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AGRONOMY NEWS FROM

**HUTCHINSONS**

Crop Production Specialists

APRIL 2020

## Top tips for good maize establishment

The area of maize sown this spring is predicted to rise to combat the shortfall in winter cereals drilling.

*Jim Clark Hutchinsons Agronomist*



**However, in the wake of last year's difficult conditions, we ask Hutchinsons maize expert Jim Clark, what we have learnt from last year and what advice he would give to get the best start to the maize crop this season.**

### Soil structure

The roots of a maize plant can venture as deep down into the soil as the crop grows in height, to find water and nutrients – but that is only if the soil structure allows it.

**Fifty-five percent of your yield is down to soil structure and drilling, so if you get that wrong you have effectively messed up your crop.**

Maize is a very weak rooter and if it hits compacted soil, it will just give up. Last season's very wet harvesting conditions will have left many soils compacted, so make sure that the plough pan is broken up – although beware that it is not necessary to go

much deeper than an inch below the plough pan in most situations.

### Drilling

You really want the crop to get up and away. If the seed just sits in the soil, it will lie in the 'rook danger zone' – particularly an issue this year with the loss of Mesuroil seed treatment which also acted as a bird repellent. Korit is widely available as a bird repellent, but some seed this year will be sown without repellent and this could cause problems with bird strike.

Beware of drilling too deeply to avoid bird strike, as soil temperatures at depth will be cooler slowing down germination - which will actually leave the seed in the bird strike zone for longer, if it does not get up and away.

**Critical to good establishment are seed bed conditions and soil temperatures, explains Jim. It is**

**really important not to drill too early** – soil temperatures in the open need to be up to 10°C – or crops can be damaged by late frosts. Up here in Cumbria where crops are grown under film, it is possible to go with slightly colder soils, around 8-9°C. >

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➤ **It's worth remembering that drilling seeds in an east to west direction helps to maximise the crop's exposure to the sun.**

### Weed control

Maize is a sensitive crop, so a fire brigade approach to weed control does not really work, as higher rates of herbicides will generally impact on the crop - therefore timings of both the pre-emergence and post-emergence herbicides are important.

**Delaying spraying by two weeks can cut yields by as much as 0.5-1 t/ha.**

When growing under film, timing of herbicide applications can be challenging. Ensure that there is sufficient moisture under the film from condensation, for the pre-emergence herbicides to work, as these tend to be pendimethalin-based. There is much more chance of these working better on a fine firm seedbed.

Post emergence sprays can go on once the film has split. If under film this can be cut in weeks 4-5 to allow

spraying, but really only where weeds are causing an issue.

Strip tilling in-between the rows under film is also an option.

### Nutrition

As far as nutrition goes, many maize growers will have access to manure so additional nitrogen may not be needed, however potash is important.

Usually I would recommend a smaller amount of nitrogen on the seedbed – about 25-30kg of DAP down the spout next to the seed. This year we are running trials with growers looking at the benefits of using 'Primary-P' starter fertiliser under film, to get the crop up and away quicker.

Maize is different to other crops, as it uses nitrogen later in the summer. At this stage it is best to supply nitrogen in the form of a slow release liquid like N-Durance to help cob and grain development. This approach also helps to speed up the plant maturity at harvest, which is a massive bonus on some sites.

FYM does make residual nitrogen available to the crop at the tasselling stage, usually late June/early July.

## Top tips for the best maize establishment

**Aim for a fine seedbed with no compaction. Plough pans should be broken up.**

- Don't be tempted to drill too early! Make sure soil temperatures are up around 8-10°C.
- Aim to place the seed just below 5cm - as this is longer than a rook's beak – so is more difficult for the birds to get to.
- A starter fertiliser and micro-nutrients in the seedbed are important for getting the crop up and away. Think about potash in the seed bed, not just nitrogen- although it is likely nitrogen will be needed later in the season as well.
- For maize going in under film, aim for a finer, firmer seed bed to improve pre-emergence efficacy.
- Ideally, crops should be treated with a pre emergence and post emergence spray. The same applies for those growing maize under film, although you may have to wait until the weeds are through and the maize has broken through the film before the second spray is applied.

**If you would like advice on growing maize successfully in your own situation, please contact us: [information@hlh ltd.co.uk](mailto:information@hlh ltd.co.uk)**

When it comes to crop nutrition, farmers have often built up an invaluable understanding, passed down through generations, of their own farm – and what it takes to get the best out of it.

Occasionally external circumstances change and force a re-think – for example the significant reduction of atmospheric sulphur deposition, as a direct result of the Clean Air act, has led to the need for sulphur to be applied routinely every year.

