

“Disease affects yield, and yield is the driver in profit — so why wouldn't you want to protect that?”

# Strategies for success

## Technical Cereal disease control

As growers grapple for cereal disease control solutions, *CPM* takes a look at some of the key issues and challenges highlighted in a recent *CPM/BASF* survey.

By Charlotte Cunningham

**As disease pressure evolves against a shrinking fungicide armoury, having a robust control programme — that incorporates both chemical and cultural options — is key.**

But with many options offering a variable response — what's the best way to keep on top of disease on farm?

Before looking for the solutions, it's essential to understand the problems, says Andrew Jones, marketing manager at BASF.

In a recent survey carried out by *CPM* and BASF, 40% of respondents revealed that septoria is their most challenging wheat disease on farm, followed closely by yellow rust (15%).

Looking at barley, ramularia claimed the top spot, with rhynchosporium closely behind.

“I think it's really important not to confuse disease challenges with disease incidences,” says BASF's Andy Jones.

“Current programmes offer a good level of control, though things like the increasing prevalence of yellow rust are certainly areas to watch.

“Looking at something like eyespot, the incidences are likely to be higher, but again, we've got good control options.”

Jock Willmott, partner at Ceres Rural agrees with the fact that control options are available but has concerns over their longevity. “A big worry for me is that while materials coming forward are stronger on septoria, they're not so active on rust. This teamed with yellow rust varietal resistance creaking is definitely a cause for concern.”

### Obvious concern

For Yorks grower, Julian Thirsk, the loss of chlorothalonil is concerning in terms of disease pressure going forward. “Septoria is an obvious concern for us and yellow rust presence is increasing. In barley, I don't suffer too badly with disease as I tend to grow hybrids, but I'm really not sure what I'm going to replace CTL with at the moment.”

In terms of barley, Andy says products like Revystar XE (fluxapyroxad+ mefenftrifluconazole) provide useful activity on ramularia. “Though there are still tools in the toolbox, what I would stress here is that we can't be complacent about both disease and resistance risk. Therefore, it's essential to plan fungicide investment and applications to ensure growers get optimum

disease control, without compromising chemical efficacy.”

This importance of an effective cereal fungicide programme was reflected in the survey with 72% stating that their attitude towards risk was that there's more to lose in yield than gain in reduced costs, so plan on a robust fungicide programme covering all key timings.

In comparison, 14% said they wait to see what diseases develop and are prepared to take the risk of missing the ideal timing, while 5% stated they keep fungicide costs low and are prepared to lose some yield in some seasons. “Once disease sets it, it's



*It's important not to confuse disease challenges with disease incidences, says Andy Jones.*



*Jock Wilmott reckons it'll be a long time before technology replaces in-person disease monitoring.*

very difficult to chase it and get on top of it," says Andy. "I think it's reassuring to see that the general consensus is that there's more value seen in rounding up, rather than rounding down — so to speak.

Discussing the loss of CTL again, Julian says this year might be a big learning curve for a lot of growers. "We always prefer to protect against disease rather than react to it, and when CTL was around, we always put that in as a multi-site element to protect everything else. I'm not entirely sure what we'll do this year. Is it worth using folpet? Or should I just increase the rate of new chemistry? I think there's going to be a lot of fine-tuning and tweaking programmes this year."

Jock says that perhaps more importantly than just implementing a robust programme is starting off with varieties that have good genetic resistance. "If you're picking varieties that are robust against key diseases, like septoria, then it all helps with that overall goal of keeping the crop as green as possible for as long as possible."

Julian agrees: "If you want to reduce your costs, there's always the case for looking at varietal resistance as cleaner types may help with reducing chemistry rates — or just giving you the flexibility to spray them last. But really, for me, it's about trying to match spend to disease pressure.

The issue with a more preventative strategy, as opposed to a reactive one, is the chemical resistance issue. However, Jock says this can be alleviated by ensuring applications that are made are as effective as possible. "If you're looking to cut costs, you may consider cutting your rate, but if you stick with the suggested dosage — teamed with an appropriate mixture of actives — you're more likely to get better control overall, which hopefully mitigates the resistance risk and delivers the yield response we're all after."

While it may be okay to wait and see what develops in some situations, it's important to be realistic about this, he adds. "With yellow rust, for example, you can take a pragmatic approach, but you can't do that with a disease like septoria. It's essential to use your knowledge of the farm, its disease history, and varietal choice to guide your decision making when it comes to cereal fungicide programmes."

With this in mind, perhaps rather unsurprisingly, 61% said that disease pressure had an extensive influence on fungicide investment, while 47% also noted that crop potential was a very important factor in decision making.

