

TILLAGE

August 2020

Harvest management

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Harvest time is the busiest time on any tillage farm with the constant battle with weather to get crops cut and baled in time. However, a few simple tips can make the job in hand a bit more efficient and also have long-term benefits on soil structure.

In wet seasons, soils can be severely damaged by large machinery, especially grain trailers, telehandlers, bale trailers, etc. This damage can have a significant impact on the following crops, so a simple traffic plan for all drivers, especially casual labour, is essential. Consider the following points to reduce the risk of damage on soils:

- tractors and grain trailers should be parked on tramlines and facing towards the gate – avoid turning in the field when the trailer is full;
- all traffic should be confined to tramlines as much as possible;
- check tyre pressures on all machines to see if they are at the optimum pressure for field conditions;
- only use chaser bins or trailers with low ground pressure tyres when side filling from the combine;
- collect straw bales where possible with bale chasers – avoid stacking bales in rows for easy loading onto trailers, loaders will have driven over the same area at least four times;
- avoid using industrial loaders with road tyres when loading straw;
- in broken weather consider chopping straw on end headlands to make it easier to bale the rest of the field (a lot of this straw gets trampled and takes longer to dry out), it facilitates easier combining and the straw will have nutritional and structural benefits to the soil;
- straw trucks should only enter the field if soil conditions are good and they should remain on tramlines;
- grain trucks should never enter the field as the tyres are not suitable for field conditions; and,
- low-value straws, e.g., oilseed rape, beans, peas, should be chopped back into soil.

Catch crops

The experience for many growers who grew catch crops in 2019 was poor, as late drilling combined with a very wet autumn resulted in poor growth and poor utilisation where they were grazed. One of the key lessons learned is that August-planted crops performed better than September crops. With more spring cereals sown this year, for many people it may be a struggle to get catch crops planted in time. Target fields that were cleared early, e.g., winter barley, and get crops established. Be aware that crops like mustard will grow quite quickly and become stemmy, so leave these until later in the month. Green Low-carbon Agri-environment Scheme (GLAS) catch crops can be sown up to September 15, using light cultivation techniques. Ploughing is not allowed. However, August-sown crops will trap more nutrients, provide more green material for grazing or incorporation, and have better soil improvement effects.

Under the current GLAS rules the options for grazing are limited to fodder rape, leafy turnip, oats and possibly rye. All the other species are not really suitable for grazing mainly due to either potential yield or cost. When considering the options also take into account the field location, fencing requirements, soil type, etc., as these crops will be grazed during the winter months. Make sure that there is a run back for the animals, especially if grazing fodder rape and other brassica crops. Place a source of roughage in the field at drilling time, bales of silage or straw will do, as this will save driving on the fields in wet conditions and causing compaction. Catch crops in GLAS can only be grazed after December 1 and remember that two separate species must be sown. Avoid brassica species such as fodder rape, leafy turnip, etc., where oilseed rape is already in the farm crop rotation, as these will increase the risk of getting club root into the soil. Talk to your local co-op/merchant and GLAS planner as soon as possible to make sure that the seeds you need are available. See **Table 1** for

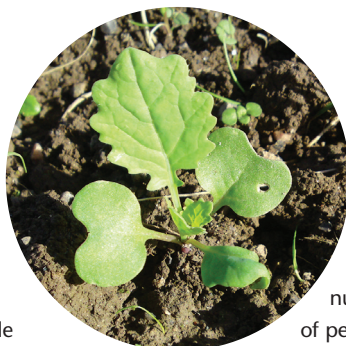
Table 1: Seed rates for catch/cover crops.

Species	Seeding	EFA	GLAS 3	Nitrogen (N)
		No set rate. Suggested rate below (kg/ha)	Prescribed rates below (kg/ha)	
Brassicas	Forage/fodder rape	3	3-5	Will trap existing N
	Leafy turnip	3	5	
	Tillage radish	6-8	5	
	Mustard	8-10	6-10	
Legumes	Berseem clover	10-15	10-15	Will trap and add N
	Crimson clover	10-15	10-15	
	Vetch	50	12	Will add N
	Peas	80-100	30	
	Beans	150	90-100	
Grasses & cereals	Rye	70-90	65-80	Will trap existing N
	Oats (& black oats)	70-80	75-100	
Other	Phacelia	5-7	2-5	Will trap existing N
	Buckwheat	40	30-40	

seeds and rates for Ecological Focus Area (EFA) and GLAS 3 catch crop requirements. Outside of the GLAS scheme, there are other options such as redstart (a hybrid brassica), stubble turnips, or even kale, although yields will not be as high as June-/July-sown crops. Keep a close eye on costs as expensive mixes, elaborate cultivation systems and “starter fertilisers”, when used, can quickly erode any financial benefits gained by catch crops.

