



# What can I learn by visiting a Helix Farm this summer?

**2023** It's all about soil

**As pressure on sustainable food production has come to the forefront of political policy, soil and soil health is a key area of focus across UK farm businesses, and this is reflected in much of the work being carried out across Hutchinsons Helix farms.**

This summer's Helix open days will focus on sharing the learnings from individual farms on how they manage and are working to improve their soils - all with their individual set of challenges based on farming system, geographical and weather patterns - and how technology and trials from Helix is helping them to do this.

"Improving soil is not always about trying to physically change the properties of soil, which often

cannot be changed. However, by understanding the soil in any area of a field on an individual farm, agronomic management can work with, rather than against the soil, to improve resilience and productivity," says Jennie Watson, development manager for Hutchinsons.

"Helix growers have found wide ranging benefits from improving their understanding of the soil on their own farm, adjusting applications to variable soil types to improve consistency, focusing on the rooting zone to improve nutrient use efficiency and reducing cultivations to increase organic matter and improve water holding capacity, to name but a few."



**Jennie Watson**  
(Hutchinsons Development Manager)

Sharing these learnings is the core theme of the 2023 Helix Open Days.

Each open day will have three soil stations based around:

**1. Cutting through the noise:**

There is a lot of 'noise' in the market regarding soil.

- What does Healthy Soil actually mean? Hutchinsons has a unique position to be able to cut through that with our soils expertise, Gold Soil test measurements and TerraMap.



▶ **2. Interpretation of Soil:** As with all data generated as part of Helix, the value comes from the interpretation and soil is no different.

- Interpreting the data is crucial to supporting bespoke on-farm decisions, whether it is the volatiles produced by the PES technology, microbiology detailed in the PLFA test or layers of detail provided from TerraMap.

**3. So what?** Supporting on-farm decisions that can make a difference

- Nutrient choice, timing and variable applications
- Rotation and the inclusion of cover and break crops for N optimisation
- Reviewing field areas to improve, remove or farm to its potential
- SFI options
- Water and land management

**In addition to the soils focus there will also be an opportunity to discuss:**

- Variety blends
- Looking to the future regards potential CP challenges
- Opportunity to tailor to the farm/region, end market, growers attitude to risk.



The Hutchinsons Helix project allows growers to trial and adapt new technology developments and innovations on a whole farm or field scale basis with the over-riding premise of supporting on-farm decision making.

Since the launch of the Helix national farm back in 2019, hosted courtesy of Andrew and William Pitts of JW Pitts & Sons located at Mears Ashby and Whiston in Northamptonshire, the success of this approach is reflected in the increasing number of farmers wishing to become Helix farmers; there are now 9 Helix farms spread across the UK reaching from Cornwall to Fife.

# How Helix has helped growers take a new look at soils



**George Stephenson**  
of Upper Aynho Grounds

## Using technology to bridge the gap

**Bringing together the technology from TerraMap and the Gold Soil Test results helps growers make decisions on how to manage both soils and nutrients.**

Having access to the TerraMap Gold Soil Test has meant a change in cultivation approach for farmers George and Jerry Stephenson of R.H. Stephenson & Son of Upper Aynho Grounds, in Oxfordshire.

“The farm was TerraMapped and we had the Gold Soil test done about three years ago, says George. We were surprised to find that despite regular applications, levels of available phosphorus were very low.”

“It turns out that we were locking up P through our cultivations; effectively we were over-cultivating our light, brashy soils – resulting in phosphorus lock up from high pH Soil.”

“This gave us the impetus to reduce cultivations, which we had been thinking about doing anyway, and we now only cultivate the top inch of the soil very lightly and have improved phosphorus levels.”

“However, it’s about being flexible and understanding what is going on in the soil. If we need to, we will still deep cultivate with a low disturbance subsoiler.”

“Another challenge of our light land is that it can often drought out and this corresponded with low organic matter measurements. To address this, we have been growing cover crops which are grazed off and using products like sewage sludge where possible.”

“We no longer use bagged P&K but rely on the manure to provide this, costing us less whilst being more sustainable.”



**Thomas Todd**  
of Barelees Farm



**Rob Jewers** (Hutchinsons  
Crop Nutrition Specialist)

## Helix Northumberland farm battles to conserve soil moisture

**Thomas Todd of Barelees Farm, Cornhill on Tweed takes a little but often approach with fertiliser on his drought-prone farm, which lies within a rain shadow on the east of the Cheviot Hills.**

His big issue is drought with an average 610-711mm of rain a year and this influences his Nitrogen strategy.

Mr Todd plans to make savings on fertiliser costs using learnings from Helix trials on his and other Helix farms.

The first is methylated urea applied as a foliar N and Rob Jewers, crop nutrition specialist, explains that it is applied to wheat in April, when there is plenty of leaf to take it up.

