

AGRONOMY

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Yellow rust piles on the pressure at 3D Thinking site

Across the UK, 2020 winter wheat crops were pressured with yellow rust following a season of mixed weather. This was particularly evident in the Frontier 3D Thinking site at Haywold, Yorkshire, where trials provided valuable data on tolerance to this key disease.

“Although this year the average yields at Haywold appear to surpass the average tonnage across the rest of the UK, it’s important to note that it is a very fertile, high-yielding site with a long growing season, so we always expect to see high yields. In fact, it was the only Frontier 3D Thinking site in 2020 to maintain its usual yield levels,” explains Christine Lilly, Frontier research and technical support manager.

“Yield performance has been consistent with previous years, with varieties such as SY Insitor, RGT Saki, RGT Gravity, Gleam, KWS Colosseum and KWS Kerrin all yielding well.”

However, Christine notes several of these varieties are very susceptible to disease, with septoria tritici usually presenting the biggest issue, but this season was dominated by yellow rust.

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"The weather patterns from early establishment through the growing season meant we saw unusually high cases of yellow rust, so we were able to truly see how varieties coped under disease pressure and the value of a targeted fungicide programme."

Yellow rust

She explains the disease was present from February through to July, with higher levels than previously seen at the site.



"Ordinarily you would expect to see infection on the leaves, but we saw disease present on the ear of some varieties, even when a robust fungicide programme had been applied.

"The magnitude of disease presence across the site is most likely down to weather conditions and an increased number of susceptible varieties, including some where yellow rust had not been widespread in the past, such as KWS Extase.

"So, as we move into the new season, we can reflect upon this season's results."

Lessons learnt for 2021

"As can be seen from the graph below, those varieties that gave high responses to fungicides in 2020 included KWS Kerrin, KWS Kinetic, Gleam, Shabras, RGT Wolverine (Europe's first BYDV-resistant variety), KWS Zyatt and Skyfall," notes Christine.

"These should be varieties that are monitored closely for onset of yellow rust and may require treatment in early spring, typically with a triazole."

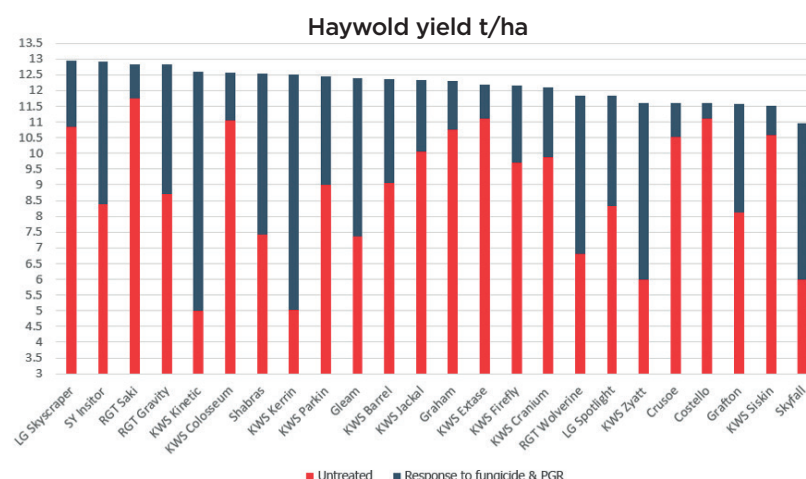
It is important to check product labels for the earliest application timing, she adds, and notes that 2021 will be the last season for epoxiconazole use - a very rust active triazole.

"This means yellow rust control will become more challenging in future seasons," she continues.

"Weather patterns from early establishment through the growing season meant we saw unusually high cases of yellow rust."

However, at the other end of the spectrum some varieties were much less responsive to fungicides.

"These included KWS Colosseum, RGT Saki, Graham, KWS Extase and Costello, and are varieties which provide more flexibility in spray timings but still require a decent programme to get the optimum returns. Observations from other trials showed that follow-up fungicides needed to be prompt, as long gaps allowed fresh rust infection to develop. This is worth considering when planning timings next season."