And then occasionally we have unprecedented weather, which also requires a re-evaluation of what to do for the best. When we cannot call upon a memory of a similar year to help us, where can we turn for guidance?

**The key to managing plant nutrition is to measure, check and act.**

At this time of year, the focus on measurement is on testing the growing crops – to check the nutrient levels and then correct any shortfalls.

There are a number of ways this can be done – two that we find most useful are: -

**Testing Chlorophyll levels** with the Yara N-Tester. This gives an immediate in-field reading of Chlorophyll levels in the leaf and correlates this to whether more nitrogen is required – and how much in kg/ha.

Heavier than usual rainfall will have impacted on nitrogen availability in the soil, so it is really valuable to be able to monitor the crop status.

**Tissue Testing** provides a detailed picture of the plant's nutritional status – importantly it allows deficiencies to be identified before symptoms are seen, or yield is affected.

**Any nutrient deficiencies during stem extension can increase tiller death, reducing ear number and yields.** This is why it is so important to act on the result and correct any shortfalls with appropriate foliar feeds.

## New for 2020

We now have **growth stage specific critical nutrient values** for cereal tissue tests developed by **Lancrop**, allowing even more accurate diagnosis. As crops develop, the amount of each nutrient required and used by the crop varies. This new development is a real advancement in being able to match crop requirements through the season.



# Managing Plant Nutrition - measure, check and act

**Tim Kerr (Hutchinsons Nutrition Manager) highlights the key importance of checking crop nutrient levels and swiftly correcting any shortfalls, in order to maintain yield potential.**

## Tips to get the best from Tissue Testing

- Use in conjunction with regular soil testing, not as a replacement
- When sampling:
  - ~ Pick the youngest, fully emerged leaves for testing (do not use partially unfurled or old leaves)
  - ~ Avoid picking leaves with disease infection
  - ~ Take a representative sample for that field/soil type
  - ~ A good handful of fresh leaves is required for testing, as leaves are dried and milled for analysis in the lab.

## Managing nutritional demands

Between GS 30 and 39 a typical wheat crop will accumulate in excess of 1 tonne of dry matter per hectare per week. In the same period, wheat will take up an average of 20 kg/ha per week of Nitrogen.

**During stem extension, canopy expansion is rapid and this is the peak demand period for nutrition.**

Consequently, it is vitally important that the crop demands are met to maintain yield potential.

We can see how much nitrogen will be needed at this time – and the N-Tester can help to manage this, however it is a fact that during this period it is likely that slow moving nutrients can become limiting factors – and this can be identified using tissue testing.

Correcting potential deficiencies is straightforward – and cost effective. The days of using tissue tests to tell us why the crop has turned yellow have gone – this is a measurement system that needs using proactively and acting upon.

No doubt 2020 will stay long in our collective memories – when it comes to understanding how to optimise crop nutrition after the wettest winter on record, we should utilise the available science to learn – make appropriate measurements and manage crops accordingly.

**Please speak to your Hutchinsons agronomist, or contact us to learn more about effective crop nutrient monitoring: [information@hlhlt.co.uk](mailto:information@hlhlt.co.uk)**



# Manure management made easy



“About half the muck from the broiler unit is used on the fields – usually we take the three warm batches through the summer - the rest goes to a neighbour,” explains Malcolm.

“We heard about the Omnia system and at LAMMA last year we took the opportunity to find out more – and we were impressed.”

“We really liked the idea of being able to pull together all of information in one place, and also knowing that this would mean we were legal and, in a position, to produce the supporting evidence whenever we needed to.”

**On the back of this, we contacted Will and he set Omnia up for us in next to no time.**

**“We have found it to be a user-friendly system that’s easy to change and update.”**

Accurate maps can be emailed easily across to whoever needs them. Omnia can also generate maps for soil organic matter, cation exchange, pH and micronutrients – all of which ensure that manure and fertiliser use is optimised – avoiding any costly waste or non-compliance, adds Will.

“What we have found on the fields at Lye End Farm is that over the years of the poultry manure being applied, levels of P&K are very high. I have also just carried out some N Min testing which confirmed similarly high levels of nitrogen. So, we will have a manure holiday next year and will look at exporting it, and realising some value from the manure in this way.”

“In Mr Scott’s case we were also able to introduce historical yield maps into Omnia. We just connected **MyJohnDeere** to Omnia through the Cloud and the yield maps transferred straight across. The next step is to look at how we will use this data going forward, either through yield performance analysis or cost of production mapping,” explains Will.

