

Tackling net blotch risk in spring barley



“With reports of increased levels of infected seed, it’s critical growers identify where net blotch is coming from on their farms so risk can be mitigated.”

CLARE TUCKER

Although net blotch in spring barley is primarily transmitted via infected stubble, levels of seed-borne mycelium also appear to be on the rise. With further concerns regarding fungicide resistant strains of the disease, *CPM* looks at the steps growers can take to help mitigate risk.

By Janine Adamson

Trends in farming systems such as minimum or zero tillage, plus weather-induced rotational changes, could be behind mounting concerns surrounding net blotch in spring barley. That’s according to BASF’s Clare Tucker, who says although many fungicides remain effective, various factors are encouraging the threat of the disease.

“Often, net blotch comes from infected trash, meaning the rise in popularity of min-till poses an increased risk to its transmission. With the mild, favourable weather conditions last

year, the disease was a genuine concern – meaning there could be high levels of inoculum remaining in the rotation even now,” she explains.

“Last year also saw much change rotations-wise with limited cropping options, meaning in some cases, successive cereals were planted where they wouldn’t usually be, or spring barley drilled into alternative locations where there happened to be nearby infected trash.

“Furthermore, the noticeable rise in net blotch in winter barley this season could be warning of what’s coming down



Increasing concerns

BASF’s Clare Tucker says although many fungicides remain effective, various factors are encouraging the threat of net blotch in spring barley.



T1 tank mix

A robust T1 in spring barley could comprise an azole, SDHI, plus one of the effective strobilurins, suggests Bayer's Greg Hanna.

- the track for spring-sown crops. It's an issue we've certainly highlighted, and now, with reports of increased levels of infected seed, it's critical growers identify where net blotch is coming from on their farms so risk can be mitigated."

Sourcing adequate spring seed has proved a conundrum for multiple years, namely a result of the inclement 2023/24 season where growers were unable to drill autumn cereals. In some instances, this may have increased the quantity of farm-saved seed.

According to ProCam agronomist Alastair Gordon, there were reports of 'uncontrollable net blotch' very early in the season last year, therefore, it's suggested the source was likely to be seed-borne mycelium.

"Unfortunately, some spring seed, particularly if it's been farm-saved or 'barn dipped', won't have received a seed treatment – which is one of the most effective ways to minimise the risk of net blotch," he says.

Although there are no seed treatments with registered label claims for net blotch, because the disease is from the same fungal family as leaf stripe (Pleosporaceae), it's widely acknowledged there should be a level of efficacy, continues Alistair. "By growing untreated seed, there's a high chance of seed-borne net blotch which is becoming increasingly

challenging to control with fungicides."

According to Bayer's Greg Hanna, there's a concerning move towards not using fungicidal seed treatments at all. "Seed treatments deliver significant value, particularly when it comes to controlling diseases like net blotch which can multiply quickly and cause yield losses of 10-40%.

"With spring barley especially, there can be a temptation to reduce input spend, in fact, it's sometimes referred to as a 'low input crop'. However by doing so, it's placing greater emphasis on the actives which are used such as prothioconazole," he explains.

"This is worrying because net blotch is showing considerable reduced sensitivity to prothioconazole, so therefore the active requires a mix partner for a robust approach," advises Greg.

Information issued by AHDB states farmers should opt to grow a resistant variety, guided by the Recommended List – in fact, its newest iteration includes net blotch disease resistance ratings in spring barley for the first time.

Then, as well as exercising cultural



**TRUSTED
BROAD-SPECTRUM
DISEASE CONTROL.
COUNT ON IT.**

iblon.bayer.co.uk

control methods such as avoiding successive barley crops, controlling barley volunteers, and opting for later drilling dates, growers should use clean seed where possible and not save seed from heavily infested crops.

INTEL GATHERING

Greg reminds that although it's an obvious option, testing seed provides much insight. "And that's not just for net blotch, but all seed-borne diseases. What's intriguing with net blotch is, there doesn't seem to be any correlation between the percentage of disease loading on the seed lot, versus the infection level in the subsequent planted crop.

"This has been demonstrated through trial work – it's either yes you have seed-borne net blotch, or no you don't. There's little grey area or scope for 'might'," he adds.

Regarding the issues surrounding prothioconazole, Clare agrees that due to shifts in sensitivity, some fungicides aren't working as well as they used to when it comes to net blotch. "Monitoring indicates the F129L

mutation conferring reduced sensitivity to some strobilurins, is found in both the UK and the rest of Europe.

"F129L levels above 20% are common in our UK sampling and this tends to show a reduction in net blotch control from strobilurins like azoxystrobin, although this isn't exclusive within that fungicide group. Pyraclostrobin (Comet 200) controls these resistant strains and continues to offer a robust option, particularly in high pressure scenarios," explains Clare.

She adds that observations also indicate some reduced sensitivity in net blotch to a range of SDHI chemistry too.