Yield responses to fungicide programme at Haywold 3D Thinking site

Christine concludes, "2020 was challenging for all sorts of reasons; however, it did provide us with a much-increased database on yellow rust susceptibility. This data has highlighted the value of a comprehensive fungicide regime for supporting yield in many of our key varieties and will enable us to fine-tune decision-making for 2021."

Start thinking Countryside Stewardship



Jim Egan

Integrated environmental management is high on the industry's priority list and, although it may be policy driven, Kings technical advisor Jim Egan says measures must be implemented on-farm to aid profit.

"Between 3 to 7% of ground on most lowland farms is difficult or unproductive and therefore isn't returning a profit," says Jim.

"Regardless of policy or agri-environment schemes, environmental measures can help make money on-farm and are currently underutilised. They're also a vital component in maintaining the fabric of the British countryside and contributing to how farming can help maintain our wildlife and protect the environment."

"What's important is that decisions are made based on the value of that measure to the farm and your business, not with stewardship or policy at the forefront of your mind."

He details some simple steps, which may take some time and thought, but if progressed will make a positive impact on the farm business bottom line.

"What's important is that decisions are made based on the value of that measure to the farm and your business, not with stewardship or policy at the forefront of your mind - only then will they be truly beneficial."

"BPS reductions are real, and this income won't be directly replaced," Jim reiterates.

"The new Environment Land Management scheme (ELMs) doesn't start until 2024, so think Countryside Stewardship. The application process is not complicated but you need to take time planning what to apply for, so why not make it part of your to-do list this autumn?"

1 Be brutal when assessing the land

Identify unproductive and difficult land across the farm - but for this to be effective it needs to be an honest exercise. Tools such as MySOYL show which fields or parts of fields are continually underperforming, measured by output or profitability, and areas on the farm which are not straightforward to farm.

