



Fieldwise

AGRONOMY NEWS FROM

HUTCHINSONS

Crop Production Specialists

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Matt Ward
(Services Leader)

Omnia Carbon goes live

TerraMap Carbon - the UK's first Carbon Mapping Service is now available

Omnia Carbon is the UK's foremost farm carbon management service, designed to help you understand, manage and profit from your farm's carbon.

So, what carbon do you have on your farm? Where is it? How should you manage it, improve it and ultimately make money from it?

Those are just some of the questions Omnia Carbon will help farmers address. First in an exciting pipeline of Omnia Carbon innovations is TerraMap Carbon - the world's first carbon mapping service. "Unless you can measure carbon there is no way it can be managed," explains Matt Ward, Services Leader.

"In fact, unless carbon can be measured, how will we know when we are at net zero?"

In light of these challenges, Hutchinsons has been investing heavily in developing services and technologies that can be utilised at farm level to allow growers to work towards these goals - and the development of TerraMap carbon is an exciting and unique development that reflects this approach.

"TerraMap revolutionised the way in which soil nutrient mapping was undertaken in the UK - and it is now doing the same for carbon mapping."

Now with the launch of TerraMap Carbon it is possible for users to accurately map both organic and active carbon in the soil for the first time.

- TerraMap Carbon is available as a standard or premium service.
- The standard service maps a total of 17 micronutrients, soil type & pH layers that now also includes total organic carbon in terms of percentage carbon and tonnes/ha.
- The premium service maps 27 layers, which includes a wider range of micronutrients than those in the standard service, and also cation exchange, and now both total organic and active carbon percentage and tonnes/ha - that is the percentage of carbon that is active in the soil.



Hutchinsons Summer Demonstration Events

Follow progress at all our demonstration sites via **Fieldwise Live**

– view all the latest information and register your interest in attending an event on our websites

www.helixfarm.co.uk and www.hlhlt.co.uk



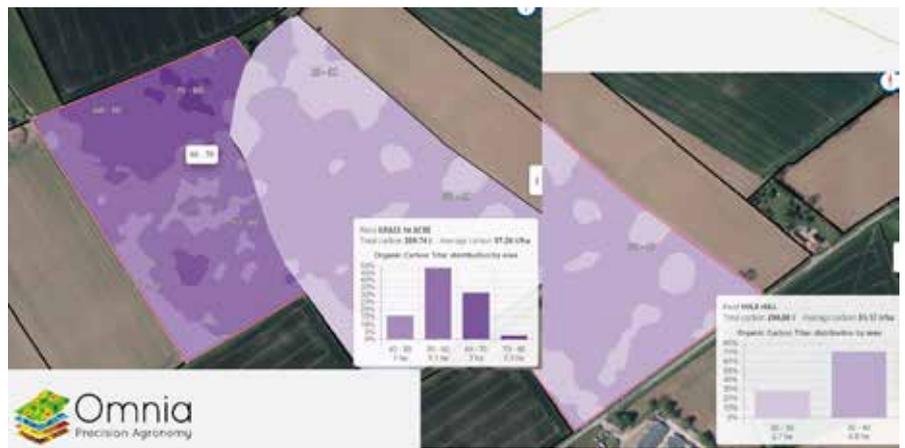
- TerraMap uses gamma-ray detection technology that delivers resolutions of over 800 points/ha and it measures naturally emitted isotopes, like Caesium and Potassium, that are very stable due to their long half-lives.
- The in-field process of collecting the data is carried out in 2 very simple steps; scanning by driving a light weight all terrain vehicle fitted with the sensor over a field, and then taking soil samples to allow for each scan to be used to create the individual map layers.
- This means that there are very few limitations to when TerraMap can be used – offering a much wider operating window compared to other soil scanning systems.
- The consistency and reliability of the results from TerraMap are proven, reflected in its uptake on over 35,000ha on UK farms since its launch in 2018.

Why is it important to measure carbon?

The pressure to manage carbon is only going to become greater, as other industries are already showing positive change. As an industry UK farming plc is in a unique and enviable position as farming activities can make positive changes to carbon, which most other industries are not able to do.

"This challenge comes at a time when the arable industry is facing great change in the light of the loss of basic farm payment, and many growers may well be questioning the importance or relevance of carbon management as potential profit margins are threatened.

