

# TILLAGE

April 2022

## Rising costs

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The uncertainty of grain prices, fertiliser costs and availability, and the cost of diesel have many tillage farmers scratching their heads as to what to do with crops for the season. Many farmers have forward-bought fertiliser and have been insulated from the worst impacts of the recent increases; however, from a survey carried out by Teagasc last month it was seen that a significant number of farmers have been left exposed. Therefore, all farmers should sit down and do a detailed review of their crops, assess how much fertiliser is available and how much the crops should receive.

Earlier in the year it was estimated that according to the break-even ratio (BER) of the cost of grain relative to the cost of nitrogen (N), winter wheat and barley crops should receive between 25kg and 30kg/ha less than the maximum allowed rate. This may or may not have changed based on the cost of the fertiliser purchased and the price of grain, either expected or forward sold, if any. Where there may be a shortage of fertiliser, prioritise crops that are likely to return the most money. Every farmer's situation is different, so it is important that this review is carried out.

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## Spring crops

Complete sowing of wheat, oats and beans as soon as possible if not already completed, while there is still plenty of time to sow barley. Increase barley seed rate as you drill

later into April and aim to sow approximately 350 seeds to establish 300 plants.

### Fertiliser key points for spring cereals:

- select a suitable fertiliser to deliver sufficient seedbed N for early establishment and

sufficient phosphorus (P) and potassium (K) to match crop offtakes;

- P trials in spring barley indicate the benefits of placing P fertiliser on P Index 1 soils in terms of rapid root and tiller development;
- recent work in spring barley has also shown the higher rates of K (80-100kg/ha) can also help to reduce brackling in barley;
- reduce the chemical fertiliser rates where organic manures have been applied;
- consider reducing N rates where large cover crops were grown, as there may well be scope to reduce rates by 10kg/ha where leafy crops were grown;
- apply ~30% of the crop's N requirements at sowing;
- apply remaining N at mid tillering, or alternatively split the remaining crop N as follows – two-thirds at early tillering and the remaining one-third by GS31/32 to reduce the risk of N loss in feeding barley – for malting, apply all the top dressing as soon as tramlines are visible; and,
- watch crops closely for signs of manganese deficiency and treat as soon as symptoms appear. Tillers can be lost very quickly and the crops will not have time to recover.

### Aphids

March-sown crops do not need an aphicide, except in areas with a history of barley yellow dwarf virus (BYDV) or near the coast. April-/May-sown crops should receive an aphicide at the 3-4 leaf stage for optimum effect. Use full label rates to get best control, but monitor after spraying to assess for resistant aphids.

### Weed control:

- early application (4-5 leaf stage of crop) using reduced rates will save money;
- best results are achieved when the weed and crop are growing actively;
- weather before spraying will influence how well the weed takes up the chemical – ideally wait for two to three warm days before spraying; and,
- **Table 1** shows available options.

### Wild oats

Pinoxaden (Axial Pro 0.6L/ha) or fenoxaprop (Foxtrot/Farmco Wild Oats) can be applied with certain herbicides on different crops, so check each label for restrictions. Where wild oat sprays are applied separately, obey intervals to maximise the efficacy.

**Table 1: Popular weed control options for spring cereal crops.**

#### Suggested rates and products

Sulfonylurea, e.g., Ally Max or Cameo Max or Harmony Max – half to two-thirds rate  
**plus**

Mecoprop P 1.5L/ha or Fluroxypyr 0.75L/ha or Galaxy 0.75L/ha or Pixxaro 0.375L/ha  
**or**

Zypar 0.75-1.0L/ha can be considered almost as a one-can solution for most spring-germinating weeds. Check weed spectrum.

## Winter wheat

### Nitrogen

Complete the main N application before GS32. This generally equates to half the total amount of N for the crop if a three-split programme is being used and is typically in the range of 100-125kg/ha (80-100 units/ac); however, this may well be slightly lower this year and will depend on the BER. Apply the final split at flag leaf. Where a two-split programme is used the application at GS32 should bring the crop up to its final amount.

### PGR

Apply a plant growth regulator (PGR) by the first node (GS31). The temptation may be to cut corners with plant protection products this year, but bear in mind that crops have grown well over the winter and may have higher lodging pressure as a result.

Options include: CCC 75% 2.0L/ha plus/minus an adjuvant; K2 1.8L/ha; and, CCC 1.0L/ha plus Moddus 0.2L/ha or Meddax Max 0.2kg/ha. Temperatures need to be >8°C for best effect.

