SDHI

No substitute for azole

Don't be misled into thinking that SDHI potency will overcome the weakness of azoles such as epoxiconazole. That's the stark warning from Bayer CropScience Scottish commercial technical manager, Neil Thomson.

He says there might be a greater armoury to fight barley disease but there isn't in the azole partner."Whether it is SDHI, strob, CTL or cyprodinil it will perform better if mixed with prothioconazole," he points out.

The message of mix partner is vital suggests Mr Thomson and is particularly relevant with SDHI net blotch resistance already confirmed. "Any partner needs to provide full pathogen control through the whole period of activity. Mixes with weaker triazoles, or lower rates will fail to achieve that mutual support, significantly raising the risk of SDHI insensitivity."

And he says just how potent prothioconazole is in barley is evident in trials."In a spring barley trial with SRUC we compared twin applications of Fandango v Adexar. Here Fandango doses of 0.75 L/ha at the T1 followed by a 1.0 L/ha at the T2 were assessed against Adexar at 0.8 L/ha and 1.0 L/ha respectively. There was no difference in yield response over untreated but when you consider the premium you pay for Adexar it really pulls them apart.

"And for good measure two 0.6 L/ha doses Siltra$_{Xpro}$ outperforms them both. It just shows the power of prothioconazole. Fluxapyroxad as an active in its own right is pretty decent, it's what it is partnered with is the weakness," he points out.

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Mr Thomson suggests prothioconazole's strength in barley disease is probably due to no specific mutations with the CYP51 protein."We haven't seen any real drop off in prothioconazole's performance since the launch of Fandango, which could be something to do with the target protein. What we do know is that some azoles are intrinsically weak against barley diseases."

Bayer launch new-look website

Bayer CropScience has re-launched its website with new look pages and interesting new content for the 2015 season.

Visitors to the new website will be able to get information on key crops and protection programmes presented in an easy to navigate new design.

New to this year are 'live-feeds' from two trials sites providing real-time information on crop development and disease levels. Also new are animated infographic films designed to provide useful advice on best practice along with the Crop Doctor tours where we see industry experts fly around the country to bring up-to-date analysis of current disease conditions.

To find out more visit
bayercropscience.co.uk

Visit **www.bayercropscience.co.uk** for more advice on effective wheat, barley and OSR disease control and information to help you make informed decisions on product choice.

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Crop Focus

Get the most out of your crop
this spring

Let growth be
your guide

Protection and
no disease?
Safeguarding your crop from stress

Getting the right balance
for the best results

Bayer CropScience

Stick with GROWTH STAGES

Stick to growth stages not calendar dates. That's the view of independent agronomist Sean Sparling given the recent spell of warm, dry weather in many areas.

The result is a growth spurt and in many cases the gap between T0 and T1 could be as short as seven days, something that could be repeated if the fine weather continues."Robust doses of fungicides might give up to four weeks protection but it's about protecting leaf layers. Leaves one, two and three are the most critical for protecting yield; full leaf protection is vital. If you play with timing you run the risk of disease getting in. My advice is stick with GS39 regardless of T1 timing."

Disease pressure has been blunted by the fine weather but don't be lulled into a false sense of security says Mr Sparling. "Septoria and yellow rust have been checked. But *Septoria* is now entering its sexual phase and I am seeing black pycnidia spots in many crops. We have to remember that we had plenty of inoculum carry over from last season. Also, yellow rust should still be factored in to susceptible variety programmes. In such cases a strob will be added to T2 sprays," he notes.

And all wheat crops will get a SDHI at T2. Mr Sparling says their value has been proven in the most drought ridden seasons."Even with the price of the final product, you can still expect an economic return from SDHI over azole + strob at T2. It doesn't look like we will need full rates this season but all the evidence points to SDHI over azole + strob."

But dose is critical and Mr Sparling doesn't want to see rates fall below three quarter."We must heed the minimum 80% dose requirement of prothioconazole or epoxiconazole as SDHI partners. Whether crops are thick, thin, forward or back, disease can still threaten. Moving to a lower dose or inferior product at the T2 could allow late foliar disease to threaten and erode valuable yield.

"Also we must protect this vital chemistry. We've seen what has happened in terms of weed control where we are now forced to rely upon a combination of cultural and chemical strategies. This situation has in part been brought about by the widespread use of too low rates of certain key actives."

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With prothioconazole being the stronger *Septoria* azole, Mr Sparling does favour Aviator^{235}$_{Xpro}$ over Adexar."It's clear to me there's nothing to choose between these two - both in terms of independent and HGCA data, and out there in the field. They are clearly the stand-out products.

"For me the question is to extract best value for my clients. That means working out which SDHI option delivers the required disease control, with an 80% azole dose for the best price, and in that regard Aviator^{235}$_{Xpro}$ is often pretty hard to beat."

