

Dwarf viruses in winter cereals

Neil Watson Hutchinsons Technical Manager urges growers not to be complacent about the risks of BYDV this autumn.

Barley Yellow Dwarf Virus

With last autumn still very fresh in most people's minds, the temptation will inevitably turn to drilling early, irrespective of the impact on BYDV control or even the hard-learned lessons for grassweed control. Let us not be complacent in underestimating the potential impact of BYDV, once infected we cannot cure the situation as with foliar diseases.

The implications for early drilling and BYDV control are likely to be two-fold: -

- Firstly, the number of potential sprays needed will increase. In most cases the extended period of risk is associated with earlier drilling, especially if this coincides with earlier aphid flight (see Fig 1 below). However, if the warmer conditions persist later into the autumn, conditions conducive to aphid flight remain, extending further the period of risk. Milder winters and few frosts also mean greater aphid survival.



Neil Watson Hutchinsons Technical Manager

- Secondly despite our best endeavours, it is increasingly probable we will see more BYDV in our crops, due not only to timing issues, but also the short persistency of the products we are now having to rely upon.

Avoiding losses from BYDV is all about managing risk.

We will be increasingly reliant on a range of cultural means, as opposed to being wholly reliant on chemical control alone.

- **The green bridge potential risk has increased this autumn: -**
 - a. A greater potential reservoir of BYDV infections will come from winter crops this season, primarily from the difficulty in getting well timed sprays onto crops due to the wet soil conditions. However, that is not discounting the amount that was in some late drilled spring crops. The bigger the reservoir of infection, the greater the potential risk.

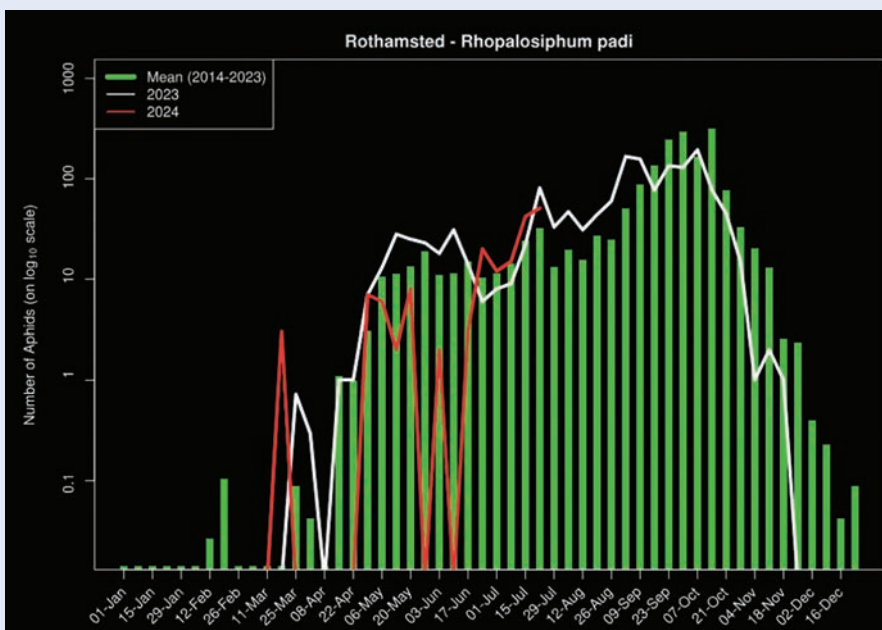


Fig 1: Bird Cherry Oat Aphid numbers from the Rothamsted suction trap. Numbers are already ahead of the long-term norm.



- b.** Bushel weights are lower this year, leading to a greater potential of seed going out the back of the combine, so more potential volunteers. Although seedbeds are dry at the time of writing, the return of soil moisture will ensure their rapid emergence. Controlling the green bridge will be even more critical this year. Be aware, aphids in the short term can feed on the crops' dying roots without appearing above ground.
- c.** A greater movement to direct drilling/ minimal soil disturbance will increase the risk of direct transfer.
- d.** Increased use of cover crops can act as a potential reservoir, as they may well include an element of cereals within the mixture. Likewise, environmental schemes such as the insecticide-free or grass margins option increase the diversity of natural predators, yet could just harbour more aphids, especially since we are unable to treat them until the end of the scheme.
- e.** Woodland and waste ground could equally be a source of infection.

