

Resistance without compromise?

“What we’re calling the second generation of BYDV varieties is a significant step forward.”

ANDREW CREASY

As growers balance disease risk, input costs and changing stewardship requirements, genetics are becoming an increasingly important part of the BYDV conversation. In its latest survey, *CPM* finds out how much virus risk is influencing varietal choice.

By Charlotte Cunningham

Few diseases have shaped autumn cereal management quite like barley yellow dwarf virus (BYDV). Spread by aphids and capable of causing significant yield losses in susceptible crops, it’s long been a challenge growers have sought to manage through a combination of cultural controls, seed treatments and insecticides.

But with the loss of key chemistry, increasing scrutiny around insecticide use and changing weather patterns, the way growers approach BYDV appears to be evolving...

A recent *CPM*/RAGT survey suggests the virus remains a familiar challenge across UK arable businesses. Yet despite most growers having encountered the disease and many facing increasing restrictions around traditional control options, more than half have never grown a BYDV-resistant wheat variety.

So, what’s holding them back?

For most growers, BYDV is far from a new problem. The survey found just 5% of respondents had never seen

BYDV symptoms in their crops, while 72% reported seeing symptoms on occasion and a further 15% said they encounter the disease every year.

According to RAGT’s Ed Stanford, recent seasons have highlighted just how variable BYDV pressure can be, while also raising questions around whether the industry is seeing a genuine increase in infection levels. “This year we’ve seen more cases of BYDV than we’ve ever seen before, but due to the infection coming in post-Christmas, the yield impact hasn’t necessarily been as severe as some previous outbreaks,” he explains.

“Last year was arguably a worse year for BYDV because where people were seeing it, they were observing much greater yield damage. This year we’re seeing more people experiencing BYDV, but generally from later infections.”

He adds that what concerns him most is the longer-term trend. “The feedback we’re getting from farmers and from our own travels around the country is that there seem to be more and more cases

of BYDV. We don’t know whether that’s because people are becoming better at identifying it, or whether it’s genuinely increasing, but if we take it at face value, we’re moving into a higher-risk situation.”

Bartholomews Agri Food agronomist and technical director, Andrew Stilwell has observed a similar pattern. “Before Deter was withdrawn, symptoms were far less common,” he says. “Since then, I’ve certainly seen a lot more BYDV in crops.

“It remains heavily influenced by autumn weather conditions, but where



Seed treatments no longer an option
For RAGT’s Andrew Creasy, the loss of Deter represented the removal of an important tool from the BYDV management toolbox.

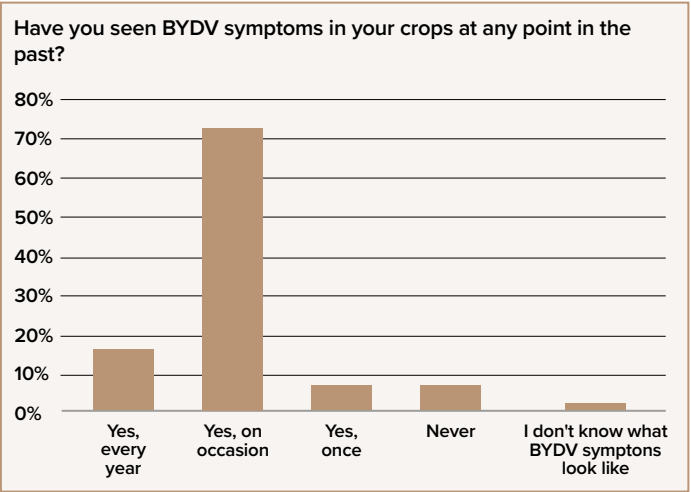


The extent of BYDV pressure
According to RAGT's Ed Stanford, recent seasons have highlighted just how variable BYDV pressure can be, while also raising questions around whether the industry is seeing a genuine increase in infection levels.