The survey also showed that overall, end market and grain price were found to have more of a moderate influence over spend, while 48% said fuel price had a limited influence. "Obviously, disease pressure is the big thing here and I think a lot of growers would be of the mindset that if they need to spend, they'll spend in order to protect their crop — and subsequent yield," says Andy.

"Thinking about crop potential, one of the key things to stress here is that different sowing dates don't mean less potential. I think sometimes it's easy to fall into the trap that the crop potential is lower and so the inclination to invest is lower.

"That said, if it's clear that the crop isn't going to perform as

expected, then you can adapt your programme accordingly."

Jock believes that crop potential isn't so important. "For me, it doesn't really come into it because if it gets disease, it gets disease — regardless of the potential. Here, it's more important to look at the bigger picture of rooting and drought susceptibility as this will dictate whether the crop will stay alive long enough to warrant the spend."

Though the survey suggested grain price only had a moderate to limited influence on spend, Jock says this can actually be a really important determinant for growers. "If the grain price is good and conditions are uncertain then the natural reaction is to minimise the risks to the crop and subsequent yield."

While the survey proves that disease pressure has a direct correlation with fungicide spend,

sometimes spotting this disease can be a challenge.

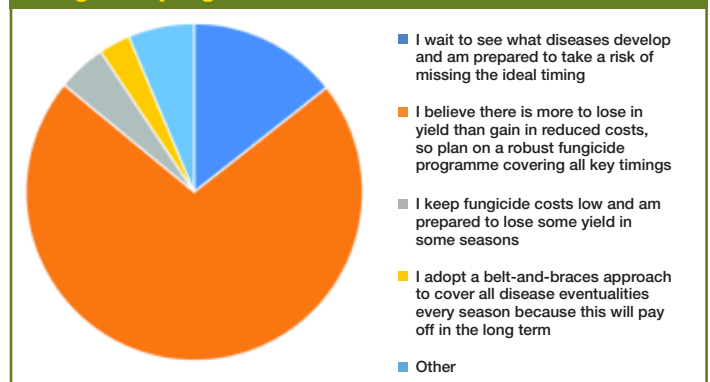
Looking back at the past three years (2018, 2019 and 2020) the survey showed that in 2018 and 2019, 53% and 49% — respectively — believed that the flag leaf and leaf 2 of their wheat crops were already infected by septoria at the T2 application timing. In contrast, just 26% believed this was the case in 2020.

"We've been doing a lot of work in this area through our CuraCrop monitoring programme, and the main message from that is: don't be fooled if you've got clean top two leaves at T2," warns Andy.

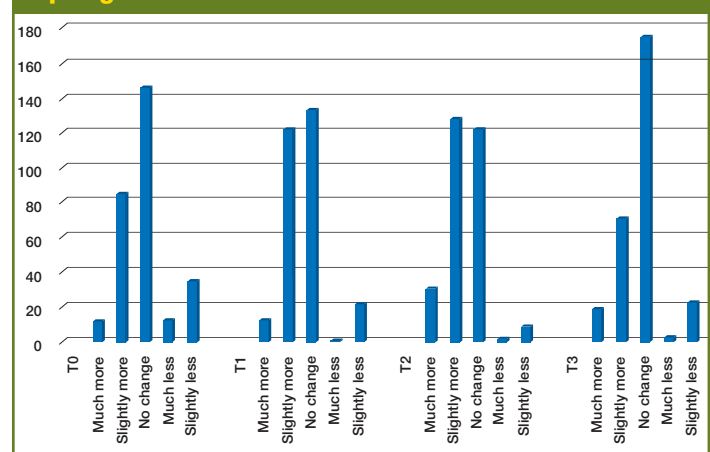
## Leaf analysis

In 2019, the leaf analysis the BASF team carried out showed that 46% of samples had some level of infection, but only 12% of farmers believed that this was the case. "In 2020, this was the

## What is your attitude to risk regarding cereal fungicide programmes?



## How do you expect your wheat fungicide investment to differ in spring 2021 compared with the unique spring of 2020?



# Cereal disease control



*Disease affects yield, and yield is the driver in profit, so why wouldn't you want to protect that, says Julian Thirsk.*

▶ other way around in that just 7% of the samples showed signs of infection by T2, but the perception from farmers was 13%.

"So I think it's important to stress and recognise that just because a leaf is green, doesn't mean it's not infected.

"Septoria is the number one disease for wheat growers and we know the tools to fight it have declined rapidly — so we must be pragmatic in how we approach disease going forward.

Across both wheat and barley, CTL has been a key component of disease control programmes. However, following its loss from the market this is likely to have a big impact on strategy this season.

Looking at anticipated wheat fungicide spend this spring, the majority of growers said they anticipate no change to T0, T1

or T3 (50%, 46% and 60%, respectively) spending compared with the unique spring of 2020.