Ensure there is sufficient time between killing the volunteers through desiccation or cultivations and drilling the next crop. As the volunteers start to die back and turn yellow, they could present a greater risk of attracting aphids than would normally be the case.

- **Crop drilling date**
Early drilled crops are at greater risk and are likely to require multiple applications. Remembering the conditions last autumn, the temptation to drill early this season might just be too great.
- **When aphid numbers start to build**
So far, numbers are still building and are a few weeks ahead of last year and the long-term average (as illustrated in Fig 1). The warm and dry conditions experienced recently, can only lead to increasing populations earlier in the season.
- **The numbers carrying virus**
Another surprising factor, highlighted by recent monitoring, was the potential number of aphids carrying virus. Numbers were nearer thirty percent, higher than the five percent traditionally considered the norm.
- **The other key factors** to consider in terms of risk.
Anything that is likely to yellow the crop up:
 - Manganese deficiency
 - Temporary yellowing from pre-emergence herbicides and heavier stacking options.

Timing is key

Our Omnia climate module has a BYDV risk tool. It combines 1km accurate weather data, with the crop drilling date to determine risk on a field-by-field basis. It expresses risk based on a traffic light-based approach, on reaching amber status, it will function as a warning, to start considering treatment. Automatic email notifications can be set up to ensure that users are alerted.

Wheat dwarf virus in cereals

The threat and relevance to the UK

A regular threat on the continent now confirmed in the UK from samples submitted retrospectively. Although samples were specifically from the Eastern Region, it would be naive to think it has not been present elsewhere in country.



Damage from leafhoppers, just "individual plants" affected.



Adult leafhoppers

Why might it go undetected?

It is exclusively spread by leafhoppers. They do not form colonies like aphids, they just infect individual plants then move on. If you are only looking for aphids you could miss them.

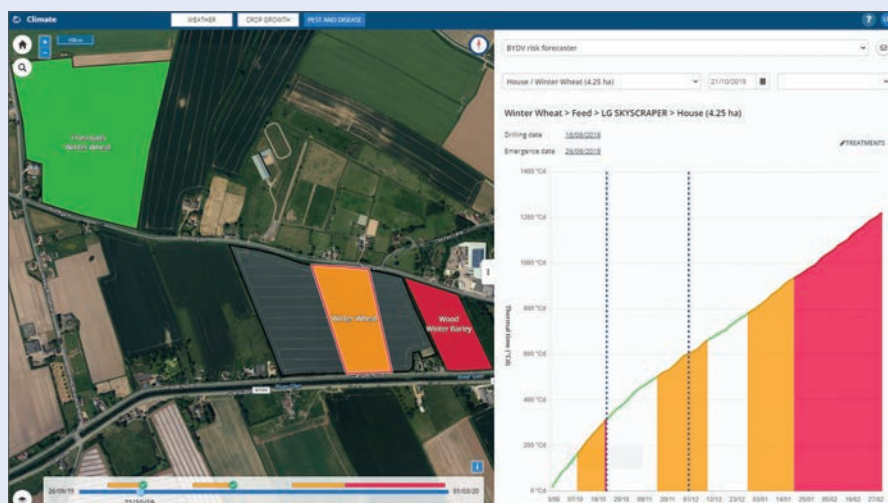
How do we know we might have a problem?

By observations, or by monitoring. To monitor, place sticky traps in crops after drilling, on a slight incline twenty metres plus from the headland in the direction of the prevailing wind.

Control

Aphicides targeting aphids are likely to take out any leafhoppers, the issue being they could have already done the damage before aphid colonies have built, so an earlier timing may be required.

Questions about BYDV risk this autumn? Contact us:
information@hlhlt.co.uk



Hutchinson's Omnia precision farming tools take the guesswork out of critical product timings.

Managing cash flow at the start of a new season



Will Foyle
Hutchinsons Farm Business Consultant

Will Foyle, Hutchinsons farm business consultant, explains the importance of robust financial planning and the need to stay ahead of potential cash flow issues.

Recent data from the Bank of England reveals a widening financial gap amongst farm businesses. Those in a secure financial position can weather the challenges of fluctuating market conditions, while others face increasing difficulties, particularly as banks adopt a stricter approach to lending.

Accurate budgeting allows farmers to anticipate financial shortfalls and make informed decisions about where and how monies can be spent, ensuring that their operations remain financially viable.

