

More connectivity with Omnia than ever before



Oliver Wood
HUTCHINSONS PRECISION TECHNOLOGY MANAGER

One of the main sticking points with precision farming has always been moving data from one system or machine to another. However, with the Omnia Precision Agronomy system this is now easier than ever before.

Exciting collaborations with leading machinery manufacturers such as CLAAS, Väderstad and data management system Muddy Boots and the OmniaHub system, have resulted in faster and more efficient streamlined data connection - than has ever been previously possible.

"This is a significant step change in the way that data is handled for precision farming and we are proud to be at the very forefront of this," says Oliver Wood, Hutchinsons Precision Technology Manager.

"For some time now, we have been working closely with our industry colleagues to look at how to connect

platforms together, to transfer data using modern cloud computer systems - which means that the user doesn't have to handle any data."

"So, in effect the systems are managing the data transfer between them, taking away the need to manually move data from one machine to another, leaving farmers with more time to look at how the data is being used to improve their farm productivity."

CLAAS

The new connectivity arrangements mean that Omnia users will be able to generate a seamless flow of data

from the CLAAS Telematics system straight into Omnia.

Field boundaries can be shared between the two systems and yield maps can be automatically sent to and processed by the OmniaHub system. Users will be able to make crop management decisions as soon as the field is harvested, explains Mr Wood.

"This is a really exciting development as we want customers who own CLAAS machines to have every possible opportunity to use the data our machines produce, and this type of link delivers just that," says CLAAS UK's EASY Product Manager, Edward Miller.



VÄDERSTAD

> It is also now possible to use the Omnia Connect app with Väderstad E Services drills.

Variable rate drilling plans generated in Omnia, or in any other third-party system, can be seamlessly transferred to the simple to use Connect app which is connected to a Väderstad drill.

Those customers who do not currently use the ISOBUS functionality on these drills will be able to unlock the variable rate potential of their drill using the Omnia Connect system.

"Implementing variable rate drilling plans is easier than ever before – and anything that makes our customers' lives easier, at what is often a very busy time, has to be welcomed and we are delighted to be in a position to offer an interface with the Väderstad

machines for this. The Omnia Connect system is utilising this interface," says Pontus Nordfelt, Systems & Components Manager for Väderstad.



grewer management
greenlight

Muddy Boots users will also be able to benefit from the new connectivity developments; it is now possible to seamlessly transfer field and cropping information and field maps between Greenlight Grower Manager and Omnia.

Information can be changed in one system and it will then be automatically passed to the other – it's as simple as that.

This ensures that information in both platforms is the same and that users aren't having to spend their time making this the case.

Paul Thomas, Global Commercial Manager for Muddy Boots farm software, believes that this

connectivity will make users more efficient as it will remove double data entry, reducing the risk of differences in data.

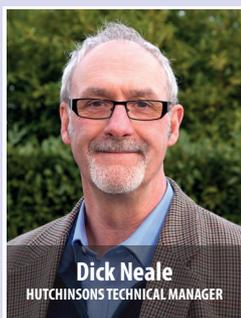
"This impressive development means that our customers will have direct and easy access to the mapping and other functionalities within Omnia," he says.

Available now, these very exciting developments within Omnia offer real time benefits to users, such as reduced operator data handling and time savings, thereby increasing efficiency, which has to be welcomed by all users.

Visit the website

www.omniaprecision.co.uk
for further information
on the latest connectivity
developments.

Fieldwise
Answers



I struggled to apply timely grassweed herbicides in the autumn, what do I do now??

Dick Neale (Technical Manager) discusses...

This autumn has resulted in such a huge variation in conditions, it is almost impossible to cover a general scenario.

Good weed control, particularly grass weed control, is so highly dependent on adequate crop competition and this must be taken into account when applying herbicides in a 'catch up' situation.

Aggressive use of herbicide mixtures in a post emergence situation can be damaging to crop vigour and this must be borne in mind. Multiple product tank mixtures should be avoided.

As a general rule, established crops have been late drilled this year, have been subjected to a very poor

foundation growth period and a delayed dormancy break in black grass has seen significant emergence within the crop, although, where applied, pre-em residuals have worked well.