"We need to move away from seeing carbon footprinting as a burden or simply a tick-box exercise and see that this is beneficial, as a proxy measurement for efficiency and profitability of a farm as well as simply a measure of waste," says Mr Ward.



Arable vs Grass carbon mapping results

"So it's clear that there are benefits such as lower input costs to having a negative carbon balance, before even getting to the Carbon bit. A reduced carbon footprint can only be achieved through more efficient fertilisers, different technologies, better soil carbon management or considering the energy used in storage, so it's a win-win on all levels."

Omnia Carbon Management

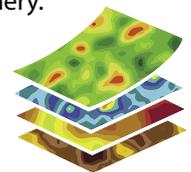
"Once I have the carbon measurements, what can I do with them to achieve any of the potential benefits we have outlined?"

The results from TerraMap Carbon can be used to create carbon maps within the Hutchinsons Omnia Carbon management system, which aligns the field carbon measurements against the carbon costs of different machinery operations for that field incorporating detailed calculations for power, width, work rate and fuel, all of which are generated using the expertise of specialists from the Farm Carbon Toolkit.

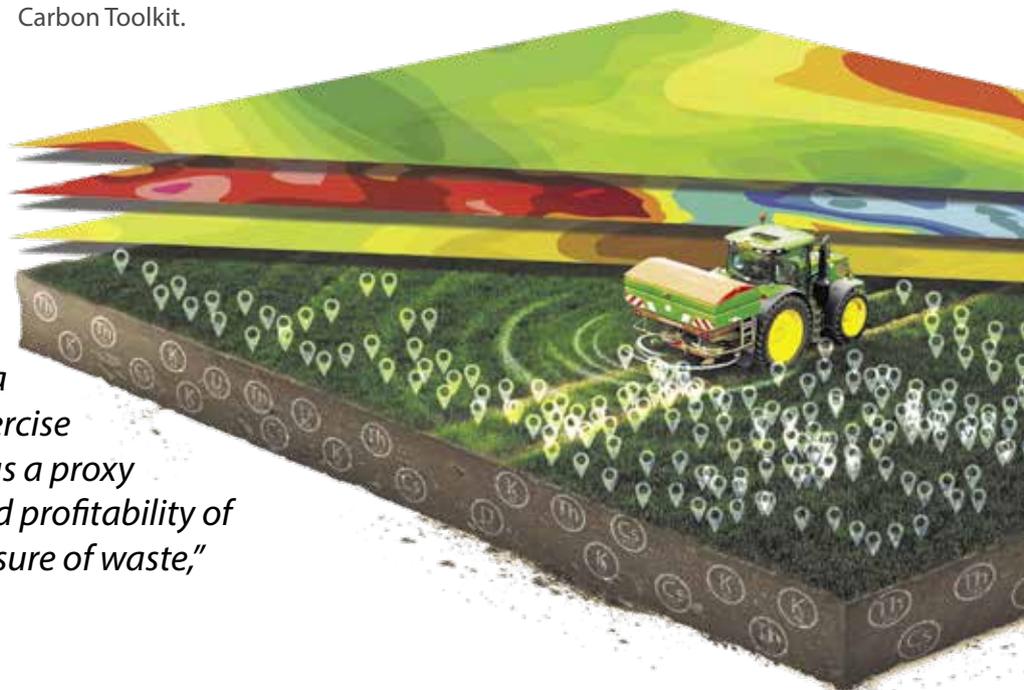
Within the Carbon management tool it is possible to create different rotation scenarios from types of cropping and variety to stewardship and management practices and see first hand the projected CO₂ impact and financial performance for each scenario.

"We wanted to move away from just presenting carbon figures on a spreadsheet, into a visible and useable format that can be used for forward planning, much like we have done with the Cost of Production tool in Omnia," adds Mr Ward.

"Its not always the grand gestures that make the difference, and this is where the ability to look at different scenarios is invaluable. For example, it might be more beneficial to put more land into ELMs and sequester more carbon this way than to replace or change machinery."



TerraMap





2021 Cereal Choices

Looking ahead, David Bouch (Hutchinsons National Seeds Manager) highlights his recommendations for autumn drilling this year.

Winter Barley

There are one or two new winter barley contenders on the AHDB Recommended Lists that will offer a step forward in yield. **KWS Tardis**, **Bordeaux** and **Bolton** all look to offer very similar ability with little if any discernible difference in yield, both nationally and across the regions. Grain quality too also looks decent in the high 60's for Kg/hl weight. (lowest is 68.6 and the highest 69.9, so no major concerns in that department) disease resistance also looks acceptable and with Tardis having a 7 score for Rhynchosporium, this also looks an asset.