The new season necessitates significant investments in new crops, from seed to herbicides, and fertilisers, and this is before any income from the 2024 harvest is realised. It also comes at a time of settling of bills from the previous harvest, such as for diesel and additional labour or contractor costs that may have occurred.

The convergence of these financial demands without a corresponding inflow of revenue places a significant strain on farm businesses, making effective cash flow management and forward planning essential.

The volatility in crop prices highlights the need for farmers to closely monitor and adjust budgets.

A decline in the November 2025 futures price from £205/tonne earlier this summer to £189/tonne at the time of writing, though seemingly modest, can substantially impact overall profitability, necessitating a thorough review of projected income and expenses for the upcoming season.

Navigating Funding Options: Overdraft vs. Loan

As cash flow pressures mount, many may find themselves in need of additional funding, either through an overdraft or loan. Each option has its pros and cons, and the choice should be based on a thorough understanding of the business's financial position and needs.

Overdrafts, while flexible and convenient for short-term cash flow needs, typically come with higher interest rates and are unsecured, meaning the bank can demand repayment at any time. This makes overdrafts more appropriate for occasional, temporary cash shortfalls.

However, if a farm is consistently reliant on an overdraft, it may be more prudent to consider a loan, which offers a fixed repayment schedule and often more competitive interest rates.

Many farm businesses are increasingly opting for loans over overdrafts, particularly in cases where significant amounts of capital are tied up in machinery or legacy land purchases.

For instance, a 400-hectare farm could have £500,000 borrowed within overdraft facilities, HP agreements and other short-term finance offers and in the current climate could face crippling interest charges if left unchecked. Transitioning to a secured loan could reduce these interest payments and provide greater financial stability.

If you have questions about managing cash flows, contact us: information@hlhltd.co.uk

The overarching message is clear:

Accurate business planning is more crucial than ever.

Whilst this has always been a key aspect of successful farming, the current economic climate makes it imperative for farmers to meticulously manage their cash flow and borrowings.

By doing so, they can navigate the financial pressures of the new season and position their businesses for long-term success.

Strategic Land Use and Capital Allocation

The goal is to optimise the use of land to maximise profitability, rather than simply maintaining traditional practices that may no longer be financially justifiable.

Consider the best approach for marginal land - can it be improved by drainage, liming, gypsum, etc, or is it better to remove it in the short term through measures such as SFI or even a longer-term measure like Biodiversity Net Gain (BNG).

Freeing up working capital is key: Reassess fixed costs, particularly those associated with field operations. For instance, replacing certain operations by using contractors could reduce the need for increasingly expensive and specialised machinery, freeing up significant capital.

Business management tools, such as the Machinery Tool available in Omnia, can analyse various machinery scenarios by inputting costs and assessing potential financial outcomes. Such tools are invaluable for making data-driven decisions that enhance the overall financial health of the farm.



Sharing practical knowledge for best practice in potato growing

Hutchinsons Potato Demonstration Day this year, held at Worth Farms, Holbeach, Lincolnshire, focussed on potential solutions to address some of the key challenges faced by UK potato growers.

Ongoing research into wireworm, PCN management, crop safety of post-emergence herbicides, nutrition trials, plus updates about root lesion nematodes were some of the topics covered on the well-attended day.

Hutchinsons root crop technical manager Darryl Shailes highlighted some of the key field trials being carried out to assess the impact of different strategies on wireworm populations in a crop of Maris Piper.

These include a pyrethroid granule which has approval in the pipeline and a calcium-cyanamide based fertiliser.

"At the moment we are focused on the theoretical effects of these products," said Darryl, noting that the fertiliser has had some effect in onions.

Some cover crop species help reduce wireworm populations, and the Hutchinsons team is measuring the effects of two different types of buckwheat, a high glucosinolate mustard, a lower glucosinolate standard mustard, and a multi-variety cover crop for soil health, revealed Darryl.

He also presented the additional work exploring the potential benefits from growing DeCyst-Prickly (*Solanum sisymbriifolium*) and DeCyst Broadleaf (*Solanum scabrum*), which can be used as catch crops for PCN as well as cover crops.

Darryl said: "We will be comparing the final populations with those initially present (pf/pi) so growers can make informed strategies on how to reduce PCN infestation."

Simon Faulkner of SDF Agriculture pointed out the importance of developing strategies that are not dependent on pesticide approvals.

