

TILLAGE

April 2023

Spring crops

Edited by
Shay Phelan,
Tillage Specialist

Most spring wheat, oats and beans were sown at the beginning of March; however, there are some areas where there may still be some crops to be planted. These should be planted as early as possible and in the case of both wheat and oats, aim to chop the straw on these late-sown crops. A lot of spring barley was sown in early March. These crops have now emerged. Again however there are still plenty more crops to be sown. Increase barley seed rate as you drill later into April. Aim to sow approximately 350 seeds to establish 300 plants. While fertiliser has come down in price in recent weeks, it is still expensive, so aim to use it as efficiently as possible.

Fertiliser key points for spring cereals:

- select a suitable fertiliser to deliver sufficient seedbed nitrogen (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 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;
- apply ~30% of the crop's N requirement at sowing;
- apply remaining N at mid tillering or alternatively split the remaining N as follows – two-thirds at early tillering and the remaining 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

Early March-sown crops will not need an aphicide; however, crops sown in late March which emerge in April and April-drilled crops are at higher risk, especially in areas with a history of barley yellow dwarf virus (BYDV) or near the coast.

Crops at risk 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) using reduced rates will save money;

- best results attained when the weed and crop are growing actively;
- the weather before spraying will influence how well the weed takes up the chemical – ideally wait for two or 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 of the wild oat spray.

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, at half to two-thirds rate plus 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 a one-can solution for most spring-germinating weeds. Check weed spectrum.

Winter wheat

Nitrogen

Complete the main N application now (before GS32). This generally equates to half the total amount of N for the crop if a three-split programme is being used. It 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 break-even ratio (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 first node (GS31). The temptation may well be to cut corners with plant protection products to reduce costs this year, but this should only be done if N rates are reduced, which will lower lodging pressure.

Options include: CCC 75% 2.0L/ha plus or minus an adjuvant; K2 1.8L/ha; or, 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): long-term Teagasc trials have shown little or no yield response to the T0, so this is definitely an area where savings can be achieved, especially in first wheats. Septoria is resistant to all the strobilurins at this stage, so it is pointless using them on wheat unless yellow rust is evident, in which case Comet and Fezan can be applied.

Leaf 3 spray (T1): apply when the 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 the correct leaf to apply the first fungicide is critical for optimum septoria control. We have seen in previous years where the timings were incorrect,

that this has a negative impact on septoria control, 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 an SDHI/Qii mix, e.g., Questar, Revystar XL, Adexar, Elatus Era, Ascra Xpro. Add a mildewicide where mildew is present.

Given that pesticide costs have increased this year by between 10 and 20%, all inputs should be queried including adjuvants, bio-stimulants and even trace elements, which can often be applied as a type of insurance. From the 2023 Teagasc Costs and Returns booklet, it is estimated that it is going to take 9.2t/ha of winter wheat to cover costs, so there is little scope for extras.

Winter barley

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

Nutrition

Depending on the total amount you intend to apply, make sure that you get the last split out before GS32, as barley does not use late N efficiently and needs it working before you see the flag leaf. Manganese deficiency is common and needs attention.

Fungicide

The decision to use a two- or 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. Some of these crops have already received their first fungicide.

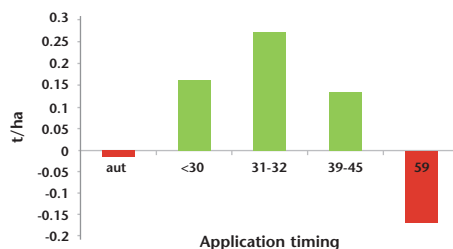


FIGURE 1: Fungicide application timing trial.

On crops in the northern half of the country on clean varieties, you may be able to get away with two applications at GS31-33, followed by GS39-49. Again, it is worth pointing out that the awns peeping stage is the ideal timing for that final fungicide to control ramularia. Many growers still apply a flag leaf spray followed two/three weeks later with the final application to the head at GS59-69. In Teagasc trials this has resulted on average in a decrease in yield of almost 0.2t/ha (Figure 1).

Options include Siltra 0.6L/ha, Decoy co-packs, Elatus Era 0.8L/ha, MacFare Xpro or Proline 0.4L/ha plus SDHI (Imtrex, etc.)/strobilurin. Where mildew is evident, include a mildewicide. Add Folpet at 1.5L/ha to the last spray for the control of ramularia. Don't forget that in barley, half rates of azole/SDHI/strobilurin fungicides will give adequate control. This will help to keep costs down.

PGR

Aim to apply a PGR on two-row varieties

Winter oats

Winter oat crops that were planted last autumn have progressed surprisingly well considering the wet winter they experienced. Most crops are between GS30 and 31. Disease is evident in some crops and 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 mildewicide. The addition of a strobilurin or SDHI will improve rust control.

Nitrogen

All crops should receive their full N by first node. Do not apply more than 150kg/ha, as this will increase lodging pressure and trials from Oak Park also indicate that it will reduce yield and quality. Generally, the optimum N rate for winter oat crops is between 120 and 150kg/ha. Exceeding this risks reducing hectolitre weight and so is not advised.

between GS32 and 37 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 while also increasing the possibility of scorching. Also avoid complicated mixes as crops are still quite delicate after the difficult season so far.

PGR

Many crops will already have received a PGR; however, Teagasc trials show that the best growth regulation is achieved when crop is at 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; and,
- Elatus Era 1.0L/ha (T2 or T3 only one application allowed).