



“It’s been a real privilege to work with new actives at the start of their development”
– Mike Hambly.

Technical Learning together

Together we stand

Industry collaboration and community are two key pinnacles upon which the Real Results Circle project rests. CPM finds out how this initiative – now five years in the running – is taking agriculture forward.

By Melanie Jenkins

By working closely to unite farmers with industry experts and manufacturers the Real Results Circle has shown how a community spirit can help farming advance.

Over the past five years it has given farmers access to scientifically accurate on-farm trials and statistically valid results, generating valuable insights so crop performance can be moved forwards.

The goal has been to overcome the issues that erode profits, by bringing together experts and industry specialists, and to generate real results through real world trials, explains Polly Lawman, market approach manager at BASF.

Typical of the 50-strong team of farmers engaged in the Real Results Circle trials and other initiatives each year are Mike Hambly of Westcott Farm Partnership in Cornwall, who has seen significant results in cereals and OSR; Antony Pearce of Stoke Farm in Buckinghamshire, who saw fungicide use

bolster wheat yields; and John Charles-Jones of Woodborough Park near Nottingham, who is trialling a fungicide in beans.

The concept came from work done by Bram Govaerts, a pioneering cereals researcher who now heads up the world-renowned International Maize and Wheat Improvement Center (CIMMYT) in Mexico. He believed on-farm trials using a farmer’s own kit and management regime, within the vagaries of the season, on their land and local climate, was key.

Grower certainty

“The variation in soil types, cultivation techniques and varieties all mean that second-hand data doesn’t always reflect how chemistry will perform on every farm, so this technique allows growers greater certainty on how it performs for them,” says Polly.

Five years later the Real Results legacy shows the power of the collective. Having started with fifty cereal fungicide trials, the programme now includes work in pulses, variable rate applications, herbicides, OSR, potatoes and N management (see panels).

The community aspect of Real Results has been key, with farmers benefitting from meetings and events, allowing them to network and learn from other growers from across the country. “For many, this is the most valuable part of the Real Results experience,” notes Polly.

The first trials tested cereal fungicides against farm standards, including Librax (metconazole + fluxapyroxad) and Adexar (epoxiconazole + fluxapyroxad) in

2017/18. Advance trials of Revystar XE (fluxapyroxad + mefentrifluconazole) were done in wheat in 2019-21, and in barley in 2020 and 2021. Over the past two years some Real Results farmers also evaluated novel herbicide Luximo (cinmethylin).

Crop assessments use Agronomics, a project part-funded by Innovate UK, led by ADAS, and involving BASF. It is the only methodology to use statistical analysis on a tramline scale, explains Murielle Moille, cereal fungicide campaign manager.

“Agronomics ensures unique scientific



Data gathered from trials on his own farm have proven particularly valuable for Buckinghamshire farmer Antony Pearce.

Data-driven farming

Launched in the UK in 2020, xarvio Field Manager has been used on over 200,000ha on 3000-plus farms, and was introduced to the Real Results Circle for the 2020/21 season to show its ability to aid crop production decisions through crop modelling and precision techniques.

Trials run by 11 farmers explored how digital agriculture could help, explains xarvio implementation lead Luke Pollard. "It was an opportunity for them to see how digital technology can work alongside their machinery and support innovative chemistry."

One trial involved variable rate applications

(VRAs) of wheat fungicides and PGRs at T1 and T2, with xarvio varying rates across a field according to biomass satellite imagery.

The second trial, on four farms, used agronomic models within xarvio to analyse crop, field and weather measurements to determine ideal wheat fungicide spray timings.

The final trial, on two farms, saw xarvio create a VRA map to apply Caryx growth regulator to OSR according to biomass satellite imagery.

"The trials have helped Real Results growers see how technology can help them maintain or even increase productivity, while doing so sustainably," says Luke.



Practical results to drive on-farm decisions has been the big benefit of Real Results trials run on Mike Hambly's farm in Cornwall.

credibility to the design, management and statistical analysis of field scale trials, giving us complete confidence in the statistical integrity of the results," she says. "By testing new products on real farms, in real conditions, we have generated a wealth of data."

