



# Disease risk takes priority when planning T2s

*Flag leaf sprays should be tailored to disease risk rather than yield potential, says Hutchinsons head of integrated crop management, **David Howard***



**David Howard** (Hutchinsons head of ICM)

**Of all winter wheat fungicide applications, the flag leaf (T2) spray is the most important in terms of yield response, so avoid cutting corners, even if crop potential has been compromised by the exceptionally wet first half of the season.**

The flag leaf contributes 40-45% of yield, and leaf two another 20%, so with almost two-thirds of crop output covered by the T2 spray, it is essential to get it right. That has been highlighted in recent years when spells of wet weather in June or July have resulted in clear benefits from the protection offered by later sprays.

Management decisions therefore need to be based on disease risk (see panel overleaf), rather than yield potential. That may seem a tough ask where rooting, biomass and yield potential have been compromised by

prolonged waterlogging or flooding, but by this stage in the season, we are fully committed, so must maximise potential, however variable it is.

## Careful timing

Given the differences in crop development, "micro-management" to tackle variability is key. That could be on a whole field level, or even within individual fields, such as where patches of ground have been waterlogged, compromising plant development and delaying leaf emergence.

Flag leaf emergence could be relatively early in some situations, or delayed in others, so monitor leaf emergence carefully. Varieties respond differently to stress events, often following it with rapid growth, so take note of maturity ratings when planning treatments, as differences could be more pronounced this year.

Where growth varies within the same field, it is impossible to treat everything at exactly the right time, so time sprays based on the areas of field with the highest proportion of higher yield potential.

Typically, the T2 is applied between growth stage 37-39, and generally it is better to treat slightly earlier (GS37) than wait too long for everything to catch up and let disease get a foothold on exposed flag leaves.

Bear in mind too, that backward wheats that were slow to build biomass earlier in the spring may race through growth stages to make up lost time, further reinforcing the importance of close monitoring to identify exactly which leaf is emerging.



Severe yellow rust on a wheat crop



Wheat leaves with Septoria

## T2 options

Septoria is often the focus at T2, and where this is the case, then fenpicoxamid-based products are most potent, offering strong protection and curative control - although it should be used at higher rates where curativity is needed.

Take note of the label maximum concentration of fenpicoxamid that can be applied in the sprayer, which will affect the water volume required. Using a higher water volume than for other products may have implications for the area that can be treated within a given period.

Fluxapyroxad + Mefentrifluconazole is another strong option for Septoria, delivering good curativity, although if rust also needs managing, it may need extra support from a rust-active product, especially when used at lower doses - the same applies to fenpicoxamid.

Benzovindiflupyr remains the strongest active against yellow and brown rust, so will be a worthwhile addition in susceptible varieties or high-risk crops.

The new active isoflucypram is a good all-rounder to consider, being the strongest SDHI against Septoria, while offering decent yellow rust performance. In 2023 Hutchinsons trials, it also showed good persistency and greening, which may be crucial to protect crops through flowering.

Where crops have been compromised by the weather, growers may look to cut costs by opting for a range of older chemistry, but caution is needed. After flowering, crops put on around 0.2 t/ha per day, so if lesser chemistry is used at T2, it could reduce the chances of achieving this, whatever the overall yield potential.

Including the multisite folpet, or sulphur, at T2 may be considered in some cases, such as where Septoria pressure is very high, or lesser chemistry is used and needs additional support, but generally the biggest benefits come from using folpet at T1.

## Disease risk factors

- **Drilling date** - Septoria risk is greater in early-sown, higher biomass crops, whereas yellow rust risk is higher in later-sown wheats
- **Variety** - use resistance ratings as a guide but beware of new races. e.g. varieties with Cougar parentage were impacted more by Septoria in 2023 Hutchinsons trials, while others may be more prone to new rust races
- **Weather** - a mild, wet autumn and winter with few hard frosts has increased Septoria and rust risk, but rainfall in April and May is key to disease development and spread up the canopy. Brown rust may be an issue later if conditions are conducive
- **Crop stress** - stressed crops generally face greater disease risk, but Septoria pressure may be lower in open, backward crops
- **Effectiveness of T0 and T1 sprays** - poor control at T1 or a long window between T1 and T2 puts greater pressure on flag leaf sprays.

## Key messages

- Upper two leaves contribute 60-65% yield
- Compromising T2 sprays has big yield implications
- The mild, wet winter and early spring increased early disease risk
- Variable crop development complicates spray timings
- Base spray decisions on disease risk rather than yield potential.

