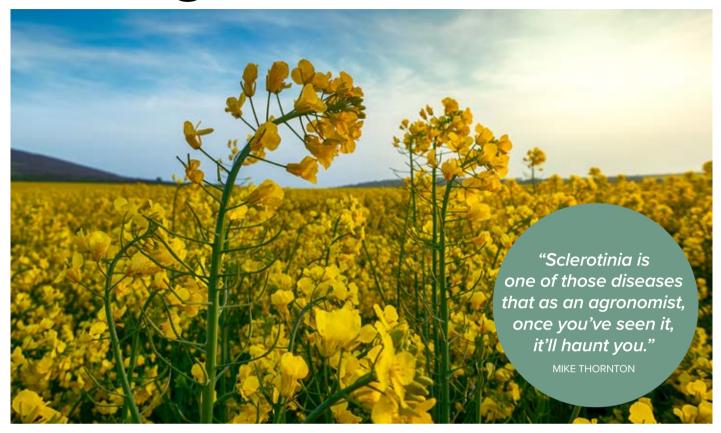
# Making the most of actives



Isofetamid could offer growers another string to their bow to help combat sclerotinia in oilseed rape, providing the option of a little-used active that works well with others. *CPM* investigates the ins and outs of the chemistry.

By Melanie Jenkins

pplying fungicides is more than a simple matter of preventing or tackling the disease at hand, it's also about resistance management and optimising efficacy by using the various tools available.

With fewer actives coming onto the market than being removed from it, it's more vital than ever to use a diversified spray portfolio and apply what's available in a preventative manner, highlights ProCam's Mike Thornton.

Although it might be lesser known than actives such as commonly used prothioconazole, isofetamid can be used in oilseed rape to target sclerotinia, and could be an option to include in programmes going forward, he says. "What drew me to Zenby (isofetamid) is that it sits apart from other actives in terms of its mode of action."

#### **SUB-GROUP ACTIVE**

Isofetamid is an SHDI which comes under the chemical grouping phenenyloxo-ethyl thipheneamide, says Certis Belchim's James Cheesman. "It's in a sub-group of its own and isn't used in UK cropping as much as most other SDHIs, which means it stands out."

With a unique structure, Isofetamid remains effective against the majority of fungal isolates that have developed resistance to other SDHI fungicides. Studies indicate this is due to having flexibility at the binding site, rather than standard SDHIs which have a rigid structure.

Equally, with reports of reduced sensitivity to SDHIs in sclerotinia in France, Mike feels it's an important addition to have. "There's an ever diminishing number of actives available for OSR and of the different classes there are even fewer, so anything you can employ to reduce pressure on one particular group has to be worth considering," he adds.

With any product, be it a herbicide



**Diversified approach** 

ProCam's Mike Thornton believes it's more vital than ever to use a diversified spray portfolio while applying what's available in a preventative manner.

### **AGRONOMY OSR disease control**

or fungicide, it's important to be mindful of resistance issues, but this is particularly true in OSR, suggests Mike. "We're perhaps all guilty of applying prothioconazole widely, and although this isn't necessarily an issue for the diseases you're trying to control during flowering, inevitably it'll hit non-targets.

"For example, if there's some light leaf spot and you use prothioconazole again, you'll drive resistance because you'll be taking out certain isolates," he explains.

"So by using products like Zenby, it can help to slow the resistance build up in the disease you're aiming for, as well as some non-target ones because it's not being used elsewhere on the crop. It's also highly unlikely to be used anywhere else in the rotation because isofetamid's other authorised uses are on crops such as lettuce or spinach, and it won't be used in cereals so there's no potential for a build-up on volunteers either."

James points out that sclerotinia can come in many shapes and forms, and OSR is one of many crops which can suffer from it. "The disease occurs in plenty of other crops, so it's advisable to understand what else could harbour



Spray on risk

Isofetamid can be applied from early flowering depending on conditions, but AHDB's sclerotinia forecast indicates the level of risk and when best to apply it.

it, be it another crop in your system or even weeds and other plants that occur on your or your neighbour's land."

In terms of positioning, Mike prefers to use isofetamid as a second flowering spray, towards the end of the period. "Whether you use one or two flowering sprays will depend on the season, weather and pressure from sclerotinia and the potential of the crop, but isofetamid can only

be used on OSR once per year."

However, it can be applied from early flowering, depending on conditions. "It's advisable to look at AHDB's sclerotinia forecast to determine the level of risk and base when you apply on this. I'd also suggest looking at your individual fields and having a handle on the risk factors that are pertinent to that site.

"Although some people might not feel it's ever a risk, sclerotinia is one of



those diseases that as an agronomist, once you've seen it, it'll haunt you," says Mike. "I've only seen it badly once and you could smell it down the road.

"But because sclerotinia doesn't occur every year, it can be easy to become complacent towards it. Using the agronomic tools at your disposal is about insurance – taking steps based on how things could turn out and mitigating risk – it's about the potential losses stacked against spend.

