

“ The quickest way to break new chemistry is to use it as a fire brigade treatment. ”

Thoughts on the season ahead

Technical Cereal diseases

One of the main discussion points since the loss of chlorothalonil (CTL) has been how to shape fungicide programmes without it. CPM sits around the (virtual) table to gather some views.

By Lucy de la Pasture

As the days begin to noticeably lengthen during March, agronomists and growers are taking stock of crops in the ground and making their best predictions for the season ahead. Fungicide decisions in the coming weeks will be shaped by variety, disease levels, the weather with an added shot of experience for good measure.

AICC members, David Lines and Andrew Blazey face very different agronomy problems. In the West, septoria is enemy number one, says David, whereas in the East, yellow rust has already been showing its hand in some varieties on Andrew's patch across a range of varieties.

"Several varieties have been hit badly by early yellow rust, though it has been subdued by the frosts during Jan which has killed off infected leaf, so it almost looks as if the crop has snow mould. There's a lot of dead leaf but as soon as the weather warms up, the mycelia in the leaves will get going again," says Andrew.

Winter wheat varieties with a high resistance score for yellow rust on the Recommended List, such as KWS Extase (8) and KWS Siskin (9), are looking clean but any rated below this are likely to be carrying some level of yellow rust infection, he comments.

Seeding resistance

"I've seen KWS Firefly (7) with yellow rust and it's supposed to have seedling resistance. Many lower-rated varieties will be candidates for a T0 fungicide, probably tebuconazole, or possibly even earlier with a herbicide application on varieties like Skyfall (3) and Kinetic (4), depending on how cold the remainder of the winter is. The loss of epoxiconazole will certainly make keeping on top of yellow rust more difficult."

Thereafter Andrew expects to be battling with yellow rust for the rest of the season. "A three-week interval is as long as you can afford to stretch fungicides, even a day longer and you're in trouble with yellow rust," he says.

ADAS research consultant Tim Boor agrees, and he says a T1.5 may be justifiable for yellow rust in order to maintain the interval between sprays at no more than three weeks.

Ella Crawford, commercial technical manager for Bayer, says that even though fungicide resistance isn't a concern with yellow rust as it is for septoria, variances in field control do occur and these are very often due to either fungicide timing and/or application technique.

Andrew believes the messages about good application practices that have been successfully conveyed about herbicide application aren't always put into practice when it comes to applying fungicide sprays.

"Fungicide is sometimes going on in water volumes of 100 l/ha at forward speeds of 15-16km/h and that's too fast, so control will suffer. Applications at 11-12km/h in 150-200 l/ha of water, keeping the boom at a steady 50cm above the crop will achieve better results in situations where you're battling with yellow rust," he suggests.

While septoria is a concern across all regions, in the west it is the biggest disease threat to wheat crops. With blackgrass less of a concern there's been a shift in drilling date this autumn, with more ▶



Andrew Blazey says that where yellow rust is a problem, application and timing are as important as product choice to get good control.

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Agronomists are seeing several varieties with early outbreaks of yellow rust, though the cold weather in Feb has slowed its development considerably.

▶ wheat than usual going in during Sept, says David.

Septoria resistance is a big factor in variety decisions on his farms and there's been a distinct move away from the more susceptible varieties. Nationally the average septoria rating for winter wheat varieties in the ground has increased from 5.09 in 2014 to 6.14 in 2021.

Even so, it's important to be aware of the effect early drilling has on its resistance rating, he believes. "The RL trials are drilled around 01 Oct and their disease resistance rating is calculated on this basis. For every 2-3 weeks earlier than this that a variety is drilled, I reckon it loses about one point from its resistance rating and for drillings as early as 10 Sept, then it's probably as much as two resistance points," he says.

In spite of all the wet weather that has become a feature on British winters of late, wheat crops are looking surprisingly clean in Herefordshire. "I have some KWS Barrel (RL 4.2 for septoria) that went in at the end of Sept and it's as clean as Graham at the moment and RGT Wolverine is the dirtiest. Graham and Skyfall drilled in the early part of Sept have very low levels of septoria considering the weather," he adds.

The unexpectedly low levels of septoria being seen this winter may be partly due to lower levels of inoculum after the 2020 season – a lower than average disease season and a year when there was significantly less winter wheat in the ground, comments Tim.

Ella believes that although most of the country has experienced frosts this year, it probably hasn't been enough to suppress disease completely but concurs that low levels of septoria were being reported at the Bayer trials sites in Feb.

"In previous years the trials have demonstrated that date of drilling can be a huge factor in the severity of septoria, so that definitely is something to have in mind going into the spring," she adds.

It's very easy to be caught out by septoria

because of its relatively long latent period where symptoms aren't visible on the leaf. Andrew looks back at 2019, which was a year when late septoria caught a lot of people out — particularly in the east after heavy rainfall in mid-June.