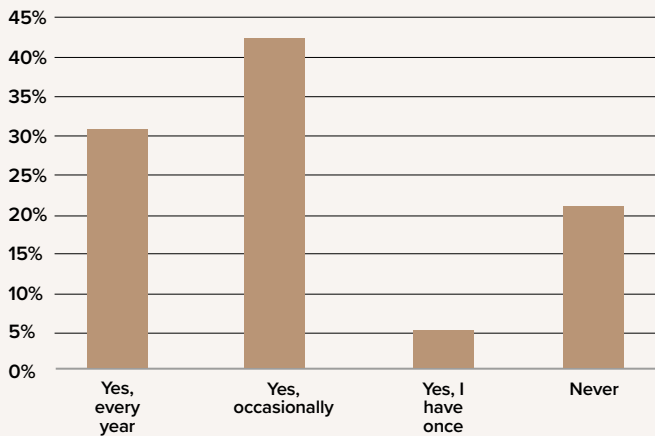
► we experience milder autumns with warmer temperatures and conditions that favour aphid activity, the incidence of BYDV is definitely increasing.”
He adds that the 2025-2026 season has been one of the most notable in recent years. “The worst year I'd previously seen was 2015, but this season is shaping up to be one of the most significant BYDV years since then.”
While BYDV itself might be nothing new, the way growers manage it has changed considerably. Prior to its withdrawal, Deter (clothianidin) formed a key part of many BYDV management programmes. In fact, almost 79% of survey respondents said they had previously used the insecticidal seed treatment.
For RAGT's Andrew Creasy, its loss represented the removal of an important tool from the toolbox. “If we had every tool available – seed treatments, foliar insecticides and

resistant varieties – that would be ideal. But we don't,” he says. “We lost one of the more useful tools available to us and now we're largely reliant on foliar applications and resistant varieties, both of which have a role to play.”
Andrew Stilwell agrees and says the impact was quickly felt on farm. “It created logistical challenges because it often meant an extra pass in the autumn, or perhaps having to travel earlier than we normally would,” he explains. “There were also additional costs involved and, of course, greater environmental considerations.”
While insecticides remain an important part of many BYDV management programmes, their use is becoming increasingly targeted. Some 42% of respondents said they apply autumn insecticides occasionally, while 31% do so every year. Just over one-fifth said they never apply autumn insecticides.
According to Andrew Stilwell, that reflects what he's seeing on farm. “I have some clients who simply don't wish to use insecticides and are prepared to accept the consequences of that decision,” he highlights. “Others have entered stewardship schemes which restrict insecticide use, while many are still using an autumn insecticide but limiting themselves to a single application.”
That trend is particularly relevant given the survey found almost 59% of respondents have at least some land entered into CIPM4, the action which restricts insecticide use on arable crops. More than 12% reported having their entire farm entered into the action.
Andrew Stilwell adds that many growers are increasingly relying on cultural controls as part of a broader integrated pest management approach. “One of the biggest advantages we have is that we generally don't drill particularly early,” he

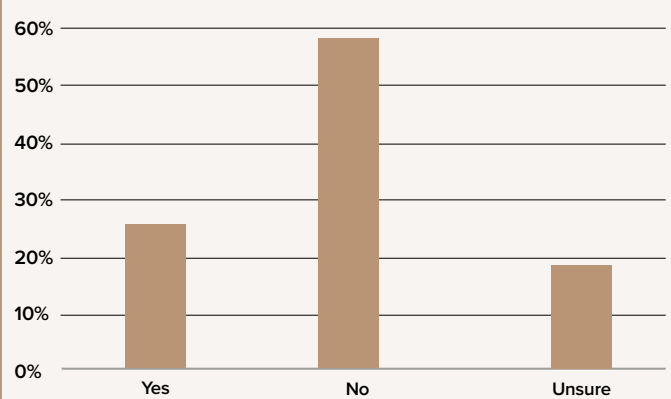
says. “Most of our wheat is targeted for the middle of October onwards because of grassweed management requirements.”
“That later drilling naturally reduces some of the early infection risk. We're also using stale seedbeds and breaking green bridges, which helps to reduce aphid movement into crops.”
The weather is adding another layer of uncertainty and Ed says that if conditions remain warm and dry, aphids continue reproducing and spreading the virus. “Equally, if conditions become wet, growers may not be able to travel to apply an insecticide when they need to.”
Taken together, the findings paint a picture of growers increasingly focused on managing risk. Which perhaps makes one survey result all the more intriguing...
Despite the prevalence of BYDV, the loss of Deter and increasing restrictions around insecticide use, the experts say there's another tool in the armoury which is still being underutilised – resistant varieties. This was reflected in the survey, with 55% of respondents noting they've never grown a BYDV-resistant wheat variety.
Given the challenges highlighted elsewhere in the survey, that figure may come as a surprise. However, the responses also provide some clues as to why adoption remains relatively limited. When growers were asked what single factor would encourage them to grow more BYDV-resistant varieties, the most common response was higher yield (39% of respondents). Better disease resistance and improved suitability for end markets followed close behind.
Similarly, when asked how much theoretical yield they'd be prepared to sacrifice in exchange for BYDV protection, most respondents indicated they'd accept little or no compromise.
For Andrew Creasy, those findings



