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Building Farm Business Resilience

Will Foyle, Farm Business Consultant for Hutchinsons, talks through how growers can manage risk within their businesses for the coming season by focussing on three key areas: Cultivations, Cropping and Cash Flow.

The term 'managing risk' is being bandied about and used in many different contexts but essentially it's the ability to turn 'unknowns into knowns.'

With the impending loss of BPS, it is crucial that every pound spent is worthwhile. However, by focussing on these key areas, it is possible to identify where efficiency gains can be made across the business.

Cultivations

It's important to thoroughly assess the field situation before deciding cultivation requirements. With current fuel prices any cultivation efficiencies that can be made will be crucial, so get out into the field with a spade and really look at the soil across the whole of the field.

Wherever possible try to reduce cultivation depth. For example, where tramlines and combine wheelings are compacted and need lifting, other areas of the field may not. Without stating the obvious, check that tyre pressures are appropriate.

The established model of owning all the farm machinery and equipment is one that is being challenged by current financial climates. Quite often if you truly cost depreciation, labour and fuel, it is more cost effective to get a contractor with specialist machinery.

This may require a new look at cropping logistics, strategy and grant payments.



Reducing Cropping Risk

- Produce gross margins - field by field
- Identify marginal land
- Produce rotation using above strategy
- Consider the value of legumes
- Replace high risk cropping situations with lower risk income.

Lockstump
Combinable Peas

Lockstump
Wild Bird mix

> Cropping

Whilst current high wheat prices may be driving discussions around changing rotations next season to maximise this opportunity, Mr Foyle believes that there is still much to be gained from rotational stability. If three quarters of the farm is down to wheat, what is the machinery capacity to cope with this? How would harvest be managed for example? Wheat is an expensive crop to grow so capital expenditure will be much higher, which increases the exposure to risk for that farm.

A better approach is to look at gross margins on a field by field basis to see if performance is consistent – be that good or bad!

Omnia's cost of production and yield mapping tools provide a very effective means of doing this. The aim should be to replace high risk cropping situations with lower risk income, for example replacing second cereals with a mid-tier scheme on less productive land.

Consider a legume crop this year; there is a low capital expenditure in growing legumes, they leave the soil in good condition for the following wheat crop, and ultimately are a

lower risk break crop than oilseed rape or a third white straw crop.

Once you have a cost of production figure to hand, it is possible to calculate a 'strike price', then it's possible to commit forward sales at a known margin.

Cash Flow

The key message here is to have a business plan. Next season a mixed cereal cropping farm will be looking at an increase in capital requirement of £50k/100Ha, so it is more important than ever to calculate peak expenditure timings and discuss potential. The easiest way to make money is always to stop losing money.

With this in mind consider:

- Broadening rotations to reduce overall spend reducing intensive cropping inputs.
- Remove marginal areas and consider alternatives to increase income.
- Consider timing of input purchases and output sales to satisfy cash flow needs. For example, more spring cropping will delay cash flow.
- Utilise remaining BPS income/ grant funding to reinvest.

Farm business depends on constant evolution to stay ahead believes Andy Mason, farm manager of Low Lindrick Farm, near Ripon in North Yorkshire.

We aim to be proactive not reactive, and to this end we are always planning, budgeting and reviewing what we do, he says. We work closely as a management team, and with our agronomist David Stead and Will Foyle for his business advice.

Cultivations

Historically everything here was ploughed, around 10 years ago we then moved onto a min-till approach using a Sumo trio and Vaderstad Rapid Drill. This year we are looking to less fuel and labour intensive crop establishment systems and have used funding under the Farming Equipment and Technology Fund to invest in a Horsch Avatar direct drill.

We didn't dive into this decision feet first and will continue to look at each field closely, only adopting a no till approach where conditions allow us to do so. Fields or areas that require remedial cultivation will be done on a low disturbance basis. In time, we hope this this will reduce horsepower requirement and machinery depreciation cost.

The Omnia cost of production tool is a really useful, visual tool that allows us to see how fields are performing on a sub-field basis, we have had some unexpected results thrown up over the years where we assumed performance was good but infact the data has shown otherwise. This allows us to look at alternative options such as wild bird food or pollen mixes for example.

Cropping

We are not making any major changes to our rotation of wheat, barley, oilseed rape and a break crop of oats or grass, maize has been dropped this year for its impact on soil structure, and the pressure on later drilling and harvesting.



Cash Flow

We consider the marketing of our grain to be one of the most important aspects of producing a profitable crop, so we are always planning ahead.