CROP DOCTOR Tour 2015

As part of Bayer CropScience's Crop Doctor tour series, Fiona Burnett from SRUC and Jonathan Blake from ADAS took a flying tour of four key growing sites in Yorkshire, Herefordshire, Oxfordshire and Lincolnshire to get a snap-shot of the season and the current levels of disease in the crops.

Visit:
bayercropscience.co.uk/yourcrop/cropdcotor/videolibrary/crop-doctor-tour-2015

Don't ignore the Physiological benefits

Aviator^{235}$_{Xpro}$ is unique in that it's the only SDHI fungicide with a label claim for yield increases in the absence of disease. But what are these physiological benefits? Bayer CropScience's commercial technical manager Tim Nicholson throws some light on the subject.

Perhaps this season the key physiological benefit could be the ability to buffer against drought stress. Mr Nicholson points to trials where plants treated with Aviator^{235}$_{Xpro}$ have been shown to wilt later and recover quicker following drought induced conditions."Chlorophyll aids photosynthesis and green leaf area retention. Under drought conditions light-capturing pigment chlorophyll degrades and leaves roll and desiccate. Anything that helps reverse this has to be beneficial. Trials with Aviator^{235}$_{Xpro}$ under drought induced conditions have shown an average extra 13% flag leaf area and 9% second leaf area from GS49 to GS61."

The other impact of drought stress is restricted nutrient flow to leaves, and again there is a benefit here too."Using infrared thermography we found that Aviator^{235}$_{Xpro}$ treated plants buffered themselves against drought stress and remained cooler indicating more normal rates of transpiration,"he notes.

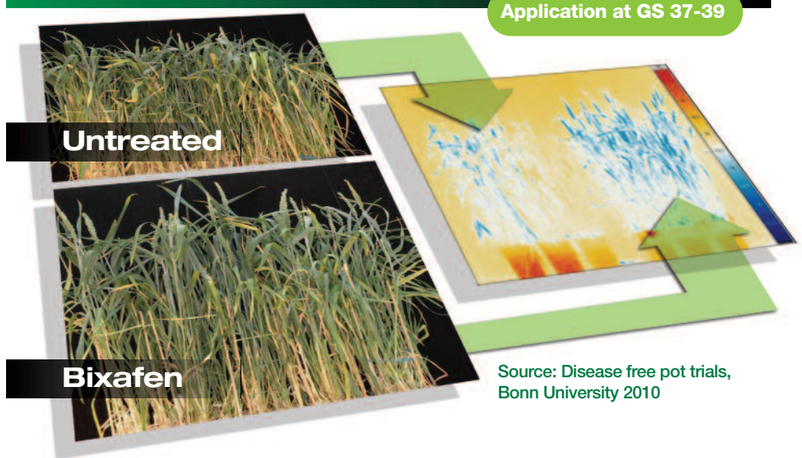
These drought recovery properties are unlikely to be needed every year, however the Leafshield formulation delivers benefits whatever the season.

In tests with the Silsoe Spray Applications Unit (SSAU) it was shown that Aviator^{235}$_{Xpro}$ achieved up to 52% more surface coverage when compared to other SDHI fungicides.

This reduces the risk of disease establishing itself due to poor or uneven leaf coverage."What Leafshield offers is consistent fungicide performance across a range of conditions. It's why you can use Aviator^{235}$_{Xpro}$ at different water volumes, travel speeds and with a range of nozzles without any decline in disease control. It's also the reason for the speed at which Aviator^{235}$_{Xpro}$ becomes rainfast – which is normally just a matter of minutes."

The other key physiological attribute of Aviator^{235}$_{Xpro}$ is its greening effects, another label claim." We see up to 30% extra green leaf area retention in Aviator^{235}$_{Xpro}$ treated plots over untreated and there can be no doubt that it contributes to final yield achievement. You only have to look at the consistent yield increases we saw from Aviator^{235}$_{Xpro}$ from our farmer Judge For Yourself trials. Here, even in the absence of disease we saw average responses of 0.3t/ha over azole + strob. Even with grain prices currently around the £125/t mark that's a return on investment of over £30/ha, which could be invaluable this year given that rapeseed margins could also be small when compared to previous seasons."

T2 bixafen helps delay senescence of drought-stressed wheat
(extends chances of spikelet survival and grain fill)



Source: Disease free pot trials, Bonn University 2010

PlotCams

Putting focus on wheat diseases

To assist growers in identifying key timings, Bayer CropScience is engaged in an exciting new initiative and installed 'plot cams' at two of its trial sites - one in the East Anglian heartland, the other at a high risk *Septoria* site in Herefordshire.

If you want to follow the crops scan the QR code or visit **Bayercropscience.co.uk/timelapse** where you'll see the cameras in action. You can also get updates by following us on Twitter **@Bayer4cropsUK** or comment on the pictures by using **# CropCams15.**