

AGRONOMY

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The power of a farm data strategy



Chris Papworth

Chris Papworth, farm manager of Little Staughton Farms in Bedfordshire, has been using Frontier's MyFarm Analytics (powered by YAGRO) to benchmark his farm's performance year-on-year and maximise productivity. Chris and his agronomist, Ed Schofield, discuss the benefits of the system.

"I began using MyFarm Analytics 18 months ago after Ed suggested it could help with on-farm budgeting,"

explains Chris. "After seeing a demonstration, I knew it would be a useful resource, particularly for monitoring expenditure, budgeting and price comparisons. I now use the budgeting tool before the new season starts to help plan cropping based on the current markets."

In particular, Chris uses the tool to calculate his gross margin and review cropping decisions. As the season progresses, he is able to modify costs, update budgets and adjust his management strategy accordingly.

Ed adds that at this time of year, it's really useful to sit down and review this data.

"This year the information will help to justify the crop protection strategy in a high-pressure season," he says. "It is also a great tool for budgeting. Chris is a very busy man and this system really works for him. Plus, because he owns his data, nothing is done without his permission."

Continued on next page...



Ed Schofield

“More than ever, growers need to use all the management data and tools at their disposal to help ensure their business is operating in a sustainable way.”

Ed recommends that farmers have a data strategy, recording what they can as accurately as possible. Tools such as MyFarm Analytics offer a secure data repository for all

areas and activities linked to crop production. This can include collating information such as invoices and spray records, as well as combine yield monitors to support appropriate maintenance and calibration.

MyFarm Analytics can incorporate farm data that's been captured in other applications which sit alongside it in MyFarm too, such as crop production information recorded in third-party farm management software like Greenlight Grower Management.

Importantly, MyFarm Analytics is also helping Chris manage his data without impacting his wider workload. As a busy farm manager, he has limited time in the office and can't spend hours inputting information into a spreadsheet. “The ease of use and the way data is incorporated means that isn't an issue,” he explains. “There is a lot of detail that I can delve into, but even if I have limited time the system is so easy to use that I can quickly find the insights and data that I want.”

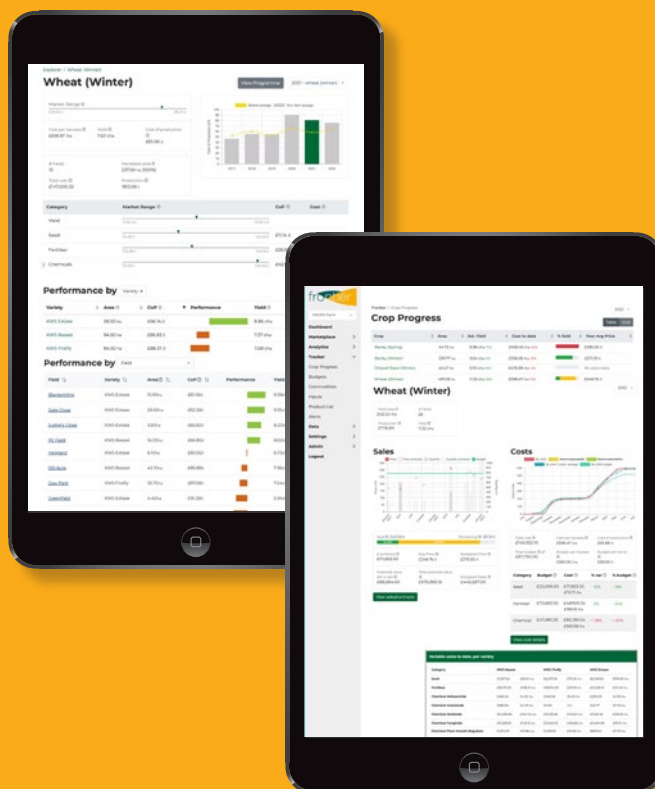
“There is a lot of detail that I can delve into, but even if I have limited time the system is so easy to use.”

With the reduction in basic payments and more Sustainable Farming Incentive (SFI) options coming forward, Chris and Ed both believe that on-farm efficiency will be more important than ever; working smarter and more sustainably while maintaining yields.

“MyFarm Analytics includes a feature which lets me compare data on a field-by-field basis,” explains Chris. “Like most farms we have some fields which ‘do okay’ every year, but which never match the average performance of the farm. The tool allows us

to review their true performance so we can focus land management where we will get the biggest return. We can then look at different approaches for those challenging areas, such as putting them into Countryside Stewardship.”

Ed adds: “Farming is not a simple system. Having that year-on-year comparison is therefore useful, as is being able to compare your costs and performance with others.”



The system includes data on the range of prices paid and received across the industry, but it also allows more detailed benchmarking, with box plot ranges to understand the spread and skew across a variety of factors. Another feature provides hosting of private ‘invite and accept’ groups in order to compare and analyse down to a granular level with those you know and trust.