"An extreme example is deciding to not apply a cheap but effective aphicide to a cereal crop in the autumn and then having an infestation, resulting in phenomenal yield and quality losses — it's the same with sclerotinia; when it does go wrong, it goes really wrong," he warns.

#### **APPLICATION TIMING**

Unlike some fungicides which have specific calendar-based application windows, Zenby is based on growth stage, meaning it's easier to apply it when a crop requires it, says Mike. "When fungicides have calendar date stipulations, this can make a big difference across the country because a crop might be at the right growth stage within the window in Sussex, but it'll be completely different in Scotland.

"However, we know when OSR starts flowering and when it ends, so you're able to make an informed decision on when to apply Zenby."

According to James, the product can be applied alone or mixed, although mixing is preferential for resistance management. "It can be used with metconazole, azoxystrobin, or the mix of prothioconazole and tebuconazole, depending on other disease pressures."

Consequently, Mike says he advises mixing isofetamid with a second product, for



#### Assessing the canopy

One of the most important things with any pesticide is to understand the canopy structure of the crop and how to penetrate this with the product, says Certis Belchim's James Cheesman.

example, azoxystrobin to help improve greening as an additional benefit. "You want to approach this in the same way you would with any other crop, such as mixing triazoles with SDHIs."

During flowering, it's the point where the canopy is at its largest and the days are at their longest, so if the plant isn't going to photosynthesise effectively then, it's never going to, suggests Mike. "But by using more than one active you can target different points of a disease's cycle and help to keep the plant healthy and green for as long as possible, while respecting the principles of resistance management.

"If you don't mix isofetamid with a triazole, which shouldn't be overused, should you want to mix it with an insecticide then there aren't any issues around the repellency of that insecticide on beneficials being masked. Applying it this way makes it both a useful and flexible product," he says. "However, it's likely that not many insecticides are being used that late in the season any longer."

In terms of the options available to tackle sclerotinia, there are a number of potent molecules available in this



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## **AGRONOMY OSR disease control**



Lateral disease thinking

Sclerotinia can come in many shapes and forms with OSR one of many crops that can suffer from it.

sector, says Mike. "Isofetamid sits in the middle of the range of options. Some of the others are being used on a lot of crops, which isn't something I'm ever very comfortable doing.

"And unlike wheat, which you could look at now and take a guess at what it might yield, with OSR it's always impossible to know what it'll achieve until it goes through the combine. Because there are so many things that can go wrong with OSR, if you can still do a reasonable job and achieve better value from the products you use because of their price point, then Zenby could provide a suitable option," he explains.

"For example, this season there's been quite a lot of pigeon damage resulting in uneven crops, but we require crops to be wall-to-wall to achieve the average yields we want. You have to deal with the problems in front of you, but when looking for good value options I think this fits well and, especially if you're short on flowering time, could help save £/ha when using it with azoxystrobin, or even triazoles such as metconazole, prothioconazole."

So far, as Mike is aware, there isn't anything that isofetamid can't be used with, noting that it's pretty benign. "However, we know with certain nutritional elements, such as boron, that we have to be careful. But, I've known growers mix Zenby with liquid nitrogen and that doesn't seem to be a problem. Having this level of compatibility is useful because growers are busy and no one wants any nasty surprises."

The full label rate for Zenby on OSR is 0.8 I/ha but Mike has generally applied it at 0.4 l/ha or 0.5l/ha mixed with a partner product. "I'd suggest adjusting the dose rate depending on the perceived risk, actual forecast risk, land history and your geographical location. Plus, keep in mind that some varieties are more susceptible to it than others, and that your rotation and nearby crops could have an impact."

One of the most important things with any pesticide is to understand the canopy structure of the crop and how to penetrate this with the product, using water volume, nozzle selection and forward speed being key, says James.

"At a full dose, Zenby should be applied with 300 I/ha of water, but depending on dose rates can be

reduced pro rata but coverage is still key. And of course, if you're mixing with partner products, you must always adhere to their label requirements. Higher water volume and nozzle choice are the best ways to achieve canopy penetration, which can optimise product performance."

As for taking a low input, low output approach, Mike struggles to see how this ever works out. "I agree that growers should look after decent crops and take steps based on perceived risks but even when the price of OSR is low, yield is still everything, because it always multiplies up into the £/t and either way you'll still have to cover fixed costs as well as variables."

James agrees that there's always going to be variable costs to manage, but the fixed costs still have to be paid for. "If you're planting a crop, you should be investing in it, otherwise, don't plant it."

Mike stresses the importance of not approaching this year's crop based on last year's. "With so many of these diseases we always have to target them in a protectant capacity rather than a reactive one. The more you can prevent the loss of green leaf area then the more potential the plants have to photosynthesise - this'll always be better for the crop overall."

Although he isn't aware of any factors that could affect the efficacy of Zenby, Mike warns that applying it in situations where sclerotinia is overwhelming and where an application has been really delayed could impact its level of control. "However, this is true for a lot of products, so be sure to apply with timeliness to achieve the best results."



Keep the volume up

At the full dose rate Zenby should be applied with 300 l/ha of water, and at lower rates a decent water volume should still be maintained to ensure effective coverage.