“Helix farm trials last year in Suffolk and North Yorkshire showed no detrimental impact on yield despite cutting back total Nitrogen rates by about 30kg/ha.”

In addition, Mr Todd has used it for three years in Northumberland and has not seen a decrease in yield despite making a 30kg/ha saving on liquid N.

However, Mr Jewers highlights that when cutting back further (70kg/ha) with two applications (mid-March and April), they did see a drop off in yield. “You need that base and if you go too far, you will see an impact.”

His advice is that farmers can replace 30kg or more later in the season with one or two applications, but crops need 120-180kg/ha of base fertiliser before using methylated urea products.

He also trialled the bacterial product Utrisha N in cereals and one tramline width in oilseed rape and successfully replaced 30kg/ha.

Last year, he used 180kg/ha on his first wheat, 210kg/ha on second wheat, while spring barley received 140-150kg/ha and 180kg/ha for oilseed rape.

This year he hopes to fine tune N levels and is trialling the alternative N sources again.

# Potato demonstration day

With the loss of AHDB potatoes, the UK potato industry will have to do its own R&D going forward.

It is with this in mind that Hutchinsons has set up a potato demonstration and trial site in conjunction with **Worths Farms** and **Simon Faulkner** of **SDF Agriculture Ltd.**

The aim of the site will be to look at issues that not only affect potato growers on the Lincolnshire silts, but are common to growers across a range of soil types.

As with the very successful Fen Trials site run in conjunction with **A.L. Lee** at Ely, the new site will look at new varieties and their tolerance and resistance to

## Thursday 13th July

PCN and what to use for weed control in the same varieties.

Alternative nutritional strategies will also be investigated and their effect on the Nitrogen Use Efficiency (NUE) and carbon footprint of potatoes.

Another topic under investigation will be wireworm, long regarded as a pest of potatoes grown in grass rotations, but now an increasing problem across all rotations. UK experts on the topic will be on hand to answer all of your questions and we look forward to seeing you on the day.

**Darryl Shailes**  
(Hutchinsons Root Crop  
Technical Manager)



## HUTCHINSONS

Crop Production Specialists

### Regional Trial Centres 2023 'Building Blocks of Yield'

With eleven Regional Trial Centre (RTC) open days this summer, visitors can expect to see how their Hutchinsons agronomy team are testing new varieties, technologies, or management practices in their local conditions - all of which are fundamental to fulfilling yield potential on farm.

### Helix Demonstration Farms and Regional Trial Centres

#### Locations & Events Summer 2023

- 1 **Carlisle** – Tuesday 13th June
- 2 **Alnwick** – Wednesday 14th June
- 3 **Grayingham** – Wednesday 5th July
- 4 **Harleston** – Thursday 6th July
- 5 **Stowbridge** – Friday 30th June
- 6 **Sutton St Nicholas** – Wednesday 5th July
- 7 **Castle Donington** – Tuesday 27th June
- 8 **Old Leake** – Monday 19th June
- 9 **Great Fransham** - Thursday 15th June
- 10 **DKB** – Tuesday 27th June
- 11 **Helix National Technology Farm** – Tuesday 4th July
- 12 **Helix East Anglia** – Wednesday 14th June



Please look out for an invitation to your local event, which will be sent out during May. Check our website for more information, or email: [information@hlhLtd.co.uk](mailto:information@hlhLtd.co.uk)

- 13 **Helix Yorkshire** – Thursday 15th June
- 14 **Helix Oxfordshire** – Wednesday 21st June
- 15 **Helix Northumberland** – Monday 3rd July
- 16 **Helix Cornwall** – 21st/22nd June evenings
- 17 **Helix Agroecology Farm** – Tuesday 20th June
- 18 **Helix Wiltshire** – Thursday 22nd June
- 19 **Potato Demonstration Event** – Thursday 13th July

**Helix**  
Technology Farms

# Choosing Oilseed Rape for Autumn 2023



**David Bouch** (Hutchinsons National Seed Manager)

**David Bouch**, (Hutchinsons National Seed Manager), says that despite recent challenges, oilseed rape still offers a really viable option to the rotation.

**With oilseed rape planting decisions for this autumn yet to be made, some growers might decide to take a step away. This follows an uncertain winter period in 2022/23 where flea beetle, pigeon damage and the effects of frost and winter kill have certainly had adverse impacts in some regions.**

Conversely, there were certainly potential growers in East Anglia specifically, who would have drilled last August had any moisture been present, but quite rightly took the decision not to. With this in my mind, the OSR market will possibly remain static or may even decline a little. I think we can safely assume it will not run away and must therefore remain in the circa 415,000ha bracket at best. With challenging decisions to make on which variety to grow, here are some considered suggestions for making the best of any opportunity.