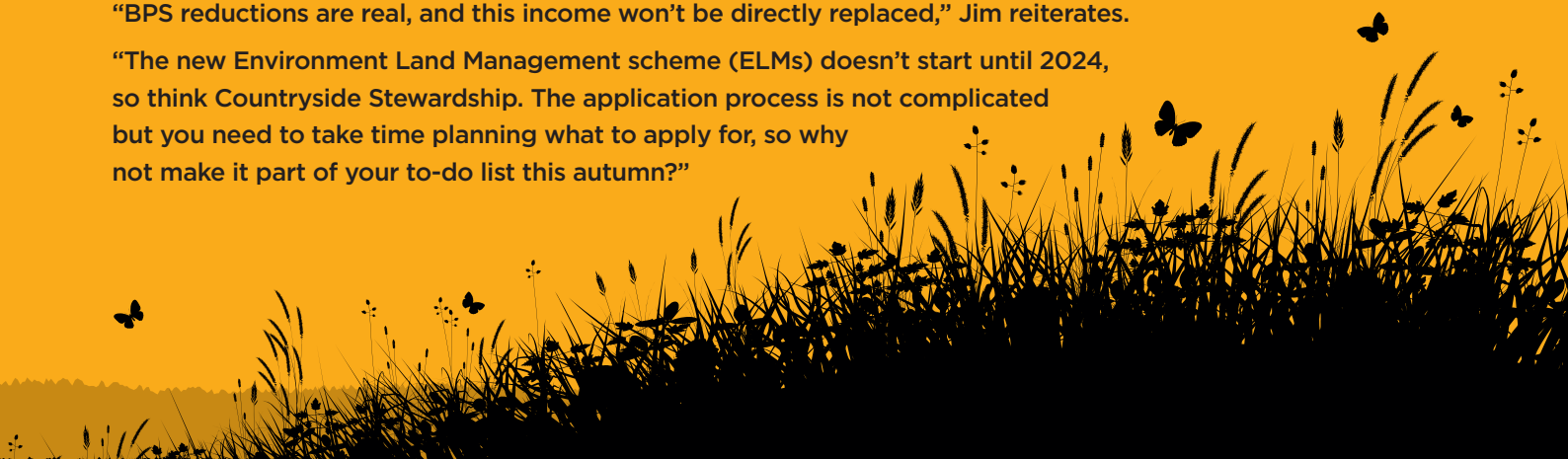
2 List your options

Once unproductive areas are identified, make a list of the management that land could benefit from, such as drilling a headland mix for insects or creating a flower rich habitat in a section of the farm which is otherwise inaccessible.

New measures can also be used to help the farm rotation. Fields with problematic grassweed issues may benefit from a period in a grass or herb rich ley, which will help long-term weed control as well as improving soil health, benefitting future crops. You may not immediately see the financial value in this approach but, add in financial support from Countryside Stewardship and it might just stack up.

3 Utilise financial support

The final step is identifying what financial support is available and how that will complement the measures you want to introduce. The Kings team, along with your agronomist, is here to help with seeking which environmental scheme would suit your business and can support in application of the measures in the short and long-term.



Good practice herbicide use in autumn crops



Agriculture is currently facing several significant challenges, and protecting water is one of our key responsibilities to ensure we maintain the long-term availability of crop protection products.

“We have several key active ingredients under the spotlight, including metazachlor, quinmerac, propyzamide, carbetamide, and metaldehyde, which is now under revocation, last legal use 31st March 2022,” says Paul Fogg, Frontier crop production technical lead.

“While a huge amount has been achieved through the Voluntary Initiative and specific stewardship campaigns, such as ‘Get Pelletwise!’ and ‘Metazachlor Matters’, when it comes to pesticide concentrations in raw drinking water supplies, the compliance picture still represents a challenge.

“The industry can ill afford to lose any more active ingredients. The answer lies in driving innovation, developing novel strategies, providing robust evidence, and accepting that we can grow food and manage crops differently,” says Paul.

Top tips for continued responsible herbicide use:

- Check if you are farming in a Drinking Water Protected Area (DrWPA) and associated Safeguard Zone on www.environment.data.gov.uk/farmers
- Take care when filling and handling pesticides to avoid the risk of ‘point source’ contamination
- Understand the local risk factors such as soil type and condition, slope, drainage systems and weather forecast before applying herbicides this autumn. Strategically placed buffer strips and stewardship margins can help mitigate the impact of surface run-off and drift
- Mitigate the risk of drift by taking extra care near water courses, using low drift nozzles and adjuvants, as well as keeping spray booms low and reducing forward speeds
- Clean sprayers in the field or on purpose-built pesticide handling areas and dispose of all water and washings responsibly
- Proactively engage with catchment specific initiatives aimed at reducing pesticide losses from fields and farmyards



Innovation focus: Inter-row hoeing in winter wheat – how wide can you go?

Inter-row hoeing has been a common tool for weed control in root and veg crops, but, as Frontier national trials

manager Andy Hartley explains, advancements in mechanisation coupled with autosteer technology are ensuring it is a method which is gaining momentum in cereal crops.

“Due to narrow row widths in cereals, it has been a bigger challenge to utilise inter-row hoeing without damaging the crop,” he says.

“However, manufacturers, such as Horsch, have altered and improved drills and coulters to make this a novel solution to complement current herbicide programmes.

“Progressions in technology through drill design now allow more room for crop and root development. Drill widths vary in size, ranging from 12.5 to 25cm and

beyond, so there remains a debate as to how wide you can go with cereals, but the wider coulters do allow inter-row hoeing as a more realistic option.”

Andy notes this mechanical weeding technique could support the long-term challenge facing growers.

“The industry is continuing to lose actives and chemistry options due to resistance and legislation, and there is a drive to a more hybrid take on weed control, so we need to offer alternative solutions.

