor farmers, who have a strong focus on business improvement. In fact, several signed up for an AHDB-funded Lean consultation in the past year. These consultations build upon experiences in other sectors, especially horticulture and pork, where many businesses have already learned from Lean.

This is important. Lean has a long history (used since the early 20th century) with numerous examples of success. However, agriculture is unique, with many producers, numerous systems, a complex operating environment and no universal blueprint. Knowing the approach worked in other sectors was encouraging.

Ling and Lean

Richard Ling's farm (Rookery Farm) has been the Diss Monitor Farm since 2019 (ahdb.org.uk/farm-excellence/diss). The final meeting took place in the summer.

He put the 1,000 ha arable farm through a Lean review in autumn 2022.

The arable enterprise (the farm also has a beef finishing unit) includes wheat, oilseed rape and winter feed barley and spring malting barley. He farms on a range of soils, from sandy to heavy clay loams.

Lean provides an opportunity to step back and look at routines and processes in detail. The first step is to map every element and identify the 'waste' on the farm. Lean defines waste as anything that fails to add value, including wasted time, untapped skills and excessive transportation. To make sure nothing is missed, Lean encourages as many staff as possible to get involved.

There are a number of processes on any arable farm, so Richard focused on the part of his business where he felt there was potentially a lot of waste – drilling.

Drilling

Failing to get the crop drilled to plan can easily cost Richard's business tens of thousands of pounds. For example, only getting 75% of the arable crops drilled was estimated to cost around £42,000 per annum. FARM EXCELLENCE

To make drilling more efficient, every aspect of the process was put under the spotlight – from planning the rotation, to storing seed and getting it to the farm's three drills (a cultivator-disc drill and two tined direct drills).

The waste walk mapped sixteen key process steps and identified plenty of scope for improvement. Actions were identified and assigned to the best member of the team. Making sure that everything was ready for drilling in tight windows was deemed essential.

One of the first actions was to make it easier to prepare the drills. How-to videos were produced to make sure all necessary steps were carried out by the night before drilling, such as calibration and fuelling.

With multiple crops, varieties and seed sources (purchased and farm saved), the need for military precision of seed movement was identified. Numerous improvements have been put in place, including making sure seed bags are arranged in clear drilling order.

The aim is to keep the drill drilling.

Lessons were also learned for other similar farm operations, such as spray and fertiliser applications.

Richard said: "Naturally, there is tendency to look for big improvements. However, Lean makes you think small. It is the 1% gains here and there that often make the biggest difference."

Simple measures matter

Although business-specific, Lean reviews on one farm can easily inspire changes on another. It is just about making processes as efficient as possible.

And simple changes matter. Lean reviews often find that resources are not where they need to be. One of several Lean case studies on the AHDB website highlights how shadow boards saved a pig farmer over £1,000 per year. Staff were often on the hunt for the right spanner for the job. In response to a Lean review, the farmer installed shadow boards alongside each piece of equipment to highlight missing tools.

A complete tool board ensures that staff do not waste time getting to the real task, such as maintaining equipment. Lean is about reducing hassle in the job, not adding to it.

Lean resources

The AHDB website features top tips and guidance to help you learn to Lean: ahdb.org.uk/lean

For further information, contact: Jason Pole Technical Content Manager jason.pole@ahdb.org.uk

A new home for Strategic Cereal Farm East

AHDB's home farm for strategic research in the East has moved from Suffolk to Norfolk. Joe Martlew explains.



© Gary Naylor Photography

In 2017, we launched our first Strategic Cereal Farm. The main point of difference between a Strategic and Monitor Farm is their lifespan, with the former having a six-year tenure (compared with three for the latter). It provides greater freedom for strategic farmers to tackle longer-term challenges and run farm-scale demonstrations and trials.

The initial Strategic Cereal Farm – in the East (Suffolk) – set the pace, with similar farms popping up over the last six years in the South (Hampshire), West (Warwickshire) and North (North Yorkshire) of England, in addition to Scotland (Fife). This summer, the Strategic Cereal Farm East baton passed to a Norfolk farm.

Strategic Cereal Farm East (Suffolk)

Duration: 2017-23.

Farm name: E.J. Barker & Sons.

Host name(s): Brian (pictured left) and Patrick Barker (cousins).

Farm size: 545 ha.

Farm rotation: 12-year arable rotation, incorporating winter wheat for feed, herbage rye-grass and break crops of spring barley, beans, oilseed rape and linseed.

Main soil type: heavy (boulder) clay.

A family farm partnership and contracting business since 1957, the Barkers approach farming with an infectious passion and the mantra: innovation, education and collaboration.

They obsess about the details and care about the environment, considering the whole-farm ecosystem and its place in the wider landscape.

A focus on the environment doesn't mean a sacrifice to the farm's bottom line, either. Through constant innovation, including the use of trials, the team has slashed production costs by driving down artificial inputs and maintained average yields.