Do you apply insecticides to your wheat in the autumn?



Have you ever grown a wheat variety with BYDV resistance?



A cultural approach

Andrew Stilwell of Bartholomews Agri Food says that many growers are increasingly relying on cultural controls as part of a broader integrated pest management approach when it comes to BYDV.

reflect perceptions that have followed resistant varieties for a number of years. "There's always been a concern that if you add another trait, growers will have to compromise somewhere else," he says. "But that's no longer the case."

He adds that the latest generation of BYDV-resistant wheat varieties bears little resemblance to the material that first introduced the trait to the market. "What we're calling the second generation of BYDV varieties is a significant step forward," he explains. "It's not just about having BYDV resistance; these varieties also carry strong disease resistance packages, good agronomics, competitive yields and, in the latest material, orange blossom midge resistance as well."

"These don't rely on one trait alone," he continues. "They're high-performing wheat varieties in their own right which also happen to carry BYDV resistance."

Building on the concept of resistance without compromise, Andrew Creasy says recent additions to RAGT's portfolio have been developed to demonstrate how far the breeding programme has progressed.

RGT Guardsman represented a key milestone for the breeder, combining BYDV resistance with a yield performance capable of competing with mainstream feed wheats. However, he believes the next generation of material takes that a step further. "As breeders, we're always trying to solve tomorrow's problems. The challenge is delivering those solutions in varieties that growers genuinely want to put in the ground."

The latest options combine BYDV resistance with orange blossom midge resistance, strong yellow rust and brown rust ratings, improved septoria resistance and competitive yields. Many have also been developed with earlier drilling slots in mind, helping growers to manage periods of elevated aphid pressure while maintaining strong agronomic performance.

Importantly, the trait itself represents true genetic resistance rather than simply tolerance to infection, explains Andrew Creasy. "The plant receives the virus and then fights it off internally," he explains. "It's not simply a case of a variety coping better with infection or

avoiding the worst of the symptoms. The resistance is there and it continues working regardless of infection pressure."

Andrew Stilwell has witnessed a similar shift from an agronomy perspective. "When the first resistant varieties became available, they found a niche among growers who'd experienced severe BYDV problems," he says.

"Now, as autumn conditions have become more challenging and the genetics have improved, interest has increased considerably."

He points to RAGT's Goldfinch as an example. "There's a perception that there's a yield penalty attached to growing it, but in our experience, when it's grown as a crop in its own right, we don't really see that penalty at all [compared with other Group 2s]."

"That gives growers confidence to continue with it and helps demonstrate how much the genetics have moved forward."

For Ed, that means the conversation is increasingly shifting beyond headline yield figures alone. "If you're achieving similar yields, but with stronger disease resistance and lower overall risk, then the gross margin equation starts to look very different," he concludes. "Farming today is increasingly about managing risk as well as maximising output." ●

Winner announcement

Congratulations to prize winner Will Cobley who responded to the CPM/RAGT survey and provided insight on BYDV. Will has won a Ninja BBQ, worth £400.

He correctly answered the tie-breaker question of "Which was the first ever wheat variety with BYDV resistance to yield more than 100% on the UK Recommended List?" With: "RGT Guardsman"

To engage with future surveys, visit the CPM website and sign up to the newsletter.