Winter oilseed rape

Oilseed rape offers an ideal break from cereal rotations and is a good entry for first wheats. Other benefits include spreading the workload, soil structure benefits and it can be used to control difficult grass weeds. Again, the experience of autumn 2019 showed the benefits of having an area of oilseed rape planted from a workload point of view.



Flea beetle damage.

beetle decimate crops in the UK, especially in dry seed beds. Check crops at the early establishment stage for damage (shot holes).

Apply a pyrethroid insecticide where numbers are high i.e., more than 50% of petioles damaged. Experience has

shown direct drilling (using a subsoiler) can present more slug problems than other systems.

Weed control: field history is important, as pre-emergence weed control is still the most effective. Volunteer cereals, cleavers and grass weeds are the main competitive weeds and do most damage early in the crop's growth. Apply pre-emergence or early post-emergence treatments. Options include Butisan S/Rapsan 500 (1.5L/ha) or Katamaran Turbo (2.0L-2.5L/ha) within 48 hours after sowing. Complete grass weed and volunteer cereal control as soon as possible with reduced rates of graminicides.

Clearfield varieties are becoming more popular in the UK and Ireland, as they offer an opportunity to grow oilseed rape in fields with brassica weeds such as charlock. Clearfield varieties are hybrid varieties that can be identified by the letters CL in their name, e.g., Plurax CL. The herbicide Cleranda is specially developed for Clearfield varieties and not only does it control charlock, it also controls groundsel, fumitory, poppy and speedwells. However, Cleranda can only be used on Clearfield hybrid varieties.

Winter oilseed rape management tips

Sowing date: mid August to early September, ideally before September 10; however, seedbed quality, i.e., fine and firm, is as important as the sowing date.

Variety: the Department of Agriculture, Food and the Marine (DAFM) recommended winter oilseed rape (WOSR) list is the best source of information on the main varieties. Conventional varieties or hybrids can be sown in August, but in September you should only use hybrids.

Seeding rate: sow 60-80 seeds/m² to establish 30-50 plants/m² in the spring. Varietal differences in vigour, thousand grain weight, along with seed bed conditions and sowing date must be accounted for. Poor seed bed and late sowing will need higher (10%) seeding rates.

Pest control: we have seen cabbage stem flea

National Crops Forum

The annual National Crops Forum provides an ideal opportunity for farmers to assess the season just gone and also look forward to options for next season. This year due to Covid-19 restrictions, the National Crops Forum will be

held over two evenings as a virtual event on Zoom, at 6:30pm-7:30pm each evening. The dates are as follows:

September 10 – varieties and agronomy

September 17 – Green Deal and Farm to Fork – implications for tillage farmers.

Post-harvest stubble management



Stubble cultivation

Stubble cultivations are the first step in the control of many grass weeds, as the reliance on herbicides is not achieving adequate control on many farms. Wild oats, bromes or black grass were common in many crops before harvest. We have seen from the UK that grass weeds, especially black grass, have the potential to become the most problematic weeds on Irish farms if they are not controlled early. Growers are spending up to €150/ha on various herbicides trying to control them in the UK, so Irish growers must adopt a zero-tolerance policy when it comes to grass weeds. A full integrated pest management (IPM) approach including crop rotation, rogueing, stubble cultivations, machinery hygiene, herbicides and possibly grass ley, has to be considered to eliminate the problem, as using herbicides alone is not the answer.



Shallow cultivations, no deeper than 2cm, will encourage up to 80-90% of sterile brome and black grass seeds to germinate. Be careful not to cultivate too deep as this can induce dormancy in some weed seeds and delay germination until next season. It is also vitally important to identify the particular grass weed that you are trying to encourage to grow, as meadow brome needs exposure to light for a period of time in order to break dormancy, whereas sterile brome needs to be covered to break dormancy. Where you are not establishing cover/catch crops, there may well be an opportunity to carry out two to three cultivations and burn off with glyphosate before the establishment of the next winter or spring crop.

Jimmy Staples, Enable Conservation Tillage Project Advisor, Teagasc, has produced a video outlining some practical tips on how to get good control of grass weeds using stubble cultivations. This can be accessed at the following link:

<https://www.youtube.com/watch?v=p7AiTNzum5M> or using the QR code below.

Headlands can often be the original source of weeds, particularly grass weeds, so it is vital for good control that headlands are cultivated, as well as the centre of the field. Headlands should

be cultivated last and avoid dropping the cultivator on the headland and then driving into the field, as this may drag the weed seeds or rhizomes out into the field. Consider turning before the tramlines to avoid this.