## Hybrid varieties

I still believe strongly that hybrid varieties offer the best case for establishment and indeed the key traits for the growing season.

**Aurelia** will remain very popular and is currently the market leader, but I think that newcomer to the list **Attica** offers a little more across the board whilst also being a better option for the north.

**LG Aviron** too will remain a key variety with its traits and its excellent vigour in both autumn and spring, making it suitable for later drilling. The new candidate **Academic** will offer greater gross output and again better northern performance than

LG Aviron, whilst delivering a gross output on par with Attica. All four varieties have TuYV resistance and pod shatter coupled with RLM7 Phoma resistance. Aviron offers the best LLS of the four.

Other hybrid variety options include **Vegas** from LSPB, newly added to the Recommended List, which has the best disease resistance on offer with 8 for LLS and 9 for Phoma. It does not have TuYV resistance or pod shatter, but does have RLMS Phoma genetics and therefore offers a different option for crop management. Pioneer have PT303 and **PT312**, both offering TuYV resistance and Sclerotinia tolerance. **PT312** possibly has the edge based on oils (47.6). This could have a significant benefit at time of sale, it also has very strong scores for standing ability. Sclerotinia tolerance has also shown a 15% advantage in yield in untreated trials. **DK Expose** can offer the same traits as the four suggested Limagrain varieties, without the advance in yield that both Attica and Academic are showing.

**Clearfield®** is a simple choice for me as **Matrix CL** is most definitely the standout performer at this moment in time and tops the ADHB listing for this category.

**Clubroot** is likely to be more widely spread again and I think **LG Scorpion** ticks all the boxes here with excellent vigour and establishment, decent disease scores and TuYV resistance.

## Conventional varieties

Conventional varieties will still be grown and remain in favour for the home saved seed market. Here my picks are **Acacia**, **KWS Campus** (10th year and still remarkably consistent) and **Annika** for those who want the TuYV trait in a conventional variety (although I believe the trait is better served by the hybrid offer).

**Speak to your agronomist about growing oilseed rape and appropriate variety choice, or contact us: [information@hlhlt.co.uk](mailto:information@hlhlt.co.uk)**

HYBRID	CONVENTIONAL	CLEARFIELD®	CLUBROOT
Attica	Acacia	Matrix CL	LG Scorpion
Academic	KWS Campus		
Aurelia	Annika		
LG Aviron			
Vegas			
PT312			

The above 11 varieties tick all the boxes for the various market sectors. This should assist in keeping the decision making simple. Not having 'your eggs all in one basket' should be adhered to where possible and certainly hybrids (my preferred route to both establishment and traits) offer more than one management tool.

The biggest single consideration remains the conditions at time of planting! If soils are warm and more importantly there is sufficient moisture, then oilseed rape still provides a very viable option in the crop rotation.



**James Whatty**  
(Hutchinsons Agronomist)

# Maize Nutrition

## Do we know enough?

Truro based Hutchinsons agronomist, **James Whatty** questions whether we need to rethink our perceptions and strategies for maize nutrition.



**In the early 70's we grew 8,000ha of maize in the UK, and now the area is over 200,000ha, and yet, for many, how the crop is grown has not changed at all.**

The last two seasons have, for many, put quite a focus on maize due to increased fertiliser costs. With DAP peaking at £1,000/t + how we feed the crop has certainly been put into the spotlight. Increased input costs, combined with increasing environmental regulation is rightly so changing the approach many growers take when considering maize nutrition.

**The question I like to ask myself and growers is why do we do what we do, and what is stopping us from changing?**

Unlike cereals, where we have recently based many decisions upon

the economic optimum when making Nitrogen decisions, maize is much more of a grey area. How many loads of slurry and dung went there? Apply Nitrogen in the seedbed, or once established? DAP at drilling? Maize requires around 30% of its Nitrogen requirement after tasselling, so why are we putting it all in the seedbed? We as advisors and growers need to be pushing the boundaries of what is traditionally perceived.

### Starter fertilisers

Protected Phosphorus starter fertilisers such as Primary-P, which also contains Nitrogen, Sulphur, Magnesium and Zinc, are now being used successfully as an alternative to DAP. The key here is preventing the fixation of phosphorus in the soil and placing the fertiliser where it is needed in the rooting zone. Broadcast

spreading of DAP may well cover the whole field, however, it often leaves the plant unable to access phosphorus when it requires it.

A conventional maize drill on 75cm row spacings will only be moving at most 10% of the field, this shows the value of looking to place more plant-available starter fertilisers. If we can focus more on placing nutrients precisely within the rooting zone, this will allow the developing seed to immediately access what it needs.

Looking across the pond to the USA, we in the UK are a long way behind in terms of precision application and tailoring nutrient requirements to the crop - will it be long before we see liquid application kits on UK drills, as standard?