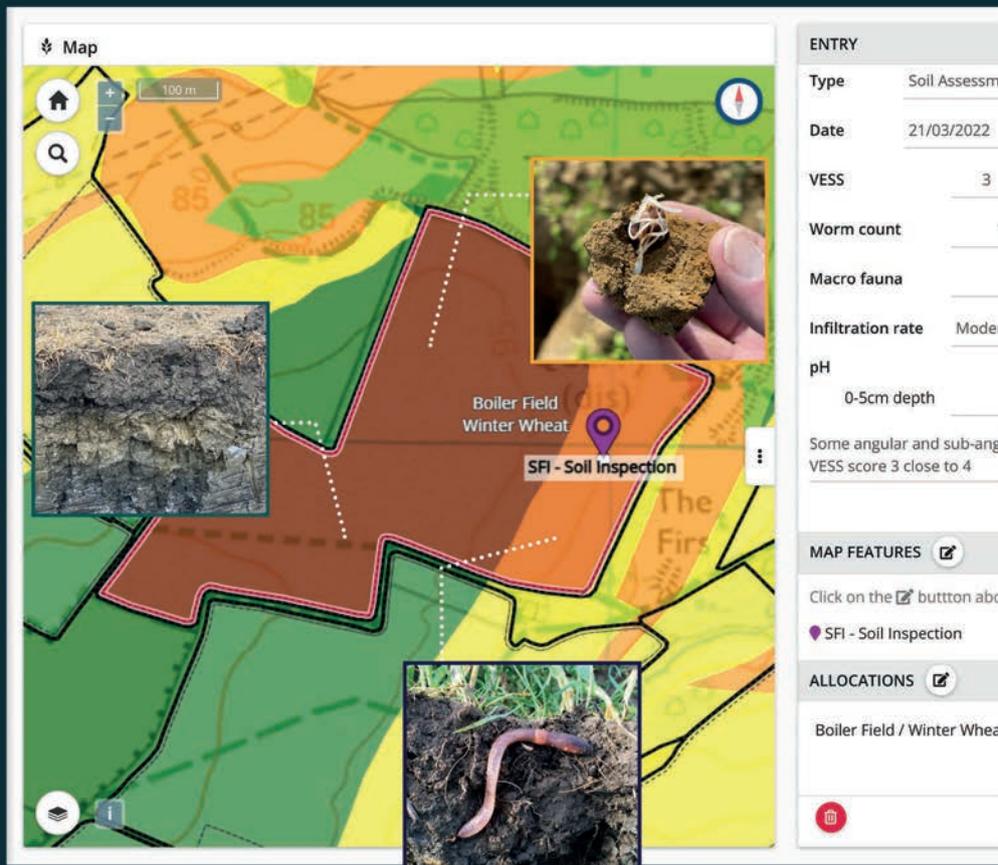
With current issues around fertiliser pricing and supply, we have already purchased our anticipated fertiliser requirement for harvest 2023 and will aim to forward sell around 30% of anticipated wheat yield to cover this purchase. It's quite a different mind set buying for a crop that isn't in the ground yet!

A variable rate approach across the farm ensures that fertiliser is only used where it is needed. It's not necessarily about using less, but using it where it is needed most. We aim to make this as accurate as possible using data from multiple sources from N min soil samples, to foliar leaf tests and NDVI mapping of crop biomass as it grows through the season.

NDVI mapping allows us to see clearly any unevenness in the crop, and where we need to focus applications, particularly for the first application. By the second split, if the biomass reading is still low, then this is more likely down to poor establishment, and it may not be worth feeding with more nitrogen. By the third application, the map is much less variable, and differences in fertiliser requirements less.

Wherever possible we bolster soil organic matter with FYM - due to our location and proximity to mixed farms, we have several muck for straw arrangements with our neighbours which works well.

For advice on building business resilience, please contact our farm business team: information@hlhlt.co.uk



Healthy Soils

Building Resilience

The perfect platform for managing the SFI Soils Standard

Hutchinsons has added new functionality to its **Omnia digital farming platform** to help farmers meet the requirements of both the highly anticipated Arable & Horticultural Soils Standard and Grassland Standard.

The scheme aims to improve soil health, structure, organic matter, and biology on arable and grassland, and is the first part of the government's Sustainable Farming Incentive (SFI), one of three schemes that will eventually replace the Basic Payment Scheme.

Healthy Soils expert for Hutchinsons, Rebecca Firth, talks through how Omnia provides a management platform to help users maximise the SFI Soil standard requirements in a functional and easy way to improve soil health and gain your SFI Soils Standard payment.