■ If you need advice on fungicide product choice and timing, email us: [information@hlhlt.co.uk](mailto:information@hlhlt.co.uk)

# How TerraMap can facilitate new SFI actions and pay for itself

*Summer 2024 will see the expansion and improvement of the range of land management actions available through the Sustainable Farming Incentive (SFI).*

"Fifty new actions will go live when the SFI and Countryside Stewardship will combine for the Environmental Land Management offer, which is likely to be called SFI 2024 for the short term, and will represent the largest change to agri-environment schemes in decades," explains **Hannah Joy**, environmental services specialist for Hutchinsons.

"The addition of more actions is designed to be more attractive to farmers and land managers to help achieve objectives that would see 65% to 80% of landowners and farmers adopting 'nature friendly farming' on at least 10%-15% of their land by 2030."

None of the new actions will be open to applicants before summer, but the ability to have two SFI schemes running or to add to an existing agreement on its anniversary means farmers are being encouraged to get on with applications.

As a result, most should be considering how they can combine it with existing arrangements to secure additional income.

"The latest update from DEFRA at the end of March announced caps to certain SFI Actions to ensure that the SFI is working alongside food production. There has been talk of this coming, and it does still provide plenty of flexibility to engage with the SFI," points out Hannah.

**SFI applications submitted on or after 26th March will only be able to put 25% of their land into six SFI actions which take land out of food production.**

These include:

- IPM1 Flower-rich grass margins
- AHL1 Pollen and nectar flower mix
- AHL2 Winter bird food on arable and horticultural land
- AHL3 Grassy field corners and blocks
- IGL1 Improved grassland field corners or blocks out of management
- IGL2 Winter bird food on improved grassland

Applicants can choose as many of these 'limited area' actions as liked, but the total eligible area of them must be no more than 25% of the total agricultural area of the farm.

## New actions for arable soils:

- No-till/Min-till farming (£73/ha). Techniques used to establish crops with minimal soil disturbance
- Variable rate application of nutrients (£27/ha)
- Camera or remote sensor guided herbicide spraying (£43/ha)
- Robotic mechanical weeding (£150/ha)
- Robotic non-mechanical weeding (£101/ha)




## Easy wins

Individual farm circumstances will dictate what can be put in place and when that should happen, says Ms Joy. "However for all farms, there are some easy wins, such as assessing nutrient management and producing a plan, for example, or assessing soil, testing for soil organic matter, and producing a soil management plan.

"It's important to remember new actions can be added into an agreement, and can be reduced by 50%, but can't be taken away."

**Omnia can facilitate many of these actions, and in fact pays for itself just through the SFI management option which is worth £40/ha, for up to 50ha, totalling £2000 for the first year.**

"SAM1 requires a soil assessment to be undertaken including measuring soil organic matter (SOM) as well as a soil management plan and this is where TerraMap can be used to meet all the requirements of the action, and also set up data for the new precision actions when they become available." 

## » TerraMap costs can be covered through SFI actions:

### Looking at a scenario with a 230ha farm

SAM1 action = £1,477

The new variable rate application of nutrients payment £27/ha = £6,210/annually

Totalling **£9,687** per year from the SFI scheme.

TerraMap = **£8,165**

### Capital payments

“From the 1st January 2024 capital payment rates have increased on average by 48%. New capital payment rates apply to new applicants and those with agreements that started on or after the 1st January 2023,” says Ms Joy.

“This includes capital items in CS revenue agreements, Sustainable Farming Incentive (SFI) pilot agreements, and standalone CS capital grants.”

“Capital grants are now a 3-year agreement and can be applied for all year round and no longer need to be tied into a mid tier agreement.”

She points out there is no longer a limit on the maximum value of capital items that can be included in each of the four groups:

- Boundaries, trees and orchards
- Improved water quality
- Improved air quality
- Improved natural flood management

### Examples of the increase to payment rates for options most applied for:

Option	Previous payment rate	New payment rate
BN11 - Hedgerow planting	£11.60/m	£22.97/m
FG1 - Fencing	£4.00/m	£6.34/m
RP4 - Livestock and machinery hardcore tracks	£33/m	£44.63/m
RP15 - Concrete yard renewal	£27.14/sqm	£33.64/sqm
RP26 Biofilters	£990/unit	£2026.14/unit

## SFI Applications

All SFI applications are submitted online in the Rural Payments Service (RPA).

### Applicants must ensure:

- Land is eligible and all land parcels they want to apply for is registered to their single business identifier (SBI) number in order to be included.
- All mapping is correct including land use and land cover (to 4 decimal places).
- Ensure there is correct permissions on the Rural Payments Agency before applying.
- You expect to have management control of the land parcels you select in your SFI application for the 3-year duration of the scheme.
- If any of the land parcels on your farm contains a Site of Special Scientific Interest (SSSI) you may be required to give notice to, or obtain consent from Natural England if you apply for actions on those parcels.
- If any land parcels on your farm contain an archaeological feature you will need to request an SFI historic environment farm environment record (SFI HEFER) if you want to apply for the relevant SFI actions on that land.

