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# RONØMY

News and agronomy advice for arable farmers



#### Coronavirus (Covid-19)

We are working hard to respond to the latest Government advice and maintain customer service levels. Please visit www.frontierag.co.uk/coronavirus to find our latest information.

## **3D Thinking goes virtual**

Frontier is continuing to work hard to respond to the latest Government advice whilst maintaining customer service levels, including keeping you up-to-date with information from our 3D Thinking trials sites.

Frontier's network of 3D Thinking sites is one of the most extensive trials research networks in UK agriculture, consisting of 12,000 plots covering over 100 hectares and 25 sites.

Normally the sites are accessible to our agronomists and growers all year round and a highlight of this

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is our summer open days. These events have been postponed for now, but this doesn't mean we will stop sharing expertise from the trials.

"Summer is a key time for our 3D Thinking programme and the events are something we and our customers look forward to. Covid-19 has changed our approach but we're still going to 'meet' to share insight, advice and trials data using video and other technology," says James Moldon, Head of SOYL & Technical Services.

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Restation rates Julia

#### Staying in touch... digitally

Farmer meetings, calls and technical updates are all now being delivered using video and digital technology. This has become the 'new norm' after Frontier ceased all non-essential face-to-face contact.

Video conferencing in particular is being used to host 'virtual' farmer meetings to enable some of the interaction that normally takes place at an open day to go ahead.

David Robinson, Head of Innovation and Knowledge Exchange, is using video to host online group discussions in place of his usual in-field meetings. "It's certainly different," David says, "but I've had some really positive feedback from farmers. When you have to change your way of working so quickly, you worry that it won't suit everyone. While in-field meetings aren't possible, my priority is making sure I can still communicate with customers and provide them with the advice, insights and recommendations they'd usually expect."

Video meetings can be especially useful for farmers who need specific advice and an integrated approach. A video call can be organised with their agronomist who can 'dial-in' expert colleagues from elsewhere in the Frontier business. In this way, growers can access technical advice on precision, environmental management, nutrition and crop protection.



Image: Farm Trader, Nigel Dring, and Kings Technical Advisor, Jim Egan, speak to customers on a video conference.

VI at March to





Image: Cambridgeshire #3DThinking site from the air.

#### Seeing trials' progress

James adds, "We know the value of physically seeing a variety in the field. Our team is monitoring variety development and variation using drones, smartphones and tablets. Drones capture imagery for the purpose of assessing pests and disease and the relative effectiveness of different treatments. This footage is shared via a range of means including Twitter, our blog, customer emails, YouTube and our websites."

To keep up with news and video from the 3D Thinking network, follow @frontierag on Twitter, search 'Frontier Agriculture' on YouTube to subscribe to our channel and subscribe to our blog at www.frontierag.co.uk/blog/subscribe.

## OSR - to grow, or not to grow?

OSR remains the most profitable break crop, but it doesn't come without some challenges. Robert Nightingale, Frontier Crop Production Specialist explores a new OSR decision tool which has been developed to help customers assess the risk factors on a case-by-case basis, to create a plan ahead of 2020 drilling.



Challenges can occur during establishment, from cabbage stem flea beetle damage. The Frontier "OSR scenario planning tool" outlines the various risk scenarios to create a 'risk score', whether the field is at low, moderate, high or extreme risk. This correlates with a set of management solutions to tailor the approach to establishing the crop.

#### The risk factors

The tool considers several aspects, such as target drilling dates, soil type, previous cropping and likelihood of flea beetle damage, depending on previous experience in the region. Cultivation techniques such as subsoiling, direct drilling and min-till are also looked at, as well as straw management from the previous crop with a clear focus on moisture retention.

#### The solutions

The management advice will be based on which category your field falls under.

Solutions range from applying fertiliser directly to the seedbed to help with rapid establishment, to varying the seed rate dependent on variety and looking at maximising moisture conservation. It's recommended to review straw cultivation and harvest strategy of a previous crop.