Crops will remain small with an open canopy well into February and March this spring and that will allow sunlight to reach the soil surface potentially stimulating a significant spring germination of grass weeds.

A further residual application should therefore be considered during mid-late February, tank mixed with a contact product where significant grass weed numbers are already present.

Refer to product labels for spring use clearance - several products have

recently had amended approvals to end of March use, which used to have an end of December cut off. Others already had this use flexibility.

In the spring residuals need moisture and cool conditions, so apply in February at the earliest opportunity. Where tank mixed with a contact product, utilise 100-150 l/ha water with a medium spray as the spiky leaf target is very hard to hit. Higher water rates with ultra-low drift nozzles will not give adequate deposition on fine upright target leaves.

If you have a question or challenge about crop production issues you are facing on your own farm, please email us: information@hlhlt.co.uk and put 'Fieldwise Answers' in the title.

2020 The Beginning of a New Era in Cereal Disease Control

In contrast to last autumn and early winter, much of the UK has experienced extremely wet conditions so far this season which have severely limited drilling opportunities for winter crops. In addition, revocation of some established fungicide active ingredients and registration of some exciting new fungicides means that cereal disease control is likely to be very different in 2020 compared to previous seasons.

In this article Dr David Ellerton, Hutchinsons' Technical Development Director, considers principles governing the construction of fungicide strategies designed to maintain yield potential while at the same time ensuring sound stewardship practices are put in place to protect new and existing chemistry from further resistance development.

Influence of the weather, variety and location

Autumn and early winter 2018/19 saw mild temperatures accompanied by relatively low amounts of rainfall across much of the UK. This continued into late winter and spring

and, apart from a relatively wet March, it wasn't until June and July that wet weather led to significant late increases in diseases such as Septoria.

In winter wheat variety trials in 2018/19 at Hutchinsons' Regional Technology Centres (RTCs), fungicide treatment produced yield increases averaging 2.49 t/ha across all sites and varieties (Figure 1) well up on the 1.54 t/ha response the previous season. However, there were extremely large differences in responses with varieties such as RGT Gravity, KWS Jackal, LG Graduate, KWS Barrel, Santiago and KWS Lili giving average responses of over 3.0 t/ha, while SY Insitor, LG Sundance,

RGT Saki and KWS Kinetic averaged a smaller response of less than 2.0 t/ha. However, at our site at St Maby, where disease pressure was high, yield responses averaged 5.20 t/ha across all varieties with treated yields averaging 11.62 t/ha.

In contrast to last season, the weather across much of the UK last autumn was extremely wet compared to the 30-year mean (see Figure 2), greatly limiting opportunities to drill winter crops, with unsettled weather continuing into early 2020.

Drilling date effect

Later drilling is likely to lead to a lower risk of Septoria in many crops of winter wheat this spring although yellow rust is often higher in later drilled crops, as is mildew. However, Septoria is often driven by rainfall in April and May, so it is important to be aware of the potential risk of the disease developing. There is also a need to take into account yield potential. The plant's physiology and less time to develop means less tillers and less leaves. Leaves need protecting to optimise that yield potential, as more can be lost more quickly in a season such as this.

Winter Wheat Varieties Mean of 7 Sites 2018/19 Yield Response (t/ha)

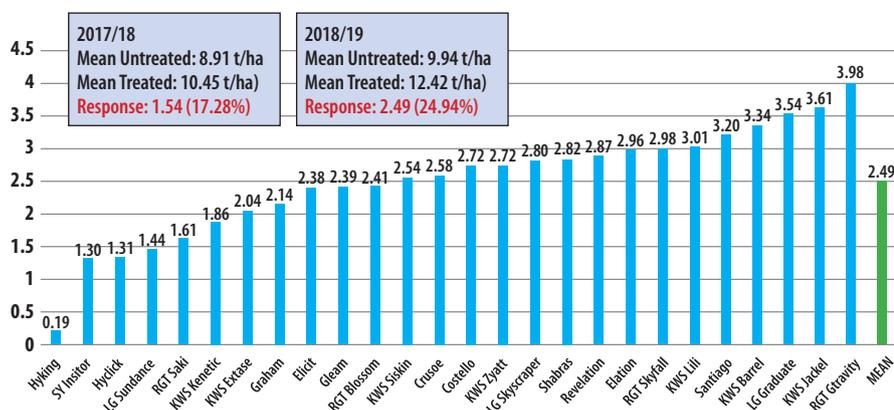


Figure 1: Varietal response to fungicides in Hutchinsons RTC winter wheat variety trials, 2018/19