Dedicated farmer networks have been developed around the UK to support the trials. "We know conditions differ across the country and wanted to ensure representation across all regions."

So what have Real Results farmers discovered?

Mike Hambly has noticed dramatic results from his trial work in Cornwall and is keen to see how these stack up when all the data has been analysed. In the 2020/21 season his trials involved a continuation of previous work with Revystar XE on winter barley, rather than wheat, and applying the growth regulator Caryx (metconazole + mepiquat-chloride) to oilseed rape (OSR).

His previous trial work with Revystar XE showed how important dose rate is for Septoria control. The winter barley work

is of particular interest, given the loss of chlorothalonil for ramularia control. "We tried it on a new variety, LG Flynn, and it was entered into YEN, with trial results due soon. It was a low disease year, but trying it is all part of the process and is something we feel fortunate to be able to do with BASF."

Remote sensing

The OSR trial was completely different, involving remote sensing to look at growth habit in the spring and used xarvio (see panel) to set variable rate applications (VRA) of Caryx, with alternate tramlines comparing Caryx with the farm standard.

"There was a very marked difference and a definite clear visual impact from the Caryx treated areas," explains Mike. "You could see it from the ground and when we flew the drone over it was even more pronounced." Detailed results are awaited — but his expectation levels are high.

"It's been a real privilege to work with new actives at the start of their development and I have gained experience earlier than

I would have done otherwise. But on top of this, having access to the expertise within BASF has been beneficial and interesting."

Speaking with other farmers in the Real Results Circle has also been a highlight. "There's a real benefit to comparing notes and hearing feedback, especially from farmers in Ireland whose climate is similar to ours in the South West."

At Stoke Farm in Buckinghamshire Antony Pearce has been involved with the Real Results Circle since 2017. Half of his home farm's 300ha was recently converted to low input regenerative practices, while the other half is run conventionally. "My interest is in soil health and I am looking to improve below ground fungal activity."

In his 2020/21 wheat trial on low input land a full micronutrition and biostimulant package, without fungicide, yielded 7.5t/ha. The same programme, plus Revystar XE, did 9.5t/ha. "Disease levels were low, but there was a clear trend for the Revystar XE strips to have more green leaf area on leaves two to four than in the untreated strips," says Murielle.

"We're still working on the trial and pushing our regenerative agriculture. We'll take the lessons learnt and spread them across a wider area."

When Revystar XE was launched Antony benefited from comparing experiences with other Real Results farmers. "You get to meet up and share findings in person and it's given us the opportunity to measure ourselves against others and also to look more at active ingredient persistency in soils."

He even has his own YouTube channel. "I like to share my results and I find a lot of people do trials. We are entering a new era of farming, which is going to be a lot more challenging, and my business model has always been collaborative through a joint venture. I find the YouTube ▶

Pushing pulse yields together

Uniting the pea and bean community to share and expand its knowledge base are key to BASF's pulses initiative. "We've wanted to support growers to further their knowledge sharing," explains campaign manager Jane Kitchen.

The first aspect was renewing sponsorship of the Yield Enhancement Networks run by ADAS and PGRO, to benchmark production and help farmers identify yield driving factors.

"We are aiming to be able to provide a knowledge sharing platform that helps shape best practice advice, which is why the YEN initiative is really important," says Jane.

Fourteen farmers were sponsored through the 2021 pea and bean YENs.

Further activity included a series of Signum Agronomics trials, three PGRO webinars, eight Pulse Check farmer blog posts and a pulse survey, capturing insight from 145 producers.

"We have really started to get more insight into the mindset behind growing the crops, and through the knowledge sharing we can recognise what works well for growers," says Jane. "We are keen to develop this further to see how different systems and approaches benefit the crops."

A second pulses survey for 2022 is now live at www.agricentre.basf.co.uk/real-results/pulses

Perfecting Potatoes Together

The collaborative approach is coming to the potato sector through the Perfecting Potatoes Together initiative, with trials in 2022 so members can share knowledge to develop healthier potato crops.