Also consider delaying drilling dates, opting for a different variety, such as Clearfield®, or using a companion crop to help fend off pest pressures. There's no single, simple solution - it requires a multiple control approach, which if reviewed and prepared for now, ahead of planting, can make the difference between a successful or unsuccessful crop.

## **IPM approach to blackgrass control**

Cereal growers are continually faced with the threat of blackgrass burden. In 2011, it was estimated that resistant blackgrass seed was found on at least 80% of the 20,000 farms that spray regularly to control the weed. This demonstrates the scale of the threat and the need to take a long-term integrated approach to blackgrass management.

Paul Fogg, Frontier Crop Production Technical Lead, explains that in order to get on top of the weed, growers need to manage seed return.

"Blackgrass needs to be sprayed off before it matures and certainly before it sheds," says Paul.

"Work carried out by Rothamsted Research in 2014 mapped seed shed throughout the season, showing shedding began in early July. The speed at which seed matures is influenced by the weather (as is dormancy) and this can happen rapidly, with this period generally occurring during the second half of June through to early July.

"Therefore, plans need to be in place to spray blackgrass off prior to this, with the old rule of thumb being to be spray after the Cereals Event."

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Rothamsted Research - Neve & Hull (unpublished data)

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#### Knowing your blackgrass status

Paul explains mapping the worst affected areas can help with management decisions later in the year.

"The iSOYLscout tool, which sits within MySOYL in Frontier's MyFarm application, is an easy way to map areas of infestation so management interventions can be targeted.

"Ideally, you should have an awareness of the resistance status pre-harvest, which can be done by working with your agronomist to collect and test seed samples," he advises.

"When sampling grass weed seed for resistance testing, make sure the seed is ripe. Blackgrass seeds are ready for sampling when seeds are brown and fall off the panicle on their own when gently brushed with your hand; you won't need to force seed off the plant."

#### **Pre-harvest management options**

Paul says depending on blackgrass pressure and distribution, either patch spray the worst affected areas with glyphosate, or if the pressure is higher, consider spraying the entire field, or whole crop removal is an option.

"For low weed populations, hand-roguing is feasible and is particularly recommended in fields where blackgrass is only just starting to appear. It is also worth considering novel harvest weed seed control approaches, such as chaff tramlining," he adds.

"It's now well accepted that managing blackgrass requires a fully integrated approach, often needing a fundamental change to the rotation and establishment strategy. Change five things for five years is the mantra, so look ahead and begin to plan for autumn 2020 to ensure you remain ahead of the game."





#### In the field with Jeremy Nicholson, Frontier Agronomist

"At Frontier's long-term blackgrass trial sites at Staunton in the Vale, we're in year nine of a cultural control study. Across 10, one-hectare blocks, we've managed crops in varying ways to see the impact on blackgrass numbers, looking at drilling dates, cultivation strategies and cropping choice.

"One of the big impacts, resulting in a rise in blackgrass numbers, has been drilling too early in the autumn. This is a big take home message for growers, particularly this year where there will be an urgency to get crops in the ground as soon as weather permits following a poor start to the 2019 season. However, we're seeing first-hand the long-term implications of drilling too soon, with a higher blackgrass burden. If you're looking to reduce blackgrass numbers, moving to spring cropping has been very beneficial. For a number of growers, autumn drilling conditions this year resulted in higher levels of spring crops being sown, so this may lead to a positive reduction in the weed levels overall."

## Late season disease control

The true fusarium risk to winter wheat crops is yet to evolve, with weather conditions at flowering playing a significant role. Frontier Crop Production Technical Lead Paul Fogg says the disease should be on grower's radars at this stage in the season, with a potentially devastating impact on a crop if infection is not prevented.

"Speaking to Phil Jennings at FERA about the possible risk, it's evident that fields which held standing water over the 2019 autumn and winter will have knocked back inoculum build-up on the stem base," explains Paul.

"A dry, warm spring usually favours inoculum build-up at the stem base and in crop trash, but we're unsure about how much this will counter the wet autumn and winter conditions. The current fusarium risk prediction is low, but is dependent on conditions at flowering."