"Concern over pesticide approvals highlights the importance of knowing which varieties can offer resistance and/or tolerance," he said. "Growers must manage their land to ensure that PCN levels are manageable without over-relying on pesticides."

PCN varietal resistance trials, which started last year are continuing, and are assessing a mix of older and newer varieties.

"We are seeing some additional crisping, packing and chipping varieties which have both tolerance and resistance, which will be important traits going forward."

French marigold (*Tagetes patula*) and certain varieties of oil radish cover crops can be effective at reducing soil populations of root lesion nematode (RLN) *Pratylenchus* spp., revealed PhD student Vongai Chekanai of Harper Adams.

The main crops susceptible to RLN include potatoes, onions, carrots, daffodils and other narcissi. In potatoes, *Pratylenchus* is associated with potato early dying disease and poor emergence.

Vongai said: "Cover crops can be non-hosts, trap crops, or biofumigants to nematodes. On the other hand, other species used as cover crops can be good hosts which support nematode multiplication."

"Our trials indicated that some varieties of oil radish and French marigolds were poor hosts and suppressed RLN population numbers, however, Indian Mustard, which is popular as a biofumigant to suppress potato cyst nematodes, increased *Pratylenchus* spp."

Nitrogen Use Efficiency (NUE) trials drew a great deal of interest and Rob Jewers, crop nutrition specialist, pointed out foliar bio-fertilisers have the potential to allow growers to choose their product according to conditions each season. *Utrisha N*, *Vixeran* and *R-leaf* are being evaluated to understand how to get the most from them.



Darryl Shailes Hutchinsons Root Crop Technical Manager

Healthy soils and potatoes

Ed Brown, Hutchinsons head of agroecology services, emphasised that healthy soils are key to healthy crops, and appropriate strategies can deliver real benefits for potato crops.

Strategies include minimising soil disturbance, maintaining living roots in the soil throughout the year, maximising diversity, and, where possible, integrating livestock into the rotation.

"These activities will help develop truly healthy soil, thereby growing truly healthy plants which will rely on less intervention but provide better yields and better quality."

He drew attention to possible reasons why PCN may be proliferating, such as too short rotations and lack of predators for those nematodes in the soil food web.

"We need to ensure that the soil food web is balanced, so individual species never get a chance to take hold."

Keep up to date with news about our crop trials via our website: www.hutchinsons.co.uk

Timing is everything

*Timing residual herbicides to the emergence timing of your grassweeds will be vital this autumn, says **Dick Neale** Hutchinsons Technical Manager.*

Recent Fieldwise articles have stressed the need to rethink the application timings of residual herbicides for black-grass control in particular, but also for bromes and, to an extent, ryegrass control.

My basic premise is that sequencing of residual herbicide now out-trumps the bigger pre-em stack, but I think it is important to also put the accepted terms of pre-em, peri-em and 'top-up' into context.

Pre-em of what ...the crop or the weed? Traditionally this term has always meant pre-emergence of the crop, and product approvals always relate to the crop growth stage in which they are used, not the growth stage of the weed they are targeting. Regardless of drilling date, it is assumed that accurate pre-em of the crop is also an accurate pre-em timing for the weed ...that is potentially a hugely inaccurate assumption.

The direction we are now suggesting is that, where approvals allow, the residual herbicides are targeted in the pre-em position of the weed, and that frequently, that is not the same as pre-em of the crop.

With so many growers having focussed on the use of stale seedbeds and delayed drilling from mid-October in recent years; while this has been hugely successful it is no surprise, and in fact totally predictable, that black-grass has adapted to that approach ...adapted to, or been selected for. In either case we are seeing a decline in the effectiveness of stale seedbeds through September and early

October and a prevalence for black-grass to germinate in its greatest numbers from mid-October.

Again, for context, 'greatest numbers' does not mean the kind of populations we were previously experiencing in late September stale seedbeds of the past. The very process of using those stale seedbeds has seen a steady decline of the seed bank within the soil and that is reflected in a reduction of plant numbers emerging through October, albeit the fact that those plants, if uncontrolled, have the potential to produce significant tiller numbers and heads.

Early drilling

Earlier drilling of cereals is firmly on the cards for this autumn, as a reaction to the biblically wet experience of Autumn 2023 and to an extent that is partially a sensible reaction to the black-grass germination pattern being discussed. But, where significant black-grass populations exist, earlier drilling still means from 1st October, not a wholesale move to mid-September.