### How late can we go?

Seedbed Nitrogen, yes, or no? Again, there is a lot of differing opinion on applying N in the seedbed. Around 30% of a maize plant's Nitrogen requirement is needed for cob fill between August and September. Spring weather in recent years, be it too wet or too dry, has not made any form of nutrient uptake easy for plants.

Trials carried out in Cornwall last year, applying foliar Nitrogen as late as the sprayer could travel through the crop, applied 7kg/N as a foliar spray, in the form of N-Durance. Whilst it was not possible to visibly see any difference in plant size, when cob weights were taken from fields, we had an uplift in kernel weight of 6%. In field terms this was 500kg/ha more grain, which for milk production is substantial.

### Where next?

This year we are expanding our trials here in Cornwall, looking at starter fertilisers, foliar nutrition and fungicides.

Measuring yield is fine in many instances; knowing the resultant feed value produced is key, and how we can influence that going forward. This is going to be increasingly important as regulation has a growing influence on how we manage our maize crops in the future.

**If you have questions about maize nutrition, please contact us: [information@hlhlt.co.uk](mailto:information@hlhlt.co.uk)**

# Timing is everything for effective T3s



David Howard  
(Hutchinsons Head of ICM)

The T3 fungicide plays a valuable role in protecting grain quality and topping up foliar disease protection, but timing sprays accurately is vital for best results, Hutchinsons Head of Integrated Crop Management, **David Howard**, says.

**For managing ear diseases, such as fusarium, microdochium and sooty moulds, he says there is only a narrow window of opportunity to treat crops, around full ear emergence, with flowering just beginning in the middle of the ear, (growth stage 63-65).**

“Applying fungicides even just a few days beyond that, means you will start to lose control rapidly, although there will still be benefits to foliar protection, which might be needed given this season’s disease pressure to date. Growing a range of varieties with different speeds of maturity therefore offers distinct management advantages.”

Where the priority is on protecting the top two leaves from foliar diseases, such as rust or Septoria, rather than tackling ear disease, the optimum timing is slightly earlier (typically GS 59), although this is too early for any significant effect on ear diseases, he adds.

“Using prothioconazole or tebuconazole in programme at this earlier timing has been shown to slow ear diseases, but it’s not effective enough. It’s very tricky to fully control ear and foliar diseases at T3, so growers need to have applied a robust T2 to protect crops through to full ear emergence, reducing the need to get in early with a foliar top-up.”

Fungicide timing can be further complicated by variations in ear emergence, Mr Howard continues. “It’s very rare for all ears to emerge at the same time, and with warmer than average temperatures through

last autumn, into spring, some crops are racing through growth stages, so ear timing could be quite variable depending on variety, drilling date, and other factors.”

## Fungicide options

Before applying T3s, growers should complete the AHDB mycotoxin risk assessment (<https://ahdb.org.uk/mycotoxins>), as there are legal limits for fusarium mycotoxins, deoxynivalenol (DON) and zearalenone (ZON), in wheat intended for human consumption, and guidance limits for feed grain.

To manage fusarium (favoured by warm and wet conditions during flowering) and associated mycotoxins, Mr Howard says metconazole, prothioconazole, or tebuconazole, are all good options. AHDB research indicates combinations of prothioconazole and tebuconazole are more effective than single actives alone. For controlling microdochium (cool, wet conditions), prothioconazole is preferred.

“Use a good fungicide dose of at least 50% recommended rate,” he adds.

Including strobilurins, such as azoxystrobin or fluoxastrobin, can be beneficial in either situation, by giving good persistency, helping manage rusts, Septoria nodorum and sooty moulds, and delivering greening benefits.

“Improving green leaf area retention and reducing crop stress can lead to wider yield benefits from the T3, aside from disease control,” he notes.

This season, Hutchinsons is investigating whether there is any worthwhile yield benefit from

## Three functions of T3s

- Control ear diseases, namely fusarium (DON mycotoxins) and microdochium (yield loss)
- Top-up foliar disease protection (Septoria, brown rust, yellow rust)
- Extend green leaf retention

applying an SDHI-based fungicide, such as bixafen + prothioconazole + tebuconazole, at T3 to deliver more prolonged disease protection. Historically, SDHI chemistry has featured mainly at T1 or T2, but with other options now available at these timings, there may be scope to use it later in programmes.

“Recent years have shown disease pressure - Septoria, yellow rust, or brown rust - towards the back end of the season is often much greater than expected, so we must protect the main yield-building leaves as long as possible beyond the main fungicide timings, while safeguarding grain quality. Crops can be quite exposed if weather changes rapidly at the end of the season.”

**Any questions? Please email us: [information@hlhlt.co.uk](mailto:information@hlhlt.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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