**Find out more: [Omniaprecision.co.uk](http://Omniaprecision.co.uk) [consultancy@omniaprecision.co.uk](mailto:consultancy@omniaprecision.co.uk)**

Managing and recording manure is a constant challenge for many farmers - the current legislative requirement to demonstrate manure management and NVZ compliance means that every farm must have accurate and reliable manure management plans in place.

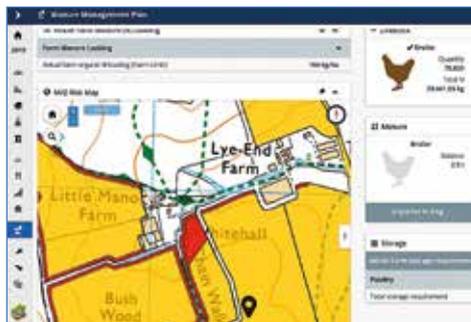
“Farmers want to remain compliant and avoid costly fines, but also maximise the considerable benefits that can be made by utilising organic manures correctly as they are valuable resources for nutrients and organic matter for crops,” explains agronomist Will Parker, based in Bedfordshire.

“However, the paperwork required for this is often an extra burden on an already heavy work load, and in many cases the calculations and records may not be kept up to date or accurate, which can incur heavy fines.”

For his clients, Will uses Omnia to generate manure management plans, as this ensures that all the legislative requirements for livestock manures, digestate covering field and farm limits, field spreading areas, risk maps and storage requirements, are met.

“Within these legal boundaries, Omnia produces organic manure maps for each field on a field scale or zoned sub-field basis. Omnia is then able to generate maps for full nutrient recommendations of the crops on which the manure is being used and what fertiliser needs to be bought in.”

**Will finds the ability to tailor services to the individual farm requirements very valuable. “I use the system across many different farming scenarios, however it all comes down to the same requirement; using manures to maximum benefit, reducing harmful impact on the environment, whilst complying with NVZ rules.”**



Working closely with one of his clients, Malcolm Scott of Lye End Farm, Buntingford in Hertfordshire, Will has been able to do just this.

Malcolm grows continuous winter wheat and spring wheat, with some mid-tier grass and wild bird mix. Alongside this he runs a 140,000-bird broiler unit which supplies IHP in Hemel Hempstead.



**Matt Ward**  
Services Leader - Farmacy Plc

## Matt Ward (Services Leader) sheds some light on an area of potential confusion

Thankfully March saw the return to some drier weather for most and the welcome announcement by DEFRA of the 3-crop rule derogation for all in 2020. However, this does not overcome the management of 'uncropped land' this spring, or how it should be referred to as part of BPS claims.

The term 'fallow' in itself is confusing, is it fallow as a 'crop' for BPS requirements, is it part of the holdings Ecological Focus Area (EFA) requirements, or is it just the term you use to describe land without a cash crop growing on it?

If this season's extreme wet weather has prevented you from planting crops on your land, then this can be treated as fallow land, this includes land that is, or has, been temporarily flooded which remains eligible for BPS and can also be claimed on as normal.

Failed crops could be managed to count as fallow land. However, they can count as the crop originally established, this will require you to keep evidence of the original crop e.g. seed invoices or photographs etc.

If you have fallow land just as a 'crop', then it must be present from **1 May to 30 June 2020**. During this time frame you may still carry out the following field operations:

- apply plant protection products
- carry out drainage work
- sow wild bird seed mixes and/or nectar /pollen sources
- use cultivations to control weeds (for example, blackgrass)
- top green cover or previous crop residue



# Is the land really Fallow?

The fallow land referred to above is different to **EFA fallow** land, which has a different fallow period and more restrictive management rules:

## EFA Fallow land operations - during the EFA fallow period - 1st January 2020 to 30 June 2020

What you can do:

- carry out drainage work
- sow wild bird seed mixes and/or nectar/pollen sources
- top green cover or previous crop residue.

What you cannot do:

- sow grass, unless required for an agri-environment scheme
- plough or cultivate the ground, unless to establish wild bird seed or nectar/pollen sources
- use cultivations to control weeds
- carry out any form of production including sowing, harvesting or grazing
- apply any fertiliser or farmyard manure
- apply any plant protection products, including herbicides etc.

## Cover crops are not fallow land

Perhaps, most importantly, farmers that establish a 'green cover' in an attempt to ameliorate the worst of the soil conditions, should not refer to this as fallow at all!