“At Frontier, we’re looking to see how hoes and herbicides can be packaged as an integrated way to manage spring weed control. This season we’re working with Horsch at our 3D Thinking site in Lincolnshire to investigate the timings, soil conditions, frequency and longevity as a solution, as well as impacts to crop quality and yield. We look forward to updating our customers on the results in autumn 2021.”

Lupins and soya – viable alternatives to OSR?

The increasing difficulties with OSR in recent years have led to growers seeking a sustainable, profitable alternative, but this hasn't come without its challenges. However, Rob Nightingale, Frontier crop production specialist, says lupins and soya could be the solution.

"There are now a number of viable end market options for these alternative proteins," he explains.

"Frontier is working with partners, such as AB Connect, to generate alternative, sustainable protein markets to create a full supply chain. This connection with the end buyer means we create the expectation of what is possible in the field, where crops can be grown and how this can be maintained long-term, creating a viable solution for our customers."

"Historically, peas and beans have been the 'go-to' break crop, but lupins and soya are slowly increasing in popularity."



Trials have shown lupins to be a viable break-crop alternative



Rob Nightingale, Frontier crop production specialist

He says this means thoughts should turn to the other consideration – can I grow the crop?

"Historically, peas and beans have been the 'go-to' break crop, but lupins and soya are slowly increasing in popularity, with several trials across the UK investigating optimum growing conditions and the required herbicide programmes.

"This season, Frontier grew 500 acres of lupins in sites across the south of England, running extensive herbicide programmes to see how best to get the crop established, and have been particularly encouraged with performance. It looks a practical option for growers in 2021, and likewise we're in the early stages of soya trials, so watch this space on how it could be a part of your rotation in the coming years."

Considerations for growing lupins in 2021:

- ✓ Soil pH of less than 7.5
- ✓ Drilling window around the first week of April
- ✓ Harvest in early to mid-September



Expert focus: Jim Egan, Kings technical advisor

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I haven't had the 'traditional' route to my role at Kings - agriculture is my second profession, having spent the first 20 years of my working life underground as a mining engineer.

However, since I entered the farming sector in 2000, my agricultural career has been tailored around stewardship, the environment and supporting farmers working in conjunction with British countryside.

Prior to joining Frontier in 2019 as part of the Kings advisory team, I worked for environmentally-focused, advice-based charities, including the Farming and Wildlife Advisory Group and the Game and Wildlife Conservation Trust - Allerton Project. I was also the longest serving member of DEFRA's Environmental Stakeholder group, where I provided practical and

pragmatic advice to the group on how initiatives and schemes could be implemented on-farm, acting as the 'farmer's voice'.

This industry experience over the last 20 years enables me to bring first-hand knowledge to Kings customers, so that together we can recognise environmental opportunities on your farm to improve the business both physically and financially.

Working for Kings, I'm there to offer a different pair of eyes to see what in the farm business is being underutilised, and ultimately could lead to financial gains in the future. My customers will always receive simple, practical advice, accompanied by continued support as new methods, crop rotations or varieties are introduced and implemented.”

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Find a more flexible approach to finance with Oxbury Bank

Oxbury ///
The Agricultural Bank

Oxbury is a new specialist agricultural bank offering a range of financial services specifically designed for British farmers. The bank's flagship product is Oxbury Farm Credit, an exclusive input finance facility that provides farmers with a flexible, convenient and financially competitive alternative to a bank overdraft or trade finance.

Frontier is proud to work in partnership with Oxbury Bank which launches this winter. Talk to your Frontier farm trader or agronomist to see how Oxbury Bank could support your business in 2021 and beyond.

Frontier has a UK-wide team of 130 BASIS qualified agronomists, including 44 Diploma holders, working with growers to deliver fully integrated agronomy advice on all aspects of profitable and sustainable crop production. To find out more about Frontier's agronomy services in your area email agronomy@frontier.co.uk, call 0800 227 445 or visit www.frontierag.co.uk

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