Dr David Ellerton, considers principles governing the construction of fungicide strategies



England - Weather Patterns 2019/20 Season Rainfall & Temperature

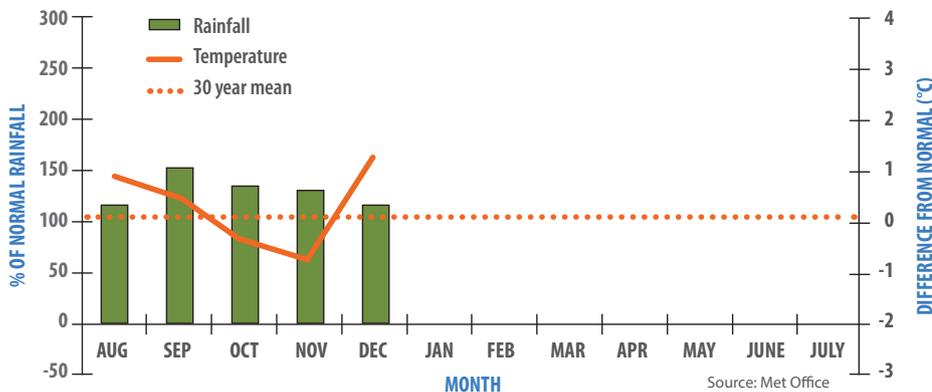


Figure 2: Comparison of rainfall and temperature in England for autumn 2019 compared to the 30-year mean

Varietal susceptibility

Weather effects and drill date are not the only factors to take into account when deciding fungicide strategies. Varietal disease susceptibility is a vital component and the latest AHDB Recommended Lists have recently given more detailed information on varietal susceptibility to Septoria tritici, usually the most important disease of winter wheat. Of the winter wheat varieties on the list, KWS Barrel and Elation (both rated 4.3 for Septoria tritici), Leeds, Viscount and RGT Gravity (all 4.8), and KWS Jackal and KWS Kerrin (both 4.9) are all particularly prone to Septoria infection, with

a rating of less than 5.0 and will need to be prioritised for protection against Septoria during the season. Varieties such as KWS Extase (8.1), LG Sundance (7.9) and KWS Firefly (7.0) are at significantly lower risk and fungicide programmes will need to be tailored accordingly.

When disease control programmes are being considered, it is vital that all the above factors are taken into account not just to ensure that the most cost-effective programme is chosen, but also to reduce selection pressure on our fungicide active ingredients.

Availability of actives

This season we will be losing some of our most established active ingredients such as chlorothalonil and fenpropimorph, along with fungicides from the triazole group such as propiconazole. Many others, such as epoxiconazole, are under threat, not just from the risk of revocation but also from the danger of continuing increases in fungicide resistance and it is vital we do all in our power to put in place stewardship programmes to protect the remaining ingredients in our armoury. This includes using appropriate doses of fungicides and utilising combinations of active ingredients with different modes of action.

Fortunately, a number of new active ingredients are in the pipeline this season - Revysol has been approved for use and Inatreq is also hoping to be approved in time for spring.

Revysol (mefentrifluconazole) is a new fungicide from the Demethylation Inhibitor (DMI) or triazole group of fungicides which has shown excellent control of a range of diseases in both wheat and barley, including Septoria tritici, offering a major step forward in control of this damaging disease.

Secondly, it is hoped that **Inatreq (fenpicoxamid)** will also be available this season. This ingredient is from the Quinone Inside Inhibitor (Qil) Group which has not been available in cereals to date. As with Revysol, it has also shown excellent control of Septoria tritici and offers an alternative mode of action for wheat disease control. With both of these ingredients, it is vital that strategies are put in place to limit the risk of resistance developing, to ensure they remain effective for many seasons to come.

Contact us for advice on where these ingredients can best be utilised in your cereal fungicide programmes this season.
information@hlhlt.co.uk



Wet soils taking remedial action

Dick Neale (Technical Manager) offers advice on diagnosing structural problems and taking appropriate steps to remedy the waterlogged soil conditions that many have suffered.