If the use of a pre-em stack remains firmly linked to the drilling date of the crop, rather than emergence timing of the weed, then the earlier we drill the wider the gap becomes between the pre-em application and the actual emergence of the bulk of the weed.

Understanding the influence of the DT50 (half-life) of individual actives and the reality of them delivering adequate control in drier, warmer soils where degradation is even quicker, is vitally important. If drilling on the 25th September into warm



Dick Neale Hutchinsons Technical Manager

and drier seedbeds and applying a product with a DT50 of 30 days with black-grass not wanting to grow until the 20th October ...you can see the issue. At the point of bulk black-grass emergence, the pre-em herbicide is already at its DT50 threshold, and the traditional 'top-up' application is a lower dose of a less effective product ...the 'big guns' having been used at the pre-em timing.

If drilling earlier, it is a reasonable argument that the sequence of herbicides should be re-focussed with far more emphasis placed on what was considered the 'top-up' application ...that now becomes the true pre-em timing of the weed while it is in fact post-em of the crop.

Individual product approvals will determine where they can be positioned, but except for triallate and aclonifen, almost all our mainstream residual herbicide options have post crop emergence approval.

Individual grassweed populations must be observed and assessed for population size and emergence pattern. Focussing your timing of residual herbicide to the emergence timing of your weeds will be vitally important.

Questions about this article?

Contact us:

information@hlhltd.co.uk

Omnia's upgrade

Following a hugely successful launch at Cereals this summer, we ask **Lewis McKerrow**, Hutchinsons Head of Field-Based IT to answer some of the most frequently asked questions about the exciting development.



Lewis McKerrow
Hutchinsons Head of Field-Based IT

Q: What is the Omnia EasyPlan upgrade?

A: It is a major upgrade to Omnia that has moved it from a precision mapping system into the Farm Management Software (FMS) space. Based on user feedback we have added a Spray module for creating spray plans, a heavily revised Field Diary module that added Tasks and Task Management, and a completely new Stocks module to allow for inventory control.

Q: How have the Omnia upgrades gone down with users?

A: Really well, we completed surveys and held focus group meetings ahead of our planned developments and this really helped us to refine what growers wanted from an FMS. Some of the most pleasing feedback has been from new Omnia clients who have moved from another system and have been very complimentary about the ease of use.

Q: Is Omnia just for Hutchinsons customers?

A: No, Omnia is available to all growers in the UK

Q: Can my non-Hutchinsons agronomist use Omnia to make my spray plans?

A: Yes, with the new user permissions functionality you can invite your agronomist into your Omnia holding(s) to make it simple and easy to keep all your records in one place.

Q: I have a farm secretary and multiple operators, does it cost more for extra users?

A: No, as part of your Omnia subscription you can add as many users to your holding as you require. You can also set what access level each user should get. For example you may choose that operators can only complete Tasks and not see financial information.

Q: Is Omnia easy to use out in the field?

A: Omnia Scout is a mobile app for Android and iOS that allows access to key information when out in the field. Scout allows access to Map Layers, Tasks, and Records, to make it easy for operators to complete Tasks and help to streamline the record keeping process.

Q: I am keen to move to a more digital based record keeping system, but can I still produce reports to print?

A: Of course, Omnia has an extensive Report module that allows many different report types and styles to be created as PDFs that can be emailed or printed. We have also added the ability to export key data as Excel files to allow users flexibility to use the data as they wish.

*If you would like to find out more about Omnia please contact our specialists:
info@omniadigital.co.uk
or **01780 919010***

Q: Will Omnia be updated to keep up with new environmental schemes such as SFI?

A: Yes, we are constantly delivering new functionality and SFI is one of the updates we delivered in August. We are very proud of the fact that Omnia is a British system developed for British farmers, and this includes ensuring that legislation in all our devolved nations is catered for.

Q: Moving to a new FMS is a big change, how would we be supported in the transition?

A: We have local digital specialists who are your point of contact at a farm level. There is also a dedicated support team that can be contacted via phone or email to assist with any questions. Training and help videos are also available within Omnia to ensure that you have all the resources required for a smooth transition.

For more information on any of our products or services, please contact your local Hutchinsons agronomist, or contact us at:

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