Greg highlights that trifloxystrobin (Mobius) isn't currently affected by the F129L mutation either, whereas azoles remain useful in targeting other diseases. "There are enough tools out there to tackle net blotch, but it's critical that no one option is over-exposed. Mode of action diversity is key to avoid relying on one or two actives to do all of the heavy lifting."

He suggests a robust T1 in spring barley could comprise an azole, SDHI, plus one of the effective strobilurins.



Getting ahead

ProCam's Alastair Gordon is encouraging growers to consider applying fungicides even earlier than usual, to provide spring barley with an additional layer of protection.

"An example might be Siltra XPro (bixafen+ prothioconazole) plus pyraclostrobin, or even azoxystrobin if the pressure is more moderate.

"Equally, Ascra X Pro (bixafen+ fluopyram+ prothioconazole) has been performing strongly on net blotch

“ The 2024 season was my first opportunity to use iblon®. It was a positive experience. I got on with it really well, especially at T1. The strong protectant activity of isoflucypram meant crops stayed clean for a long time after. It has definitely earned my trust, and it will figure in my programmes again for this reason. ”



Find out more

Colin Woodward AICC agronomist



► for several years in both fungicide performance curves and Bayer trials. Just don't expect prothioconazole to achieve adequate control on its own."

Clare concurs and adds that as a crop, barley benefits from receiving a good range of active ingredients in fungicide mixes such as in Lentyma XE (Revysol+ Xemium) and Comet. "The crop appreciates a combination of two or even three actives – the reason for this is, all diseases seem to hit barley at the same time so there's a lot to address at once."

She stresses the importance of application timing in getting the most cost-effective benefit from fungicides. "The message is, don't delay. Growers might try to fit a fungicide application in with a PGR at GS32, but it's really too late at that point."

PRIME TIME

"The aim should be GS25-30 ideally, perhaps even GS30-31 at a push. Given the weather permits, finessing application timing is something which can be achieved without any additional spend, plus it assists the fungicides in working harder," says Clare.

By applying a comprehensive T1, it can also have positive implications for diseases later in the season too, she highlights. "Ramularia is high risk by T2 and is exacerbated by stress in the crop, whether that's biotic or abiotic. So, reduce crop stress by keeping disease out from the start. It's also best to avoid over-complex tank mixes, especially those involving herbicides.

"With fewer options for ramularia control in spring barley, you really want to help the crop fight its own corner."

Good disease control is also critical in retaining tillers, adds Clare. "In barley, the main focus will always be building yield through tillering. Unlike wheat where you might focus on preserving the flag leaf, all leaves are important in barley."

This season, given the concerns regarding seed-borne transmission, Alastair is encouraging growers to consider applying fungicides even

earlier than usual, to provide crops with an additional layer of protection.

"In a conventional year or low disease pressure scenario, it might be feasible to wait until T1 to apply a first fungicide

Identifying net blotch

Symptoms begin as individual spots which then elongate and turn into brown stripes or blotches, with a random 'netting' of darker lines along and across the leaf.



Spotting the symptoms of net blotch

According to AHDB, seed-borne net blotch infection in barley causes brown stripes to spread from the base of leaves in seedlings and tillering plants, which can appear similar to leaf stripe infection. Then later in the season, the symptoms of leaf stripe and net blotch become more distinct, with the symptoms of net blotch becoming more typical of that disease.

However, transmission from splash-borne spores – from infected trash or neighbouring plants – is the most common cause of net blotch. These symptoms begin as individual spots which can sometimes be mistaken for ramularia leaf spot.

These spots elongate and turn

into brown stripes or blotches, with a random 'netting' of darker lines along and across the leaf. In winter-sown barley, symptoms can be extensive during the winter but as affected leaves die back, new leaves in spring can be symptom-free.

Finally, the 'spot form' of net blotch is less common – a chlorotic halo surrounds oval lesions. Unlike the net form these spots don't elongate, but grow to be 3-6mm in diameter, which can be mistaken for ramularia leaf spot.

Spot form lesions aren't rectangular nor are they limited by the leaf veins. Net blotch also occurs throughout the season, whereas ramularia leaf spot symptoms typically appear after flowering.

treatment. But with reports that a significant volume of seed has been confirmed to have very high levels of

net blotch, where untreated seed has been drilled or where drilling was brought forward to make the most of recent dry conditions,

the risk will be even greater.

"Therefore the advice this year is to bring plans forward by applying a suitable fungicide treatment as soon as possible."

As such, he recommends monitoring for symptoms – brown stripes of infection spreading from the base of leaves in seedlings – ahead of the first tiller stage (GS21).

"Most growers will already be planning to apply weed control and trace elements at this timing, so it makes sense to use the opportunity to apply a fungicide to knock back any infection that's travelled up from the seed, or which has been transmitted to the emerging plant from infected trash. Remember that once conditions are favourable, net blotch cycles every 14 days," he concludes. ●

"There are enough tools out there to tackle net blotch, but it's critical that no one option is over-exposed."