“For the last four years I've been part of the AHDB's Farmbench [online benchmarking tool], and I now get some of the data for that from MyFarm Analytics. I hope, going forward, MyFarm Analytics will become my single source of data for the farm.”



www.frontierag.co.uk/myfarmanalytics

Field grain analysis optimises crop production



Cambridgeshire-based J O Williams is a 400ha farm near Huntingdon, incorporating a 400-head dairy herd and growing both cereals and forage crops. For the last two years, Oliver Williams has used SOYL's

field grain analysis service to support his variable rate nitrogen application programmes to optimise production and maximise nitrogen use efficiency.

The SOYL grain report uses yield data and information on nitrogen applications to compare the sample with optimum protein levels, yield and nitrogen use efficiency (NUE). In turn, farmers can then consider changes in nitrogen management for future crops.

“It’s like getting a ‘school report’ on performance for the end of the season.”

“A lot of NUE is determined by your management, leading you to think about changing the amount of N or when you apply it,” comments SOYL area manager, Andrew Carswell.

“When it comes to milling wheats, half of all samples are at least one percent below the protein target, which can be worth a premium of £60 or £70 per tonne. It also enables more targeted application of inputs so that they’re applied only where needed. Therefore, this service adds a crucial element to a sustainable management approach. It’s not surprising that demand for this service is increasing every year. It’s like getting a ‘school report’ on performance for the end of the season.”

Oliver adds: “Over the last few years, we have secured land for a longer term, so we have the opportunity to focus on consistency.



Grain analysis helps optimise approaches for the new season

“Having used SOYL’s nutrient mapping service for more than 10 years, we began using its variable seed rate service four years ago. This is our second year of variable rate drilling and our first for variable nitrogen rate fertiliser. Adding field grain analysis allows us to pay more attention to detail and be more efficient.”

Oliver’s aim is to maximise output by optimising inputs. “Last year was obviously a challenging season and we cut our last nitrogen application back as we didn’t think the crop would take it up. However, the grain results showed that all our crops were short of nitrogen. Although every season is different, it gives us the confidence to know we can push nitrogen further and has also shown us we need more manganese this year,” he explains.

“There is no way I would move away from using the service now having seen the results.”

“We’ve learnt how to utilise these principles and trust them, so when we’ve gone into new land, we’ve been able to maximise the returns straight away. It pays for itself so quickly. There is no way I would move away from using the service now having seen the results.”



www.soyl.com/field-grain-analysis



Top varieties for drilling in 2023

Frontier seed business development manager, Jim Knight, and regional seed manager, Chris Piggott, look at the most popular varieties for the coming season and how to get the best from them.



WHEAT

Champion, KWS Dawsum and KWS Extase are expected to be the three largest varieties in terms of market share, with one or more featuring in most cropping plans. This popularity is due to their disease resistance and resilience. All three have strong resistance to yellow rust and Septoria, particularly relevant in a tricky season for fungicide applications, with Champion and Extase showing very strong Septoria performance in the past season.

Positioning these varieties within the rotation is key to getting the best from them. Dawsum is the best suited to early drilling, with Extase and Champion better for later sowing. Champion is the first choice for heavy land situations, with Dawsum and Extase better options for light land (both aided by high bushel weights).

Extase is better placed as a first cereal due to a susceptibility to eyespot, which is more common in second cereal positions. Champion would be our first choice for second and continuous cereals, with Dawsum equally comfortable as a first or second cereal and the most versatile of the three varieties.

Champion also has resistance to orange wheat blossom midge, which is important when planning rotations. Faster developing varieties like Champion and Extase, with their vigorous tillering, are also more likely to be suitable for production in reduced tillage systems, although Dawsum can benefit when drilled early.



OILSEED RAPE

Hybrid varieties Murray and LG Wagner are likely to be popular this year, with Murray one of the highest yielding varieties in the east and west regions thanks to its vigorous autumn growth, strong regrowth in spring and standout performance against stem diseases. It has resistance to phoma stem canker from the new RLMS gene and good resistance to light leaf spot, as well as showing good verticillium tolerance.

LG Wagner is the highest yielding option on the Recommended List for growers in the northern region, which covers North England and Scotland. It also has the trait for genetic resistance against turnip yellows virus and pod shatter and is significantly higher yielding than current northern favourite, Aurelia.

There are fewer new conventional varieties coming forward, but they are still likely to account for around a third of the area. New variety Tom is the highest yielding conventional variety available, out-yielding current favourite Acacia and with improved resistance to light leaf spot.



BARLEY

New two-row conventional LG Caravelle, which has high yields and good bushel weights as well as very good resistance to net blotch and Rhynchosporium will be a favourite.