But at T2, the majority (44%) said they'd be likely to spend slightly more. "This will no doubt be adapted depending on the conditions that are presented, but in general, getting on at T1 means there's less of a catch up or compromise at T2," says Andy.

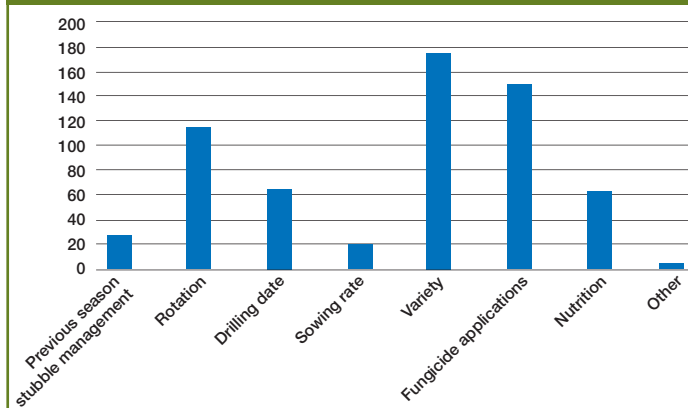
Similar trends were highlighted when looking at anticipated wheat fungicide spend this spring compared with a 'normal' season, where across all timings, the most common answer was that there would be no change to spending.

It's also worth noting that across both questions and all timings, only a small minority said they'll be spending less this year.

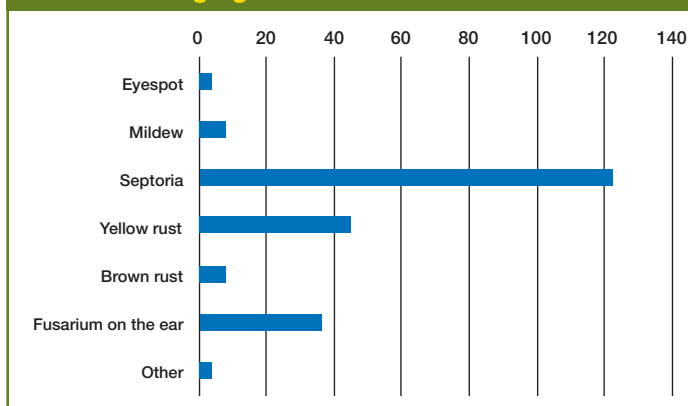
Julian says while his spending in total has been roughly the same over the past three years, the way this spending is apportioned per timing is very dependent on the disease pressure in front of him. "While it's obviously good to have a plan, I think you just need to be prepared to be very flexible in your approach and prioritise spending where it's needed — whenever it's needed.

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## What are the most useful tools for mitigating cereal disease risk on farm?



## On your winter wheat fields, what do you rate as most challenging disease?



## Other tools in the armoury

While fungicides are undoubtedly one of the key tools when it comes to mitigating cereal disease risk, the survey revealed that 57% of growers and agronomists believe variety choice is the most useful.

Rotation, drilling date and nutrition were also deemed as particularly useful — 38%, 21% and 21%, respectively.

Variety choice is something Julian has been looking at over recent years — particularly the use of blends. "This is something Danish farms do a lot, and it seems to work, but one of the issues we have in the UK is that varieties are too close together — in terms of genetics — to get an effect."

When it comes to disease control, all of these options come together to form a mutual support system, and they're all components in the strategy, adds Andy. "It's

important to pick your strategies wisely though, for example, changing your rotations might be useful for something like take all, but not so great for septoria."

As breeders excel in breeding resistance into varieties, taking the pressure off of chemical solutions, the relationship between them and chemical manufacturers is going to be pivotal in future disease control, he adds. "There's definitely an increased dialogue between us and breeders, and it's important to stress that we're all on the same page."

Jock says that while he has confidence in the genetic resistance coming through, fungicides are still likely to play an important role in situations where their inclusion can be justified.

"A sustainable future depends on everything everyone can bring to the disease control party."

## Winner announcement

Congratulations to our winner Chris Green from Gloucs who responded to the CPM/BASF survey on cereal disease control and has won the fabulous prize of a 256GB 11" iPad Pro WiFi — worth £948.

Chris' responded to the survey and completed the tie-breaker question, which asked respondents to detail a real on-farm story about disease control.

His answer was: "In 2020 we were extremely dry, so I cut back on T2 spray. I checked the crop every other day and from nowhere

septoria and yellow rust appeared overnight. I immediately sprayed a T2.5/3 to recover the situation. Although the yield was okay, I would never cut back on T2 again."

The judges were impressed by Chris' pragmatic approach and stressed the importance of ensuring a robust but adaptable programme is in place to cover all eventualities.

To take part in the next survey, make sure we have the correct details for you by emailing [angus@cpm-magazine.co.uk](mailto:angus@cpm-magazine.co.uk)