Aside from these three, there will still be an interest in the proven varieties such as **KWS Orwell**, **LG Mountain**, **Surge**, **Valerie** and the old favourite **KWS Cassia**, which still holds demand within the marketplace. **California** is still a niche within the south west for livestock growers with a straw requirement.

In the malting segment the options remain **Craft** and **Electrum**, with the choice in the region being aligned to the Maltsters' preferences.

Hybrid barley will see the market being dominated by **Kingsbarn**, **Bazooka** and **Belmont** primarily. There will still be limited interest in

Libra with its very consistent grain quality. Limited introduction of candidate variety **SY Javelin** sees a marked change in untreated yield, with the variety possessing a 9 score for Rhynchosporium. Yield wise it will be comparable to Kingsbarn, but with earlier maturity.

Finally, there are the **BYDV tolerant varieties** to consider for management purposes and **Sensation** is currently the variety of choice in this six-row feed barley market, as we stand. Six-row malting candidate **KWS Feeris** also possesses this trait and may be of some interest to monitor for the future.



Five-point plan to better OSR results

With the recent upturn in oilseed rape prices likely to stimulate renewed interest in the crop this autumn, Hutchinsons technical managers Dick Neale and Neil Watson offer some practical tips for achieving best results.



Dick Neale
(Hutchinsons Technical Manager)



Neil Watson
(Hutchinsons Technical Manager)

Before deciding to grow any crop, oilseed rape being no exception, it is important to identify the yield required to break even and then decide whether this can be practicably achieved.

Consider alternative break crops and other options, such as the two-year legume mix within the Countryside Stewardship Scheme, which at a payment of £522/ha, effectively sets a “floor” for the potential returns possible and means an osr yield of at least 2.3 t/ha is needed to make this a better option financially.

Managing the many risks to crop establishment, whether from cabbage stem flea beetle or dry seedbeds, is key to maximising oilseed rape yields, and there are five main areas to focus on:

1 Rotation: Oilseed rape should ideally be grown no closer than one year in five or six to avoid building pressure from pests like CSFB and diseases such as clubroot. Crucially, a wider rotation gives more time to plan the best entry for early osr establishment, which is often a preceding winter barley crop. Early-harvested wheat, or in bad black-grass situations where a double-break is needed, peas, can also be suitable entries, both for timeliness of drilling and for leaving soils in better condition after harvest than they may be following winter wheat.

2 Soil management: Underlying soil structure issues, such as compaction, must be rectified in preceding

seasons, as current pressures on establishment mean it is simply not effective to combine osr sowing with subsoiling. Aim for a friable surface that osr can be direct-drilled straight into, as preserving seedbed moisture is critical to establishing rape successfully at what is usually a dry time of year.

3 Drilling: Given rape’s small seed size and the need for fast, even establishment to counter pest threats, it is essential to maximise seed-to-soil contact and achieve consistently accurate sowing depth, whether using a tine or disc-based drill. Avoid sowing any deeper than 5cm otherwise seed is unlikely to germinate. Also, resist the temptation to push seed rates too high as this is likely to result in more plants with thinner stems prone to CSFB larval damage. It also exacerbates intra-crop competition for water and nutrients. Early sowing at lower seed rates generally gives bigger plants able to develop stronger stems, well-branched canopies and more extensive root systems. Typically, 25-30 established plants/m² is optimum for yield, but 40-50/m² may give leeway for some establishment losses.

4 Nutrition: Placement fertiliser at drilling can benefit osr establishment as nutrients are more easily available to young plants with limited scavenging ability. This is particularly true for phosphate which is vital for root development, but has poor soil mobility so must be close to the seed.

Seedbed nitrogen is also beneficial for early growth. Typically around 30kg/ha of each should be sufficient.

5 Trap crops: Leaving volunteer osr to grow in other fields after harvest can provide a useful “trap crop” to divert CSFB away from newly-sown crops. However, destruction must be timed carefully to reduce the risk of adults migrating into the new crop. Also, beware that volunteer osr can dry soils significantly, potentially creating issues for a following winter wheat, so consider raking out a proportion of osr volunteers and drill other catch crop species into it. The variation in root structures of plants like buckwheat, berseem clover or vetch, improves moisture management.

Questions about this article?

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