However, hybrid variety SY Kingston offers a wider sowing window and early harvest. Together with good yield, grain quality and balanced disease resistance, this will also have wide appeal.



You can hear more from Chris, Jim and the team in this year's 3D Thinking trial site video series, which includes more detail, results from our research and crop management considerations to support you in the new season. Watch online at www.youtube.com/frontieragriculture



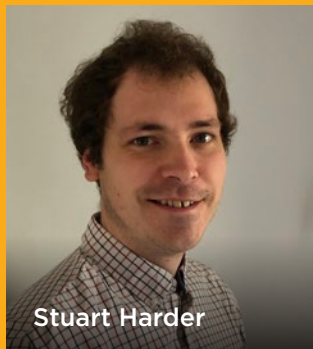
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More varieties and recommendations can be found in our Autumn Seed Guide.



www.frontierag.co.uk/seed

Establishment is key to OSR success



Stuart Harder

Despite the challenges, oilseed rape is still a profitable break crop which can also aid grassweed control in the rotation. Of course, success is dependent on good establishment, which in turn relies on strong attention to detail.

To withstand cabbage stem flea beetle (CSFB) pressure, the aim should be to drill early (before 20 August) to reduce adult damage, or late (after 15 September) to reduce larval damage.

However, it's also important to always ensure optimum drilling conditions in terms of good seedbeds and soil moisture so the crop establishes quickly. "If you have a lot of oilseed rape, I'd consider two timings to split your risk and a hybrid variety for later sowing," says Frontier combinable crop production specialist, Stuart Harder.

Trap crops for CSFB can be useful, but they require attention to detail and timing is crucial – trap crops at

the cotyledon stage at the end of August will be most attractive to the pest.

It's important to note that drilling earlier can increase the risk of clubroot and weeds such as charlock may be more problematic. "If you know you have clubroot issues, opt for later drilling," stresses Stuart. "Also consider testing for the disease and checking soil pH in high-risk areas. Clubroot-resistant varieties are available to mitigate against several strains."

"If you know you have clubroot issues, opt for later drilling."

Once drilled, OSR crop establishment requires good soil structure, moisture and nutrition. Leaving longer stubbles can also help with flea beetle control and moisture retention, but leaving straw on top of dry soils may prevent water infiltration, so reacting to the conditions around establishment is key.



Success is dependent on good establishment

Companion cropping in oilseed rape

The practice is becoming more widespread, particularly given forthcoming support under SFI. "In terms of drilling, the earlier the better," comments Kings technical advisor, Will Moynan. "Otherwise, you are limiting the species that will work. The benefits of a companion crop in late September are fairly limited." He recommends a combination of buckwheat, fenugreek and Berseem clover – drilled at the same time as the rape crop but using a separate hopper to optimise seed rates. "Some people have tried vetch and phacelia but I feel they are too competitive," adds Will. "It's also important to use the right seed rate for the variety of buckwheat that you are using."

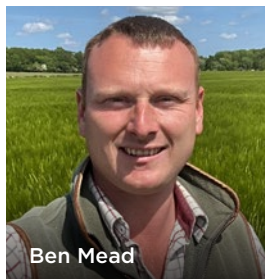
More advice about companion cropping and specialist Kings mixes can be found online.



www.kingscrops.co.uk/companioncropping

VIEW FROM THE FIELD

Ben Mead, Frontier agronomist, Lincolnshire



Ben Mead

I'm based in Stamford and cover combinable crops and sugar beet across south Lincolnshire and the surrounding areas. In this period ahead of harvest we're seeing winter wheat crops more or less finished and starting to mature, so

there is little to do agronomically. Some winter barley may need desiccation, but I try to avoid this with any cereal crops unless it's really necessary.

Most growers have applied a pod sealant to their oilseed rape and will be thinking about pre-harvest glyphosate application in the first half of July to aid harvest. Although some people will look to combine the two treatments, I always find it much more beneficial to apply the pod sealant separately a few weeks before, as it achieves the best performance from the sealant and reduces crop damage and seed loss when desiccating the crop.

Beans are also nearly finished. They should have received their final fungicide application or be due the treatment very shortly.

On sugar beet, attention is turning to fungicide applications around the end of July, depending what levels of disease are being observed and weather conditions. The number of fungicides the crop may require will also depend on the target lifting date.

For many though, this early summer period generally consists of post-season reviews and starting to plan which crops are to be grown in the following year – an important job to do before harvest sets in.



Lincolnshire



Post-season reviews are a good idea before harvest sets in

Frontier has a UK-wide team of 130 BASIS qualified agronomists, including 44 Diploma holders, working with growers to deliver fully integrated agronomy advice on all aspects of profitable and sustainable crop production. To find out more about Frontier's agronomy services in your area email agronomy@frontierag.co.uk, call 0800 227 445 or visit www.frontierag.co.uk

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