Autumn and winter 2019/20 have been wet across the country but conditions have varied from wet, with annual total rainfall ending up slightly above normal, to monsoon conditions where rainfall totals have doubled the annual average.

Progress with fieldwork varies from absolutely nothing touched, to heavily cultivated but undrilled in either case. These situations tend to be in areas where the high rainfall occurred, and occurred early, preventing any possibility of establishing crops.

We then have areas where the potential to establish a crop was there but in marginal conditions and the resultant crops are poor with significant surface water and rotting seeds.

Management of either situation this coming spring will have long term implications for soil resilience and the rotation so deciding the cultivation, cropping and any remedial action taken needs to be made with a cool head.

Dig to assess soil structure

Where rainfall timing and intensity was such that fields remain in untouched post-harvest stubble, the situation is better than many may like to think and valuable lessons can be learnt. Dig to check structure, it is likely to be good and an absence of surface ponding, good water flow from drains and a surface that 'walks well' are all indicative of a good soil structure. Be patient, pick your moment and just drill it, resist the urge to do any but the lightest of pre-drill cultivations.

It is worth running a check list for each field to help focus the decision process: -

1. Is the field suffering from water ponding at the surface?
2. Are, or have the field drains been running?
3. Have the drains been running as expected for the rainfall experienced?
4. Is the surface of the soil capped?
5. If sloped, is the surface 'ribbled', or is there obvious soil movement/erosion?
6. When dug, is there a wet zone overlying dryer soil - is it evenly moist throughout the profile, or is

water accumulating at a particular level in the soil?

7. If volunteer plants exist, are they healthy, are the roots penetrating to good depth?
8. When dug, is the soil penetrated easily or is resistance evident, at what depth is the resistance felt and can it be pushed through i.e. resistance from 12-20cm but soft above and below?
9. Is the field, or areas of the field, significantly damaged by harvest traffic or previous cultivation operations?

Water management into, through and out of the soil is a key indicator of issues present, or not, throughout the soil profile ...correct diagnosis is vitally important to ensure the appropriate remedial action is implemented.

Poor infiltration, or drainage issues?

Soils that have a history of residue removal and significant cultivation input that are now showing ponding at the soil surface, a general surface capping and evidence of 'ribbles' and surface soil and water movement, are most likely suffering from poor water infiltration. >



Dick Neale carrying out a Visual Evaluation of Soil Structure (VESS) test



> If under-drained and the drains have seen low flow and when dug the structure is predominantly soft with a very wet surface, but noticeably dryer profile below that, this would confirm that the issue is poor water infiltration at the surface, not poor drainage of water from the lower profile.

The planned use of deep cultivations, loosening or subsoiling will not usefully impact the underlying problem, this can only be achieved by a targeted, surface movement cultivation to the appropriate depth, which may only be 5-7cm.

Equally where water accumulation and resistance can be seen to a depth of 20cm, there is no useful benefit achieved from either just scratching the top or, alternatively, pulling a loosening leg to 35cm deep. The leg must be set to break the compaction at 20cm and above, going too deep is no more effective than not going deep enough.

Above all, the soil condition must be assessed to determine whether its current moisture content is ever going to allow deeper tillage to be in any way successful. In most cases deep movement will not be appropriate until later in the summer.

The only way to dry wet soils is to establish a growing crop for the summer period. If soil is too wet to establish a viable cash crop in good time this spring, it may be more appropriate to allow the soil to dry sufficiently in April before sowing a well-chosen mixture of cover crop species to dry and re-structure the soil over summer, for entry into a successful wheat crop in autumn 2020.

Where compaction has been identified within the profile, the appropriate depth for soil loosening should be utilised in the dry soil of late summer. Where no compaction is identified, then no soil loosening operation should be carried out.

If there has been one take home message from the experience of autumn 2019 it is this **...the more cultivation passes applied, the wetter the soil has got. This is a key message and a lesson we must learn for the future.**

Talk to one of our trained soil specialists for help and advice on a cultivation strategy best suited to your own situation – email: healthysoils@hlh ltd.co.uk

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

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