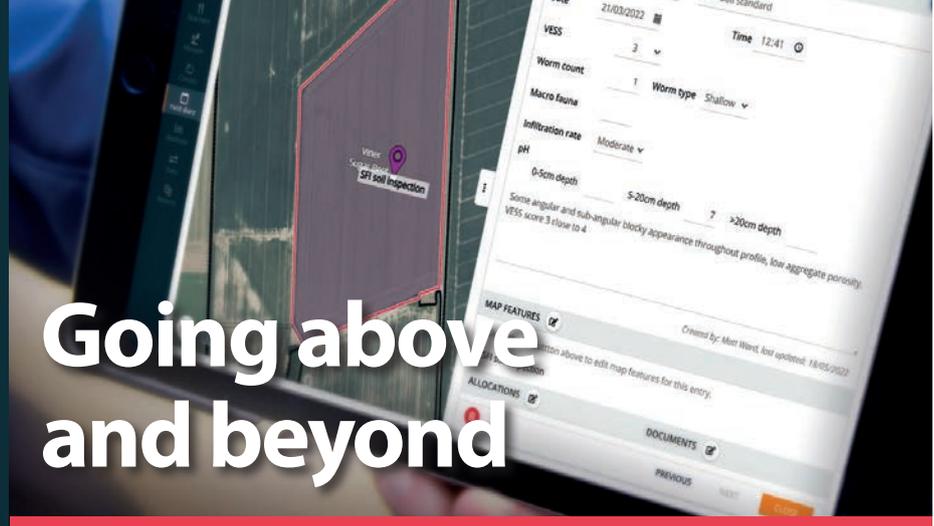
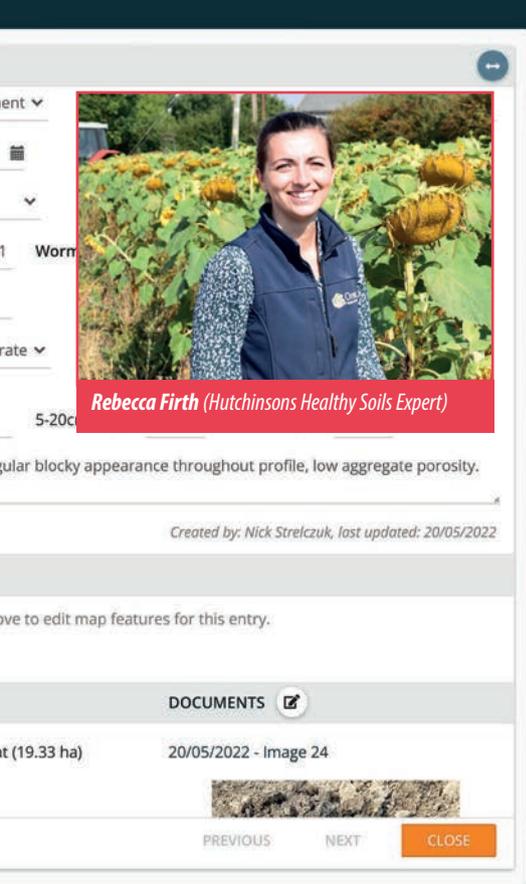
The application window for the first two tiers of the SFI Soils Standard (Introductory and Intermediate levels) were due to open at the

end of June, so the changes to Omnia, built around a central soil management plan, come at an ideal time for growers planning to sign up.

This improved accessibility includes an updated and simplified iPhone app that allows users to upload VESS tests, worm counts, other soil assessments, pictures, and notes to the Omnia platform while still in the field, with the ability to geotag information and pictures using the device's in-built GPS.

Information is immediately available on the web-based platform, where users can log on, to carry out more detailed mapping and analysis of the data.





Going above and beyond

The new functionality can record all the information needed to comply with either level of the SFI Soils Standard requirements, including:

- Soil structure/ VESS test scores (Visual Evaluation of Soil Structure)
- Soil Management Plan with suggested management actions
- Soil analysis results (either from own tests or agronomist-led services such as Healthy Soils)
- Erosion risk map (wind and water erosion risk)
- Cropping map
- Many other layers and options.

> The Omnia soil management plan also allows farmers to easily generate a pdf report summarising all the information required to comply with the SFI Soils Standard. Users can select what they want to show in the report and generate individual reports for different blocks of land if required, all at the click of a button.

The Omnia team continues to develop the system to ensure it remains up to date as scheme requirements change, and further updates are already planned to accommodate the wider release of other SFI measures in the future, such as the Advanced Standard due in 2024.

