

TILLAGE

March 2021

Winter cereals

Edited by
Ciaran Collins,
Tillage Specialist

The area of winter cereals has returned to normal this season. Establishment has been good in the majority of crops, apart from some that were sown later and on wetter soils. Fertiliser application and any remaining weed control will be the priority this month.

Phosphorus and potassium

Prioritise any crops with low plant counts and fields with low phosphorus (P) and potassium (K) levels for the first fertiliser application. **Table 1** shows the P and K requirements and suggested fertiliser types and rates based on a cereal crop yielding 10 tonnes/ha where the straw is removed. P and K



P and K fertiliser application should match crop offtakes. Requirements need to be adjusted (P by 3.8kg/t, K by 10kg/t) for lower or higher grain yields. P and K applications should be based on a recent soil test report.

Table 1: P and K advice for 10t/ha crop.

Soil index	P kg/ha (units/ac)	K kg/ha (units/ac)	Bags/ac
1	58 (46)	130 (104)	4.5 bags 10-10-20
2	48 (38)	115 (92)	4.5 bags 12-8-20
3	38 (30)	100 (80)	4.25 bags 10-7-20
4	0	0	-

Winter barley

Apply the first split of nitrogen (N), 50kg/ha, in early March and apply the main split by GS31. On thin or backward crops, first N can be earlier (start of growth) but application rate should be low as crop demand is small.

Where N levels are high (over 180kg/ha) three splits can be used but ensure all N is applied by GS32.

Sulphur (15kg/ha) and deficient trace elements (based on soil analysis and field history) should be applied to all cereals before GS31.

Plant growth regulator

An application of CCC 1.5L/ha before GS30 may be beneficial for any crops with lower plant counts.

This will encourage tiller survival (not to reduce lodging), can give a yield response (0.2t/ha) and also help to even up crops. This plant growth regulator (PGR) can be applied with the first fungicide. Use Moddus/Medax Max plus 1.0L/ha CCC for high lodging risk fields at GS30. For best straw shortening effect in barley, apply Cerone/Terpal/Moddus/Medax Max from GS32-39.

Herbicide

Broadleaved weed control should be based on sulfonylurea combined with a suitable partner, e.g., Zypar/Galaxy/Hurler. Active growth and high rates are needed to control overwintered weeds. It is too late to control annual meadow grass in most cases.

Winter wheat

Nitrogen

Apply 40-50kg/ha of N as the first split in mid March. Increase rates to 75kg/ha for thin crops, second wheat or where take-all is a risk. Generally divide the N applications ¼:½:¼ over three splits. Apply the main split by GS31 and the last split by GS39.

Herbicide

Where grass weeds are present, Pacifica Plus/Monolith plus Biopower are options. Broadway Star plus Torpedo is a strong brome option where annual meadow grass has already been controlled. Avoid crops under stress and be careful of tank mixes. Where no grass weeds are present, select a spring-type option like Ally Max, Calibre, etc., plus Galaxy/Zypar/Hurler, etc., for a wider weed spectrum.

Spring crops

Spring beans

There is good interest in spring beans again this year due to favourable contract prices and the Department of Agriculture, Food and the Marine (DAFM) has confirmed that the protein payment is available again in 2021. Beans are an excellent break crop and offer an alternative mode of action to control grass weeds.

The yield potential of beans is reduced after mid-March sowing, so aim to plant beans as

early as possible in March but get your seedbed right. Aim to plant 40-45 seeds/m² to establish 30-35 plants/m². A thousand grain weight (TGW) of 550g will need a sowing rate of 210kg/ha (13.4st/ac). Take note of the TGW on the bags, as big seed requires high seed rates. P and K must be incorporated into the seedbed in P index 1 and 2 soils to avoid additional yield loss. However, low P soils could lose 1.5t/ha, irrespective of the fertiliser application method.



Beans are an excellent break crop.

There is no benefit from seedbed N. It is essential that pre-emergence residual herbicides are used, as Basagran is the only approved post-emergence herbicide which controls emerged broadleaved weeds and it has a very limited

weed spectrum. Pre-emergence residual products work best on fine seedbeds with some moisture after spraying. Rolling post sowing helps the activity of pre-emergence herbicides by breaking up the clods. The main pre-emergence herbicide options are: Nirvana 4.0-4.5L/ha; Nirvana 2.5L/ha plus Defy 4.0L/ha; and, Stallion 3.0L/ha.

Spring barley

Consult the 2021 recommended list for variety characteristics. Seed rate should be calculated based on the TGW, which is normally printed on the bag. Sow 350 seeds/m² to establish 300 plants/m² in good conditions (**Table 2**). Be realistic about establishment percentage and adjust seed rate for soil conditions. In Teagasc experiments across three sites and three seasons (2011-2013) the average establishment rate was 78%.

Table 2: Spring barley seed rates to establish 300 plants/m².

Variety	TGW*	kg/ha	st/ac
Gangway	48	169	10.8
RGT Planet	49.1	173	11.0
SY Errigal	49.5	175	11.1
Highway	50.3	178	11.3
Prospect	46.7	165	10.5
SY Arderin	52.5	185	11.8
SY Tungsten	50.3	178	11.3
Laureate	50.4	178	11.3

*DAFM harvest trials 2020.

Date for your diary

Winter Crop Agronomy Webinar

Tuesday, April 6, 2021

Teagasc researchers, specialists and advisors will update growers on crop agronomy for the coming weeks.

Venue: online

Event time: 11.30am

Straw incorporation measure

The DAFM has secured a dedicated €10m for a pilot scheme on straw incorporation for 2021. While the finer details are to be confirmed (at time of writing), it is expected the measure will cover the chopping and incorporation of cereal straw, namely oats, wheat, rye and barley. Oilseed rape is also being considered.

Straw incorporation is one of the measures included in the marginal abatement cost curve (MACC) as a carbon sequestration action. The MACC is a roadmap that identifies the most cost-effective pathways to reduce agricultural emissions.

While the measure is awaiting approval in Brussels, rates have been reported of €250/ha for

cereal straw (with a reduced rate mentioned for oilseed rape), where farmers chop and incorporate straw as soon as possible after the harvest. Farmers will nominate parcels on their Basic Payment Scheme (BPS) application for the scheme, but these can be amended after the closing date.

As this is a Pillar II measure, in the event of the measure being oversubscribed, applicants will be selected by a rank and set of criteria to be finalised shortly, rather than a reduced rate of payment.

Further details will be available when the terms and conditions of this year's BPS are available. Contact your local advisor for further details.

HEALTH & SAFETY

Plan ahead to stay safe

A total of 12% of tillage farmers suffered an injury in the previous five years, according to the most recent Teagasc National Farm Survey (NFS) farm injuries survey. The survey showed that 97% of injuries required medical treatment, with 73% requiring a hospital visit. Spring is high injury risk time on tillage farms due to workload. Injuries with vehicles and machinery and trips and falls are frequent. Prevent injuries by having machinery, equipment and farmyards in a safe working condition. Additionally, safe behaviour is crucial as behaviour is a factor in about 90% of workplace injuries. Work



Avoid machine crush zones.

organisation is vital in spring, such as working at a steady pace, getting enough rest and taking adequate meal breaks. Injuries with farm machines tend to involve knockdowns and being crushed by machine parts, so give safety a high priority when working close to machinery.

Older farmers and children on farms are at high risk near machinery.

Trips and falls are also avoided by ensuring that farmyards are free of hazards. Operating farm vehicles with machinery on public roads is high risk and RSA/legal requirements need implementation.

