Turning data into **profit**

Hutchinsons hosted a Helix Live webinar in November to share the outcomes from the Helix Project over the last year.

Increasingly growers are under pressure to make more informed and justified decisions surrounding their farm management practices – and ultimately more informed decision making leads to increased profitability.

So how can they do this?

Data. However, it is critical that this data is interpreted between both grower and agronomist.

How is the data collected? Technologies produce the data.

This is the very premise of the Helix concept. Launched two years ago, technologies that produce data are developed, tested and validated across seven Helix farms on a field-scale basis.

The aim is to produce the best solutions on issues such as soil health, farm diversity and carbon to improve farm economic and environmental sustainability.

Helix outcomes:

Omnia Climate module – this drives modelling to look at risk linked to weather i.e. disease, BYDV and lodging. Crop growth modelling is also linked to the climate module by improving the prediction of key growth stage timings.

TerraMap to include TerraMap Carbon. *Why managing carbon makes good business sense.*

Within Omnia it is now possible to calculate the cost of production for a crop both financially (£/t & £/ha) and in terms CO^2e (CO^2e/ha & CO^2e/t). This is called the **Production Module.**

Costs of production and levels of carbon in the soil are closely linked. Where input costs are efficient and output high, carbon levels reflect this and vice versa – managing carbon is good business sense.

What's coming:

Strategic Farm Planning Tool combines rotational planning tools, carbon accounting and cost of production and analysis tools to visualise what effect they will have on overall farm profitability.

This is achieved through:

- optimised inputs to crop potential
- cost savings
- reduced risk
- sustainability
- managing carbon

Yield prediction module: Why is a quantifiable crop potential important? Currently it is only possible to predict yield about 30-60 days pre-harvest which is useful information - but does not help with the management of the crop.

However, modelling within Omnia is being developed for the future to allow for much more accurate prediction of a quantifiable yield – allowing inputs to be matched accordingly - to within a 10% accuracy level.

Hutchinsons Helix North project is based at Hundayfield Farm, just outside York, by kind permission of Nick and Liz Wilson. The farm is in a nine year rotation that includes livestock and grass leys.

Nick Wilson

Trials at the farm are focussed on these key areas:

1. **Use of TerraMap data to include carbon:** this has shown differences in carbon levels between arable and grass; levels of carbon in the grass ley being almost double that of the arable. With a baseline measurement it is now possible to look at how to use FYM or cover crops on the poorer areas to improve active carbon measurements.
2. **Cover Crops:** these trials are looking at how to establish fodder beet after cover crops without ploughing to prevent carbon loss as well as overall effects on soil fertility.

Helix East Farm is hosted by Tom Jewers, of GD Jewers & Son in Rattlesden, Suffolk.

Tom Jewers

TerraMapping has been carried out across the farm and has raised some interesting questions for Tom:

1. **Why high soil reserves of K are not matched in tissue sampling?** Indications from pH and Calcium maps are that there is some form of lock-up. This will be looked at in more detail.
2. **Where to use nitrogen this year?** Historic yield data does not capture seasonality of yields, so inaccurate. Much better to use yield expectation maps and NDVI biomass maps in Omnia to highlight best performing parts of the field.

You can view a recording of the Helix Live webinar by registering your interest at our dedicated website: www.helixfarm.co.uk