

# Shift in the fungal fight

“You need nerves of steel to the point of foolishness not to treat.”

## Technical Crop Doctor

As crops put on spring growth, many will have their first fungicide at the T1 timing. CPM joins the Crop Doctors on a virtual tour as they consider the implications.

By Tom Allen-Stevens

Every year, Crop Doctors Jonathan Blake of ADAS and SRUC's Prof Fiona Burnett have taken a whistle-stop tour of four trial sites in Herefordshire, Lincs, Yorks and Oxon to get a unique snapshot of disease across England. With the country still in lockdown, it was a virtual tour that took place on 30 March, during which the picture on pathogens became clear.

### The Callow “complex”

The fertile soil of Bayer's trial site at Callow, Herefordshire, drilled 30 Sept, has taken a pounding through the winter, with above average rainfall in October, December and January, reports commercial technical manager Gareth Bubb.

“The plots had been looking pretty sorry for themselves, although growth is now (29 March) picking up, with leaf four emerging. KWS Extase especially is picking up pace, although KWS Barrel is still flat to the floor and way behind. Skyscraper is looking dirty, Theodore noticeably cleaner and Costello not too bad for disease.”

The relatively low level of septoria

showing on leaves may be masking latent infection, however. Bayer has been monitoring crops across the UK and Ireland with its Rapid Disease Detection (RDD) service that analyses leaf samples for the presence of pathogen DNA, undetectable on the leaf surface. “We're finding septoria in most varieties including Extase,” notes Gareth.

But he's spotted yellow rust in just one of the 37 varieties at the site — KWS Kinetic. “It was really active at the beginning of March but appears to have stopped in its tracks,” he reports.

Jonathan visited the site, separate from Gareth, on 29 March. “Septoria is there in nearly all varieties, even those that should be resistant — Graham for example is a long way from clean. Conditions recently haven't been conducive for yellow rust,” he confirms.

Both Jonathan and Gareth found eyespot on Extase but “had to search for it”. Jonathan also found mildew on AHDB Recommended List candidate variety RGT Rashid, a disease that Gareth notes has been the “biggest disease issue by far” for crops in the area over winter.

“Mildew's an added complication,” comments Fiona. “It doesn't surprise me that we're seeing the disease early on, with many varieties susceptible. Is it the new yellow rust? Although it appears there's not a worrying level of disease, having all the main ones present at that stage builds a complex picture.”

Local AICC agronomist David Lines notes that 80-90% of the varieties he looks after have high disease scores for septoria. “The message has finally got through, and with no

chlorothalonil this season, that takes the pressure off T0 sprays, due to go on after Easter. I'm struggling to find any yellow rust, but we're treating as we see it, and may consider a strobilurin protectant on susceptible varieties.”

David stresses the point that a variety with a high septoria score sown early will behave like one that's more susceptible. “Then there's RGT Wolverine, sown early for its BYDV resistance. It has a septoria rating of 5.3, but makes Barrel look like Theodore in comparison.”

He's planning a T1 application of Ascra (bixafen+ fluopyram+ prothioconazole), particularly where crops received no T0 fungicide. The higher SDHI loading than his previous standard — Elatus Era (benzovindiflupyr+ prothioconazole) plus CTL — is warranted, he notes, without the multisite and lack of pre-T1 protection.

“One aspect to note, however, is growth regulation — crops that don't get a T0 fungicide in many cases still need an early chlormequat plus Moddus (trinexapac-ethyl), that we're putting on with trace elements and/or herbicide,” adds David.



Yellow rust spotted earlier in Kinetic at Callow appears to have stopped in its tracks.

The trial site at Hinton Waldrist, Oxon.







*Yellow rust, found here in Zyatt at Long Sutton, is being treated as and when it's spotted.*

► certainly be cut, although I'd stick with an SDHI/azole application. Folpet would be useful to reduce the risk of resistance, and the T1 timing is the obvious point in the programme for it."

Although the barley plots at Cawood have not been inspected, Fiona's recently visited SRUC's site south of Edinburgh. "We're finding high levels of rhynchosporium — a lot of winter barley varieties have scores of 5 or 6 for the disease, which isn't strong," she notes.

"Some growers are growing two spring barleys back-to-back to overcome grassweed problems, but that's not a

sequence you'd cheer for."

It also creates the perfect establishment for net blotch, Jonathon adds. "In those cases I've seen crops stuffed with the disease. You need a robust dose of prothioconazole-based chemistry to deal with it," he says.