While the Omnia soil management plan provides an ideal way of recording all of the information needed to demonstrate compliance with the SFI scheme, Mrs Firth urges growers not to regard it simply as a “tick-box” exercise.

Look beyond doing the bare minimum necessary to qualify for a payment, and instead use the SFI Soils scheme as a catalyst for much wider-ranging changes that could deliver far more significant benefits to soil health and productivity across your farm business.

The payments available within the SFI Soils Standard are much lower than originally proposed, so the real benefits are likely to come from longer-term improvements to soil health.

That may involve changes to cultivation practices, altering fertiliser and nutrition strategies, altering crop rotation, or bringing in cover crops, manures, or other sources of organic matter.

It’s about building a more regenerative approach across many different aspects of soil management. Healthier soils are better at cycling nutrients, have higher nutrient use efficiency, improved drainage and workability, and greater resilience to weather extremes. This all helps growers use inputs more efficiently, potentially reducing costs, while maximising yields.

The SFI Soils Standard is about getting farmers onto the soil health ‘ladder’, but really it is just the starting point from which to build from. Growers can use the Omnia soil management plan themselves, or as part of a Healthy Soils service.

Looking ahead to post harvest cultivations

In the rush to prepare ground for drilling it can be all too easy to go straight in with the cultivator or subsoiler as soon as the combine leaves

the field, but that may not be best for soil health or crop establishment.

“Before doing anything, it is important to stop, take a step back and consider what the soil actually needs,” says Hutchinsons head of soil health, Ian Robertson, who urges growers to adopt a flexible “clever cultivation” strategy.

“Clever cultivation can mean anything from not cultivating at all to subsoiling or ploughing where necessary. As a general rule, never cultivate at the same depth every year and make sure whatever you do delivers what the soil actually needs.”

Consider a range of factors before deciding on post-harvest cultivations

- Identify what soil needs and any issues to rectify
- Plan how to solve these issues using cultivations, cover crops, or other options
- Target cultivations, machine setup, and operation, to field requirements
- Do not confuse dry soil for compacted soil
- Beware of shallow infiltration issues and deep compaction
- Consider whether cultivation is necessary - why, what for?
- Avoid repeatedly cultivating at the same depth
- Build aggregate stability by keeping roots in the ground
- Do not overwork seedbeds before drilling
- If conditions are not right, wait.

Always have a plan B.

For more information on managing the SFI Soils Standard requirements, email the team: healthysoils@hlhld.co.uk

Managing Unproductive Areas

'Choosing the right option for the right area'

*Reviewing and understanding your unproductive and low yielding fields and areas of fields is an important aspect of mitigating your risk across the whole of your farm, explains **Emma Willis** (Hutchinsons Environmental Services Specialist).*

*Emma Willis (Hutchinsons
Environmental Services Specialist)*



The first areas to analyse, and often found to be unproductive, are next to woodland or large hedgerows and poorly drained areas. It is also important to review any yield data. This will highlight which parts could be better suited in a Countryside Stewardship option, to ensure a guaranteed income for the area, rather than a potential loss. Once an area has been identified it is important to understand why it is unproductive to be able to choose the most appropriate option for the location. For example, Winter Bird Food (AB9) is better placed in shaded areas and is a rotational option, so can be moved around the farm as it is required to be redrilled every one - two years depending on seed choice. Whereas a Flower rich Margin (AB8) is a long-term option which can be a successful alternative in your regularly unproductive areas. It is a high revenue option with lower management requirements (one time seed cost and annual topping). It further adds value to ecology of a field as when placed next to crops it encourages beneficials.

Example of Countryside Stewardship

The following example is one of a number that we have seen on our Helix sites across the country. This field in Yorkshire demonstrates that by utilising the farm business module in our Omnia system which includes cost of production, sales achieved and therefore financial return, adopting Stewardship

options can improve profitability, and better manage financial risk. The field has historically always been cropped as a single crop and when the field was last in winter wheat the field margin was calculated at £4,737 over the whole 9.8ha.

When analysing this field's performance, it was highlighted that the side and bottom turning headlands were frequently unproductive in comparison to the rest of the field. Therefore, we have investigated putting the unproductive 2.2ha area into the non-rotational countryside stewardship option - Flower-rich margins. This has an income of £628/ha. Using the same cost structure as when the field was fully in winter wheat the total field return has increased to £4,985. Taking out the marginal land from the cropping has increased the total field margin by £248, while spending less.