■ If you need advice on your SFI application, please contact our specialists: [enviro@hlhlt.co.uk](mailto:enviro@hlhlt.co.uk)

## SFI actions

- at the touch of a button



For Harry Middleditch of Hole Farm, Sudbury in Suffolk, applying for SFI actions has been relatively straightforward and hassle free – and he puts this down to having access to all the data required - at the touch of a button.

We have been Omnia users for several years he explains. “We are a data driven business and like to have the information we need to run our business, all in one place. We find the system very easy to use, for example we can take pictures and upload them so they are in one place for when we need them, we don’t have to waste time looking back.

“Over the last few years using Omnia, we have been able to build up a picture of good and less productive areas of the farm which we have taken out of production and

entered into a range of actions such as AHL1, AHL2 and IPM 3 & 4.”

Having recently had the whole farm Terramapped this level of data has been taken to a whole new level, says Harry. “Now we can look at characteristics of the soils from soil texture down to OM levels and overlap this with the data we already have - which helps us to understand why the soils behave the way they do and enables us to make much more accurate decisions about how to manage them – and this includes where dovetailing appropriate SFI actions would work and applying for them.

It’s a no brainer when the data is already to hand; such as for SAM 1 where we can easily provide the soil measurements and a management plan.”



# “Grow Grass Like a Crop”



Amie Hunter (Hutchinsons Agronomist)

*Amie Hunter, (Hutchinsons Agronomist) says forage producers should treat grassland with an arable focus, to maximise both yield and quality.*

**Given that well managed grassland provides the cheapest feed source for cattle and sheep throughout the year, farmers are striving to produce more milk / meat from forage.** Grass is well suited to growing in the UK and can produce well over 12t DM/ha, yet the current average for improved grassland is just 7-8t DM/ha.

To maximise the production of milk or meat from grass, it is vital we get the most we can from every hectare or tonne of crop. Arable farmers consistently focus on this, and livestock farmers should make sure they treat their grassland with an arable focus to maximise yield and quality.

## Seed Selection

Cereal growers will spend considerable time choosing which varieties to grow ensuring they select varieties with the right yield, quality, and agronomic qualities for their farm. As grass is in the ground for much longer, it could be argued it is even more important to select the right seed, as a wrong choice will have a longer-term impact.

Choosing the right grass seed mix for your system is most important, given the different characteristics of Italian, perennial and hybrid ryegrasses, different heading dates and big differences in agronomic properties between the varieties.

Consider how often you re-seed; grass swards naturally change over time, with the percentage of sown species declining. Weed grasses are much lower yielding, have poorer feed quality and a poorer response to fertiliser. Grass leys should be regularly monitored, and re-seeding should be considered when the percentage of sown species drops below 50%.

## Start with the Soil

Like any crop, to maximise grassland production it is important to work from the ground up. Soils are vulnerable and easily damaged by heavy rain, poaching and machinery traffic. Research shows that 1st cut silage yields can be reduced by over 30% following compaction.

Digging a hole, assessing soil structure and if there is any compaction can help formulate

an appropriate plan to rectify any problems. Grassland soils should be sampled every 4 years, and a full nutrient management plan should be produced to ensure optimum nutrition including best use of organic manures.

Ryegrass is very responsive to nitrogen and in good growing conditions grassland can utilise 2.5 kg N/ha per day. However, utilisation will be poor if other nutrients are out of balance. Sulphur is key for nitrogen utilisation. Insufficient sulphur can lead to reduced yields and protein, and lead to high nitrate levels accumulating in the leaf, reducing palatability.

Regular soil testing also allows us to monitor pH: a drop from the optimum pH 6 down to pH 5-5.5 can cause a 10% drop in grass yield. We know that pH can vary significantly across fields. An even better approach would be to use **TerraMap** to scan the fields, which gives you variable pH maps (in addition to other soil properties). These can then be used to variably apply liming materials, helping to even up the field and reduce lime costs.

## Weed Control

Weeds in grassland, as with other crops, can have a significant impact on yield. Generally, each 1% ground cover of grassland weeds equates to 1% yield loss. A 10% weed infestation is the threshold widely used to justify weed control, based on the yield loss alone, although lower infestations are often economically justified when considering value of lost milk / meat.

Yield loss is not the only reason to control weeds in grassland. Weeds can also cause problems with silage quality, forage utilisation (where grazing animals avoid them), and stock health.

## Regular Assessment

Regular assessment is key. Growers should work with their agronomist to regularly monitor their grass fields, then appropriate agronomic decisions can be made to maximise yield, quality, utilisation and ultimately farm profitability.