## Oxon recovery

In Oxon, the Bayer site at Hinton Waldrist was drilled on 19 October with 39 varieties and two blends, reports CTM Ben Giles. "Considering it was a cataclysmically awful seedbed, I'm impressed with how well it's looking.

"Skyscraper, the highest yielding variety of 2020 in both treated and untreated plots, is looking pretty grubby this year with septoria in its base and yellow rust on its leaves. There's a fair amount of yellow rust all round, with Kinetic the worst and Skyfall giving it a run for its money, as is Zyatt," he reports.

"There's septoria in Extase, but it's chalk and cheese compared with Skyscraper. Theodore's cleaner, while RL candidates such as Mayflower also look impressive at the moment."

Colin Woodward joins the meeting, farming at Great Tew further north on soils that range from light sandstone to heavy

clay. He has Gravity, Skyscraper, Extase, KWS Siskin, Firefly, RGT Saki and high protein wheat MV Fredericia in the ground.

"We've not found much yellow rust in anything apart from Firefly, while there's septoria in the lower leaves of everything," he reports, although following a tip-off from Ben, checked again and also found yellow rust in Skyscraper and Gravity.

He's taking three approaches with the T0 spray — those drilled in Sept have already received a dose of folpet with tebuconazole added where yellow rust is found. October-drilled wheats will only get a treatment where there's rust. "Some of our later drilled wheats have just received a herbicide and need to recover, so we'll wait with them until the T1 timing."

Ben notes some residual herbicide applications have caused yellowing, especially where heavy rain has followed. "In some cases, heavy applications to control blackgrass have given crops a serious spanking, but they've tended to work well. Some barley crops have suffered a smack, too."

Brown rust has been a problem this year in Colin's barleys, especially Sept-drilled hybrids Bazooka and Kingsbarn. "Crops coming out of the winter on heavy land are





suffering with wet feet," he says. "But I've not seen any mildew in wheat or barley this year — I think the frost has taken it out. I haven't seen eyespot, but there's a high potential for it, so I'll be using prothioconazole at T1 as a precaution."

He's also planning a trial with lodus (laminarin), the new elicitor from UPL, and is wondering about skipping the T1 SDHI in some situations.

"The key aspect about elicitors is that they are not a fungicide replacement," notes Fiona. "They prime the plant which helps its natural defence against disease. You have to consider whether the crop is already primed if there's already disease present, although you could argue the later-emerged leaves



*Skyscraper, last year's top performer in the Hinton trials, is looking pretty grubby.*

could benefit. There's a lot of interest in these products, but we've yet to see robust data and there's still a lot to learn."

A straight prothioconazole with folpet would be her "lowest offering" at T1, but Colin decides he'd rather spend money on an SDHI than folpet.

Jonathan sounds a note of caution,

though. "It's the first year without CTL and we've had a couple of quiet seasons on the disease front. We've probably forgotten the value it brought to fungicide programmes, so it's worth ensuring there's enough insurance in what's applied at T1. The danger is that we put in place strategies that underestimate the risk," he concludes. ■

## Univoq brings new mode of action to T2 programmes

Inatreq, the new fungicide active from Corteva Agriscience, has finally received approval for sale and use in the UK. Univoq offers curative and protectant control of all septoria strains, says the manufacturer.

The product contains fepicoxamid and prothioconazole and will be available for sale in the UK in time for wheat T2 (flag leaf) fungicide applications. The first new target site active ingredient for septoria control registered in the UK for 15 years, its iQ-4 formulation is designed to ensure Univoq sticks to and spreads across the leaf.

Tests show the new target site for septoria has no cross-resistance to existing cereal fungicide chemistries. Corteva's Mike Ashworth says Univoq has flexible application characteristics and consistent, broad-spectrum

performance. "Its major strength is its robust control of septoria.

"The Inatreq active molecule works differently than every other cereal fungicide available to farmers in the UK," he adds. Used at the T2 timing, it delivers a good length of protection, maintaining green leaf area, while UK trials have also shown control of yellow and brown rust in line with existing market standards.

Containing 50g/l of fepicoxamid and 100g/l of prothioconazole, the maximum label rate of Univoq is 2 l/ha with an advised rate of 1.1-1.5 l/ha depending on disease pressure and location. It's cleared for use on wheat (including durum and spelt), rye and triticale but not barley.

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