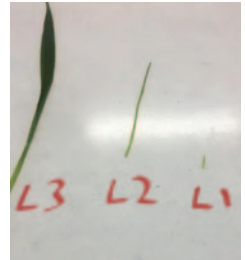
### Fungicide

**Leaf 4 spray (T0):** so far there have been few reports of yellow rust and so the justification for a leaf 4 spray must be questioned this year. Long-

term Teagasc trials have shown little or no yield response to the T0, so this is an area where savings can be achieved, especially in first wheats. For those who still are growing Bennington or JB Diego, monitor crops closely and if yellow rust appears, then treatment will be needed. Options include an azole (e.g., Fezan) plus a strobilurin (e.g., Comet). However, be aware that using an azole at this timing will affect the efficacy of some of the azole fungicides used later to control septoria.

### Leaf 3 spray (T1):

apply when third last leaf is fully emerged. Growth stage may not be an accurate indicator of the actual leaves present in the crop, so dissecting plants and identifying



Dissect plants to identify leaf 3.

the correct leaf to apply the first fungicide is critical for optimum septoria control. In other years, where there has been good growth over the winter, we have seen plants produce an extra leaf, so make sure that you target the correct leaf before application of a fungicide. Include the multisite Folpet 1.5L/ha plus 80-100% of SDHI/Qii mixes, e.g., Questar, Revystar XL, Adexar, Elatus Era, Ascra Xpro.

## Winter barley

April is the month where winter barley crops develop the fastest and demand for nutrition is at its highest.

### Nitrogen

Again depending on the total amount you intend to apply, make sure that you apply the last split before GS32, as barley does not use late N efficiently and needs its N working

before you see the flag leaf. Manganese deficiency is common and needs attention.

### Fungicide

The decision to use a two- or a three-spray strategy will depend on the variety and location.

Use a three-spray programme on susceptible varieties (e.g., Cassia) where disease levels are moderate or high, especially in the southern

half of the country.

However, with crops in the northern half of the country on clean varieties, you may be able to get away with two applications. Spray plan:

*first spray* – GS30;

*second spray* – GS31-33; and,

*third spray* – GS39-49.

**Options include:** Siltra 0.6L/ha; Decoy co-packs; Elatus Era 0.8L/ha; MacFare Xpro; or, Proline 0.4L/ha plus SDHI (Imtrex, Zulu, etc.)/strob. Where mildew is evident, include a mildewicide. Add Folpet to the last spray for the control of ramularia.

## Winter oats

Winter oats have been very advanced all year because of the relatively mild weather, with most crops around GS30 and heading for GS31 by April 1. Disease levels as a result are higher than in 2021. There have been reports of both crown rust and mildew in crops, so keep a close eye on them. With options limited, it is important to choose the best product or products for each situation.

Prothioconazole products (e.g., Proline) will give good control of mildew. Where pressure is high add in a mildewicide. The addition of a strobilurin or SDHI will improve rust control.

### Nitrogen

All crops should receive their full N by the first node. Do not apply more than 150kg/ha, as this will increase lodging pressure and trials indicate that it will reduce yield and quality. Don't cut N rates too much on oats, as yield penalties may be more severe than in wheat or barley. Anything below 125kg/ha increases the risk of a large decrease in yield.

### PGR

Aim to apply a PGR on two-row varieties between GS32 and GS37 for effective shortening, e.g., Terpal 1.2-1.5L/ha, Cerone 0.5-0.7L/ha, Meddax Max 0.3-0.5kg/ha. For six-row varieties or two-row varieties on very fertile sites, two applications are generally required. Consider Moddus 0.2L/ha plus CCC 1.0L/ha at GS30/31, followed by the normal timing at GS32-37.

Watch the weather when applying PGRs, as frost will lessen the effect of the products, while also increasing the possibility of scorching. Also avoid complicated mixes, as crops can be prone to scorch at this time of year.

### PGR

While many crops will already have received a PGR, trials show the best growth regulation is achieved when the crop is at the second node (GS32-33). Options include CCC 75% 2.0L/ha or Ceraide 1.4L/ha or CCC 1L/ha plus Moddus 0.2L/ha, or Meddax Max 0.2kg/ha, etc.

### Fungicides

Disease control should start early with the first signs of mildew and the first two applications generally coincide with PGR applications. Options include:

- Talius 0.2L/ha plus or minus Fezan/Tebucur 0.5L/ha;
- Fezan 0.5L/ha plus Midas 0.25L/ha or Tern/Winger 0.25L/ha;
- Proline 0.5L/ha plus Comet 0.5L/ha or Cello 0.6-0.75L/ha;
- Siltra 0.6L/ha; or,
- Elatus Era 1.0L/ha (T2 or T3 only one application allowed).