**For advice on making the most from grassland, please contact us: [information@hlhlt.co.uk](mailto:information@hlhlt.co.uk)**

# Winter Wheat Nutrition

**Tim Kerr** (Hutchinsons Nutrition Manager) answers topical questions about applying nitrogen for milling wheat and potash uptake:



Tim Kerr (Hutchinsons Nutrition Manager)

## Question – How should you adapt a nitrogen programme for milling wheat in a year like this?

RB209 provides a useful guide on adapting nitrogen applications according to yield potential. Yield potential below 8 tonnes per ha is reflected in a 20 kg /ha drop in nitrogen requirement per ha for every tonne of yield reduction.

It should be borne in mind that, due to the year, soil nitrogen reserves will have been impacted and often the SNS index will be lower than expected.

Consequently, it is entirely likely that any reduction in overall N due to yield potential may be offset by a greater demand due to lower soil mineral nitrogen reserves.

On the bright side, lower yield often increases the likelihood of attaining milling premium, as protein levels can become diluted in higher yielding crops.

A late application of N is important in achieving milling premiums, and more so if soil nitrogen supply is low. 40 kg as a fertiliser application at GS39 has been proven to be effective, although 40 kg as a foliar

application at GS69-73 seems to be more consistent in improving grain protein (without any detriment to baking quality).

## Question – Can I predict the likelihood of achieving milling quality standards?

That final push for milling standard by applying extra nitrogen will be a decision based on factors such as the premium available and the likelihood of wheat grown on your farm achieving the required protein levels, combined with the probability of the crop in front of you delivering.

The Protein Prediction test that has been developed by Hill Court Farm Research is an effective tool to help you decide whether an application of late N to enhance grain protein content is required. The test measures the Nitrate N in a sample of the roots taken from the field in late May/ early June. The result is an accurate indicator of nitrogen in the crop at the time of sampling that offers a valuable guide as to what % protein may be achieved. In a year like this, the test would certainly be worth considering.

## Fieldwise Answers

### Question – I haven't managed to apply potash to any cereals this spring – my soil indices are 2s – should I be ok waiting until next year?

I would want to know how recent the soil was tested – K levels can become depleted if not replaced, and light textured soils may well have lost potash from the rooting zone through the recent months of wet weather.

Potash is particularly important in maximising photosynthesis, nitrogen use efficiency and improving straw strength, and any deficit will have a negative impact on all of these.

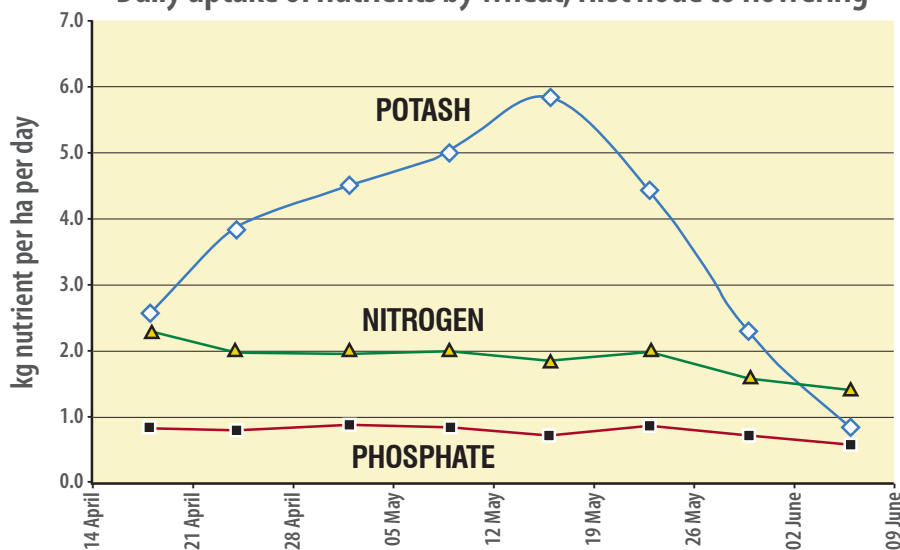
Potash uptake in cereals only reaches its peak around flowering and an actively growing crop will take up around 100 kg of K in the month of May – more than the nitrogen uptake in the same period.

(See chart below – courtesy PDA)

If you have product ready to apply, I believe there would be more benefit from applying it now, rather than waiting until the autumn or next spring. A significant proportion of potash that is taken up returns to the soil during senescence, but it is important to ensure there is sufficient K for uptake requirement – not offtake.

If you have questions about this article, please contact us: [information@hlhld.co.uk](mailto:information@hlhld.co.uk)

Daily uptake of nutrients by wheat, first node to flowering



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