Main trials

Cover crops and water quality (2019–22): This trial examined the effect of cover crops on soil quality and nutrients (compared with plough and stubble treatments). It showed that well-established cover crops reduced drainage water nitrate concentrations to far below 50 mg/l. However, a negative effect on subsequent cash crops was occasionally detected, especially when establishment conditions were poor.

Managed lower (fungicide) inputs (2019–23): AHDB fungicide performance data was used to build lower-cost winter wheat treatment programmes. The trials included untreated and seven timing treatments (combinations of T1, T2 and T3). The harvest 2023 trials used a single variety with a strong set of disease ratings – earlier trials (low disease pressure seasons) showed that varieties with good disease resistance and a low-input regime produced the best net margins.

Flowering strips (2020–23): This trial used perennial flower strips, both around and within the field, to determine the impact on beneficial insect and pest populations. It identified a large variation in the diversity, distribution and number of invertebrate species. No clear evidence of in-field impacts of strips on invertebrates was identified, and grass-weed ingress from flowering margins was noted. However, the mission is to boost biodiversity across the farm, which now buzzes with wildlife – over 20 species of butterfly were recorded in the margins alone.

Marginal land (2022–23): An analysis of the farm's long-term data sets (covering rotation, yield, soil, drainage maps, satellite imagery and costings) aimed to identify the land most suited to stewardship schemes. This revealed a large variation in crop productivity, although even the poorer areas generally delivered a profit. Grain nutrient analysis results also identified lower-yielding areas that would benefit from adjusted nitrogen rates.

As an industry, we're too reliant on pesticides. With costs and the environment in mind, I hope to combine methods to cut down on spray requirements

Strategic Cereal Farm East (Norfolk)

Duration: 2023-29.

Farm name: Morley Farms.

Host name: David Jones (pictured right).

Farm size: 750 ha (700 ha cropped).

Main soil type: sandy loam and sandy clay loams.

Farm rotation: wheat, malting barley, oilseed rape, sugar beet and pulses.

The son of a farming contractor and a teacher, David graduated from Harper Adams in 1994 with a HND in agriculture. He worked on farms in the UK, Australia and New Zealand before taking on the farm manager role at The Morley Agricultural Foundation (TMAF) in 2008.

David is no stranger to innovation. He manages land steeped in research history. Formed in 2003, TMAF absorbed the Morley Research Centre (formerly known as the Norfolk Agricultural Station) and continues to invest in agricultural trials. Its website features a stimulating research archive, including the first experiments from 'Little Snoring' (Station Farm) in 1908.

With around 20 ha available for trials and demonstrations, the site is a perfect fit for a Strategic Cereal Farm. Although the commercial farm business does not plan to move from its conventional roots, David wants to explore farming in an environmentally sympathetic way that delivers on yields. In particular, he wants to investigate integrated pest management (IPM), including the cultural control of weeds, to reduce inputs.

David said: "As an industry, we're too reliant on pesticides. With costs and the environment in mind, I hope to combine methods to cut down on spray requirements."

In November, a series of webinars will take place on Tuesdays to showcase results from the Strategic Cereal Farms, with a focus on the East on 14 November.

For the latest information, visit: ahdb.org.uk/strategic-cereal-farms

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Meet your ENGAGEMENT TEAM

With many fresh faces at AHDB, find out about your regional representative (your first port of call at AHDB).

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	11031
Joined	2023
Strength	Getting
Email	Getting to the crux of an issue
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BASIS and FACTS qualified, Jason has a Master of Research degree and extensive farming experience.

Twenty years of family farming and agronomy have helped him to think on his feet. A ski-racing coach, he loves quality food

and time with the family.

TEAM ROLE

- Facilitate the Farm Excellence programme*
- Run events for farmers
- Connect research with on-farm action
- Promote AHDB activity and resources
- Collaborate with industry •

Listen to levy payers to direct AHDB investment •

*The Farm Excellence programme includes Monitor Farms, Strategic Cereal Farms and Arable Business Groups.

KNOWLEDGE TRANSFER TEAM

Joe Martlew – Senior Knowledge Transfer Manager Henny Lowth - Knowledge Transfer Manager Matthew Brearley – Knowledge Transfer Officer Jason Pole - Technical Content Manager

FARMEXCELLENCE Find your nearest **Strategic or Monitor Farm**













James Turner and Henry Scholefield

Jonathan Fryatt



North

Ripon







Wainfleet Gary and Debbie Willoughby



Joe Fisher



Andrew and Sam Melton

Coming soon Wolverhampton Monitor Farm



🕈 Strategic Farm



Michael Balls



Jack Hopkins, Rob Beaumont, Martin Carr and Adam Lewis



Andrew Walters



Cambridge Matt Redman



David Jones

Vale of Glamorgan **Richard Anthony**

Newbury **Robert Waterston**







Monitor Farm Scotland Managed in partnership with QMS

- A. Banff and Buchan F. East Lothian
- B. Speyside
- C. Deeside
- D. Stirlingshire
- E. Argyll
- G. South Ayrshire H. Roxburghshire
- I. Dumfries



*Approximate locations shown

To find your nearest farm meeting, visit ahdb.org.uk/cereals-oilseeds-ke-winter-events