The AHDB has an online tracking tool to monitor rainfall during the flowering and pre-harvest periods across England and Scotland, showing the associated rainfall-related mycotoxin risk assessment scores for these two risk periods: ahdb.org.uk/mycotoxins To determine your risk status, also refer to Crop Monitor: map.cropmonitor.co.uk/map

With little or no curative activity being afforded by current fungicide actives, Paul says preventive treatments are the only solution and should be applied pre-to-early flowering.

"When selecting active ingredients, review your current programme applied to date, the on-going fusarium risk and whether there is any need to top-up activity against septoria and rust. Triazole chemistry, such as prothioconazole, tebuconazole and metconazole, have been shown to offer good preventative control of the key fusarium species. Achieving good coverage is critical at this time in order to accurately apply the fungicide. Reviewing the angle of nozzles as well as alternating nozzles forward and backwards can all help coat the ear," he adds.

## **Boosting mid-season maize nutrition**

Applications of macro and micro-nutrients will be vital for maize crops this season, as growers accommodate for depleting soil nutrient reserves following the extremely wet winter. Finley Hawkins, Frontier Southern Fertiliser Business Development Manager, says the focus now should be on nitrogen.

"Due to above average winter rainfall, UK-wide SNS indices have reduced this spring, indicating very low levels of nitrogen in the soil, so crops will need additional support," says Finley.

"Ahead of tasseling, foliar applications of a crop safe nitrogen source should be considered to ensure the plant receives enough nitrogen, with a few options to consider.

"Nutrino has performed well in trials over the last two seasons. It's a readily compatible, slow release, foliar nitrogen, containing polymer urea chains of varying lengths which slowly break down, resulting in a crop-safe phased release of nitrogen." He notes there's now a new generation of foliar nutrition, which is coming to market this season.

"Nutrino Pro has the same basic ingredients as Nutrino with the added benefits of magnesium and sulphur, as well as complimentary biostimulants, pidolic acid and R100, which improve nutrient uptake and assimilation to stimulate growth. In trial plots testing Nutrino Pro last year, we saw a 10% increase in cob size.

"It's worth noting, both Nutrino and Nutrino Pro are compatible with most commonly used fungicides, minimising the number of passes required on the maize crop," concludes Finley.

## **Innovation focus: new seed genetics**

With plant genetics expected to provide ever larger contributions to weed and pest management, we take a look at some of the most exciting developments in seed breeding available to growers in 2020.

Growers will be familiar with the Clearfield<sup>®</sup> production system in OSR, in which herbicide tolerant varieties have revolutionised the control of broad leaf weeds and volunteers. Now sugar beet growers can tackle troublesome weeds in a similar way.

CONVISO® SMART sugar beet is an innovative way to control weeds and volunteer weed beet, brought to market by KWS and BAYER. The programme includes new varieties with a specific tolerance to the ALS-inhibitor based herbicide, CONVISO® ONE. This offers greater flexibility in weed control, combined with the opportunity to reduce spray applications. Crop safety is therefore improved,





while the control of weed beet allows growers to bring previously unusable land back into the sugar beet rotation.

There have also been advancements in the way cereal varieties resist pest-borne virus pressures.

For growers combatting barley yellow dwarf virus (BYDV), seed genetic solutions are now available in both barley and wheat. KWS Amistar, a six-row feed barley with BYDV tolerance, has impressed both in-trial and on-farm, while RGT Wolverine, the first UK wheat variety to offer BYDV resistance, will be available this autumn.

#### Have you logged into MyFarm?

MyFarm is a comprehensive farm management platform which all Frontier customers have access to free of charge. MyFarm is intuitive and fully interactive, working as well on a desktop as it does mobile. Through MyFarm farmers can view and manage crop records, recommendations, invoices, payments, grain movements, sampling results, live markets, precision data and more.

Find out more by asking your Frontier advisor, calling **03330 141 141**, or visiting **www.frontierag.co.uk/myfarminfo** 



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