"Given the right canopy, and varieties play a role in this, it doesn't take a lot for septoria to explode in a crop if the conditions are right. In a thick crop with a canopy that's closed over, there can be more septoria bubbling away in the crop than you might think," he says.

With two stalwarts of fungicide programmes missing this season — CTL and epoxiconazole — how are the two agronomists planning on shaping their programmes? David says the big problem is that there's not a protectant product available that can equal CTL in terms of its efficacy or its value for money.

Yield responses

"Folpet is double the price with half of the payback. In AICC western region trials last season it seemed to work with some partner products but not with others. In AICC UK trial data over the past 2-3 years where folpet has been used at 1.5 l/ha, it's very difficult to find yield responses," he says.

Andrew agrees that it's hard to include a product at a higher cost that is perceived as offering less benefit but believes that it's a case of analysing the crops in front of you and targeting folpet accordingly.

"In our trials, folpet did perform well on KWS Barrel in 2019, so it probably has a place in early-drilled crops at T1 and T2."

A useful contribution from folpet was also observed in ADAS trials in 2019, adds Tim. "Jonathan Blake found a useful benefit in 2019 trials in a high disease pressure situation."

Both agronomists agree that folpet has



There's been a significant shift in variety choice over the past few years, with a rise in the average RL septoria resistance rating for winter wheat in the ground.



David Lines is rethinking his approach to the T1 timing since the loss of chlorothalonil and sensitivity shifts in the septoria population which seem to be affecting the performance of some SDHs.

no place at the T0 timing, Andrew will be targeting any yellow rust in crops early on and David doesn't believe its economics or efficacy stack up to make it worthwhile including.

"We used CTL at T0 as it was so cheap and a good protectant but when you look at the dose response curves for folpet, the curve flattens when you get to doses above 0.75 l/ha. I'll probably use 0.75 l/ha folpet at T1 with Ascra XPro (bixafen+ fluopyram+ prothioconazole) and follow with either Ascra or Revystar XE (fluxapyroxad+ mefenitruconazole) at T2," he says.

David believes that T1 has become a much more important timing now that all fungicide chemistry is really only protectant in nature. For him it's a return to the thinking that predominated at the start of his career.

"If you can keep the crop clean at T0 and T1 then it's easier to keep it clean going forward. The top three leaves are the main contributors to yield but the 10% contribution from leaf 4 is still valuable," he says.

Andrew also believes that, when it comes to rusts, the value of a cheap T0 shouldn't be underestimated because it will damp down inoculum in the crop and make disease control easier later in the season.

David also says it's important not to be lulled into a false sense of security by the curative active Revystar brings to the party. "The quickest way to break new chemistry is to use it as a fire brigade treatment.

"I see Revystar as a T2 treatment — it's more expensive than Ascra so that's something that needs to be weighed up as well. If you apply an 80% dose of Revystar ▶

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Cereal diseases



Tim Boor says a T1.5 may be justifiable for yellow rust in order to maintain the interval between sprays at no more than three weeks.

▶ it costs £20/ha more than an 80% dose of Ascra."

David is rethinking his approach at T1. He has previously used Elatus Era (benzovindiflupyr+ prothioconazole) quite extensively followed by Ascra at T2 but is

considering recommending Ascra at both timings in 2021. "Elatus is very good on yellow rust but is slipping behind on septoria. Cost-wise, if my options are 0.8 l/ha of Elatus plus folpet to get decent septoria control or 1.0 l/ha Ascra, then Ascra looks the more inviting proposition."

Andrew adds that on his later drilled wheats it may make more sense to use Ascra at T2 and plan to use two folpet applications in some varieties with lower septoria resistance. He plans to remain fluid with his decision-making and tailor them to the crop in front of him.

"If fields remain wet and at field capacity then I'll be sticking with prothioconazole-based products early on to target eyespot and choose SDHI mixture partners depending on the balance of rust against septoria."



Ella Crawford says that resistance management and efficacy are different considerations and that in practice it's difficult to cover both bases.

Should both agronomists be routinely adding a multisite for resistance management purposes? Ella says that resistance management and efficacy are different considerations and that in practice it's difficult to cover both bases as easily with folpet as it used to be when CTL was available, which is why Bayer adopts a neutral position on the subject of multisites.

"It's as important to use well thought out, considered rates of active ingredients and Bayer ensures its co-formulated fungicides deliver a balance of actives to support each other when used at the recommended field rate, which is all playing a part in managing resistance," she comments.

The biggest unanswered question about folpet is whether farmers are prepared to pay for it, believe both agronomists. "There's was a further shift in sensitivity in SDHIs and azoles last year and we'll continue to see this as we lose the protection from CTL and use weaker multisites in its place," says Andrew.

On a positive note Tim adds that the fungicide product pipeline is looking really promising so there will be more MoAs available to allow alternation of actives as part of a resistance strategy in the near future. ■



Both agronomists agree that folpet can't replace CTL at the T0 timing on grounds of efficacy

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