In these cases, where a single species is sown e.g. Mustard, then it should be called the crop species that it is, (i.e. Brown Mustard BPS code: AC37; White/Yellow Mustard AC38).

Where a mixture of species are sown, then, no-matter what the mix, these should be referred to as a Mixed arable crop (BPS code: AC58-AC62) - you can have up to 5 different mixed crops on your land as different crops, with each mixed crop being considered as a separate crop for crop diversification.

Mixtures of predominantly leguminous crops are separate crops again (Mixed Crop Predominant: code LG15) these can also be claimed for EFA, but, like fallow, more restrictive rules apply, specifically regarding the prohibition of Plant Protection Products for the life cycle of the crop - this includes seed dressings.

**If you have questions about managing uncropped land on your own farm, please contact us: [information@hlhlted.co.uk](mailto:information@hlhlted.co.uk)**

# Fieldwise Answers

## What's the latest information on Light Leaf Spot Risk in Oilseed Rape?

Dr David Ellerton brings us up to date...



Recent mild conditions mean that stem extension is well underway in some crops which have managed to survive CSFB and pigeon grazing and the flowering period will soon be starting across the UK.

ADAS reports widespread symptoms of Light Leaf Spot (LLS) in the field and has seen a very high incidence of 96 - 100% of plants affected on susceptible varieties.

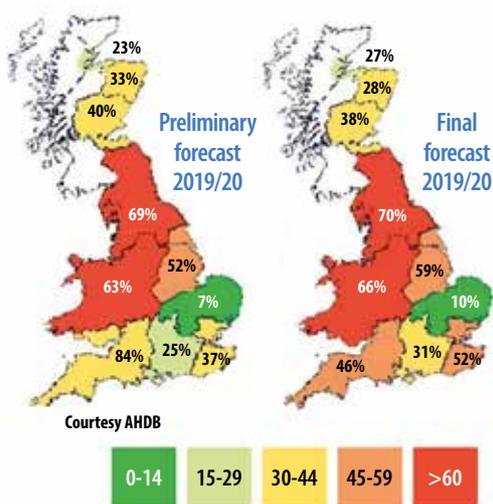
The Bayer SpotCheck initiative has also found Light Leaf Spot in the North, East, West, Midlands, Scotland, Wales and Northern Ireland.

The Autumn LLS forecast last October showed a very variable risk of infection around the country, with the lowest risk in the Eastern Region (7%) and the highest in the North (69%) and West and Wales (63%).

The final AHDB forecast (below) has recently appeared and is based on the deviation in actual winter rainfall data from the 30-year mean:

### Light Leaf Spot forecasts

(Preliminary v final 2019/20)



This final forecast shows that the UK Light Leaf Spot (LLS) risk has generally increased slightly since the publication of the preliminary 2019/20 forecast last autumn. This has been the result of the warm and wet conditions experienced over the winter across the UK.

### Fungicidal control

Of the options available, **prothioconazole** is the most effective active against this disease and products based on prothioconazole should be favoured where Light Leaf Spot is particularly prevalent. Choice of products may also be based on the level of growth regulation required.

**Tebuconazole** based products are worthwhile alternatives to prothioconazole, particularly in lower risk situations and have useful growth regulatory properties which may be appropriate in more forward crops.

**Metconazole** is an alternative active ingredient, but has very strong growth regulatory activity, so care should be taken in deciding which crops to treat.

Inclusion of **azoxystrobin** may help encourage growth in more backward crops.

Where certain fungicide products have already been applied in the autumn, there may be label restrictions on spring usage. Consult individual product labels carefully and follow the appropriate instructions.

There is no threshold for treatment of Light Leaf Spot, so sprays should be applied at the first sign of the disease. At early stem extension, 15 per cent of plants affected is associated with a five per cent yield loss.

- LLS Infection continues to be reported across the UK
- The final Light Leaf Spot forecast indicates a slightly increased risk this spring compared to the provisional forecast, due to the mild, wet winter and early spring
- Prothioconazole based sprays are the most effective on LLS, although products based on tebuconazole also have good activity
- There is no threshold for treatment of LLS so sprays should be applied at the first sign of infection
- Use of non-triazole options at the next timing of yellow bud/early flowering will reduce selection pressure for triazole resistant strains of LLS and also enable pyrethroid mixes where appropriate.

*If you have a question or challenge about crop production issues you are facing on your own farm, please email us: [information@hlh ltd.co.uk](mailto:information@hlh ltd.co.uk) and put 'Fieldwise Answers' in the title.*

For more information on any of our products or services, please contact your local Hutchinsons agronomist, or contact us at:

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