Potato hubs will be established in Scotland, and the East and West of England, with growers invited to view product trials throughout the year.

Over the next five years BASF hopes to launch seven new products. Growers will be able to see how these work, with a monthly

newsletter, local events, webinars and information on the most sustainable practices, says Sophia Sutherland, BASF campaign manager.

"We are committed to helping the potato industry by unifying growers with experts who understand the issues being faced, so we can solve them together. In the future we want to be able to emulate what we do in other crops, such as cereals, facilitating knowledge exchange, providing expertise and offering more regional support on different pests and diseases."



Potato hubs will showcase the latest technical developments across the UK.

► audience quite collaborative.

"One of the great things about the Real Results Circle is having direct access to the people who are responsible for the development of products, so you can give them direct feedback."

Near Nottingham John Charles-Jones has worked with BASF as part of the ADAS/PGRO Bean Yield Enhancement Network (YEN), in a bid to further improve his understanding of how best to grow the crop and to see how he stacks up against his peers.

Despite challenging topography and clay soils he has had good success growing

spring beans. "Our margin from spring beans compared very favourably with our winter wheat margin. I don't think we do wheat badly, but our spring beans we do very well," explains John. "This is through attention to detail and timeliness — we aren't frightened to spend money on them. But no one is more surprised at the good run we've had with beans than we are."

Though he has been involved with YEN for three years, it's only the past year that he has worked with BASF. "They gave me a fungicide, Signum (boscalid + pyraclostrobin), to try on our YEN field."

Taking detailed recordings has been

one of the most valuable aspects of his involvement with YEN. A prime example is plant populations. Drilling rates were always recorded, but never the final plant population. Since doing checks he's found the past two years have been spot on.

The YEN will also look at plant biomass, drilling date and moisture levels through the year to determine potential yield, which John can benchmark his actual yield against. "Yield is important, but we are driven by margin. However, the emphasis now should be on net margin and moving towards direct drilling."

Typical of many Real Results Circle farmers John is hoping he can continue the work, feeling there is more to be gained from further trials. "When you get a lot of historical information, and run trials over a number of years, that is when the information becomes really useful."

Indeed, Real Results continues to grow and has exciting plans. "We will be continuing our efforts to unite growers and experts and look forward to doing this through webinars, newsletters and face to face events," says Polly. "We will also be continuing with our trials across our crop protection, N management and digital portfolios." ■

Better nitrogen management

Limus, a urease inhibitor that reduces ammonia losses from urea-based fertilisers, has been included in two series of Real Results Circle trials (CPM Dec 2021), with independent auditing by ADAS.

Nine Limus Clear Agronomics trials were conducted over three years to demonstrate the average yield increase in winter wheat compared to untreated liquid fertiliser, explains Jane. Another nine trials of Limus protected urea in winter wheat and winter barley in 2020

showed equivalent yield and protein scores to ammonium nitrate. A further six trials were conducted in 2021.

"ADAS brings independence and robust science through assessment and analysis," says Susie Roques, research consultant at ADAS. "Farmers involved year-on-year are making better choices of trial fields and have learnt the importance of replicating treatments. Being able to bring everybody's results together is something special."

Championing OSR Together

Giving growers confidence to grow OSR again, profitably, is the aim of the Champion OSR Together project.

Cabbage stem flea beetle (CSFB) challenges left many producers at a crossroads, unsure whether to continue with the crop. "By working with AHDB and NIAB we want to find technical solutions," says Sophia.

"Any grower can sign up to the campaign, which involves conferences, demo days and events. It's about bringing the OSR growing community together, to share its learning,

whether from growers, BASF experts or external professionals."

Five growers have already shared their OSR journeys through Champion OSR Together, exploring their challenges with the weather, weeds, pests and diseases, as well as growing a profitable crop.

The economics are important. "OSR is still the most profitable break crop when it grows well," says Sophia. "We are working with UK crushers to look at its value as a break crop and how it can be grown sustainably."



Making OSR a profitable barn-filler is the goal of the latest collaborative project.



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