Furthermore, by removing the side turning headland and squaring the field this has reduced the number of machinery turns, so as well as the overall increase in productivity it provides further benefits from



reducing soil erosion, compaction and time, alongside improving biodiversity. By putting this unproductive area into Countryside Stewardship, it has now **turned an unknown income into a known profit** and therefore helped manage the risk. It has reduced the working capital requirement and reduced the area of the field requiring inputs, including fertiliser. The average yield has now increased without changing the input, which has diluted carbon emissions, reducing carbon emissions per tonnes of wheat.

On other sites we have utilised the same data but rather than permanently removing land, we have used stewardship options for one or two years to improve fertility and soil health, with legume fallow mixes, in place of higher risk crops, such as break crops or second cereals. The whole field can then be returned to production for high yielding winter wheat.

Now is an important time to analyse all your cost of production information so that you can utilise the current available Countryside Stewardship Schemes and prepare for Environmental Land Management (ELMs) coming in 2024. It is also important to understand why an area of the field is unproductive so that the right management option is chosen for the right area.

If you would like any Countryside Stewardship advice, please contact our Environmental Services team: enviro@hlhlt.co.uk

Establishing Oilseed Rape



Neil Watson (Hutchinsons Technical Manager)

Neil Watson (Hutchinsons Technical Manager) considers some fundamental questions.

The subject is far wider than this brief article allows, so I thought I would step back and look at the science behind the subject and pick a single aspect that has a common thread - **drilling date**.

Why is moisture so fundamental in the germination process in OSR in particular?

It sounds such an obvious question to ask, yet fundamentally the answer is much more complex than one might anticipate. Yes, it is about moisture and seed to soil contact, but it is more about the unique nature of the oilseed rape seed, and when it needs that moisture.

The seed goes through a two-stage process before emerging (see diagram 1), the first relies on it taking up over 40% of its own weight in moisture before the entire process can begin. The seed then goes through a process of repair and stabilisation before absorbing more moisture to complete the entire process. How often have we seen seed that has started to germinate but then withers away through lack of soil moisture before completing the second stage and emergence? So, we need sufficient moisture in the soil to start the process and then ideally rain following drilling to ensure sufficient moisture again for the crop to finally emerge. This leads nicely onto our second question.

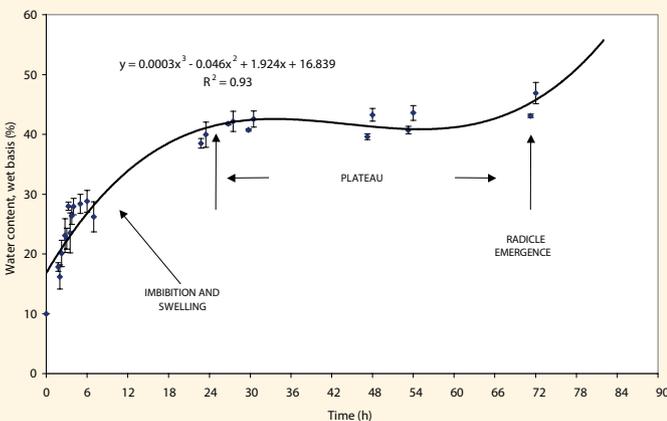


Diagram 1 The process of OSR emergence. AHDB report 313

When is the best time to drill the crop?

The consensus was very much towards the end of August/ early September, purely based upon experience. The French took a more scientific approach to the matter, thinking the answer ideally should be between rainfall events (the relevance of which I explained earlier). So how might we demonstrate this concept through the drilling window related to the UK crop?

The answer is to consider probabilities - looking at the probability of a rainfall event occurring over a seven-day rolling average from early August to the end of September. Rather than relying on single years in isolation, look back through historic

weather data over a 20-year period. Surprisingly, the window of drilling opportunity was exactly what conventional wisdom had suggested (end August-early September, see diagram 2).



Diagram 2 Probability relates to rainfall events occurring over a seven-day rolling period 1999-2008 (relating to a 5mm or 10mm rainfall event).



Diagram 3 The probability of rainfall events (2009-2018). Data from a site in central England.

Is that window of opportunity still valid?

Further analysis of historical weather data suggests that the drilling window of opportunity has shifted two weeks earlier over recent years (see diagram 3). This movement to earlier drilling has to a large extent already occurred for different reasons, to escape the worst of adult cabbage stem flea beetle activity. However, if we intend to drill later, well into September (to avoid the vagaries of both the adults and subsequent larvae damage) we might be waiting some considerable time for a further rainfall event to get a crop established.

Remember, the analysis of this data is no guarantee of actual rainfall in any one season but shows a trend.

The Omnia virtual weather platform aids more informed decisions by viewing historic weather data for your own area.

Questions about this article? Contact us: information@hlhlted.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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