



JULY JOURNAL

As one of the most challenging seasons of recent times nears its end it's time to start preparations for harvest and turn thoughts to the season in prospect.



Early July is typically the start of the 'desiccation season', but following high temperatures and dry conditions in May and early June, desiccation started on forward oilseed rape crops, in some parts, in the latter part of June. There still remains many of the later crops, often with variable, in-field maturity to prepare for harvest. In addition, rains in late June, followed by high temperatures, will have stimulated a surge of late weed growth, in many crops. This may be an indicator that a number of crops will require some 'tidying up' or 'harvest conditioning' before the combines go in. It will be important to clear problem weeds hiding underneath the canopy and limit viable seed return. For the most part this will require an application of glyphosate.

The change in glyphosate formulation in recent years is well documented. All formulations with tallow amine surfactants have been replaced with alkyl phosphate ester (APE) surfactants. Trials have demonstrated the greater reliability and performance of the more advanced glyphosate formulations e.g. Roundup PowerMax compared with both current and previous product formulations. These trials have backed up anecdotal observations of farmers and agronomists.

The main advantages from using a glyphosate formulation such as Roundup PowerMax are:

- Rainfastness — 1 hour for annuals and 4 hours for perennials.
- Speed of uptake and activity.
- Improved reliability, in both hot and dry or cool and dry weather conditions.
- Less risk of drift.

Suggested guidelines to optimise the activity of Roundup PowerMax and other glyphosate formulations include:

- Spray as soon as crop reaches 30% moisture.
- Use water volumes of 200–250 litres/ha in thick or leaning crops and/or use angled nozzles to increase spray penetration into the canopy.
- When spraying tall crops pre-harvest there is increased risk of drift damage to hedgerows & glyphosate-sensitive crops. Follow spraying 'Best Practice', choose low drift nozzles and adjust the boom height to ensure the best spray pattern coverage of the whole crop.
- Apply Roundup PowerMax early in the day or in conditions of high humidity, especially in periods of hot weather. Early leaf wetness—provided it is not so wet as to cause run-off and conditions are 'drying', will improve uptake. Applications in high light intensity and long days are also preferable to spraying on dull days/evenings.
- DO NOT spray crops intended for seed production.
- Roundup PowerMax is a low-drift formulation with ammonium sulphate included. Additional surfactants should not be required but in areas of very 'hard' water additional water conditioners could be considered. With alternative glyphosate options the addition of ammonium sulphate based adjuvants and water conditioners will certainly help to improve uptake and speed of activity. These disrupt the leaf wax — especially important with oilseed rape — and the ammonium ions facilitate the entry of glyphosate into the plant through the waxy leaf surface.

Make sure you are using the appropriate and most effective product to optimise your crop desiccation and pre-harvest weed control this year.

GRAIN STORES

PRE-HARVEST HYGIENE



Good grain store hygiene is an essential foundation for keeping grain insect free. Over 90% of grain stores harbour at least one insect species known to infest grain. Mite and insect feeding results in direct losses but can also have a detrimental effect on the quality of stored grain. Whether intended for milling, malting or feed, infested grain runs the risk of being rejected resulting in major economic losses. A full cleaning procedure should take place; ideally around 6–8 weeks prior to harvest. The following steps should be followed:

1. Empty the grain store of any old grain and debris. Do the same with grain handling equipment.
2. Sweep all surfaces of the store thoroughly — and/or use a high pressure airline to clean crevices, then burn the sweepings. Wear appropriate PPE including a dust mask.
3. Use an industrial cleaner to clear as much dust as possible. Dust provides breeding sites for mites and insects. Burn the dust.
4. Treat the fabric of the store — spray the walls, floors, ducts and handling equipment with an approved insecticide, ideally 4 weeks before harvest via a knapsack, motorised knapsack or tractor-operated spray lance.
5. Complete the treatment process by using a smoke generating insecticide.
6. After the initial cleandown check the grain store regularly for insect activity using sticky and pitfall traps. Placing traps every 6 metres or so around the grain store allows for effective monitoring of insect activity. It is a key part of an integrated programme to avoid insect and mite infestations.

There is a limited number of products available to use in grain stores. Deltamethrin e.g. K-Obiol and cypermethrin as Talisma are examples of products that can still be used to treat the fabric and walls of grain stores. Pirimiphos methyl e.g. Actellic smoke generators are also still available and will form part of the cleaning strategy.

Your ProCam agronomist will have details of all the available products. You may also need to check with your grain buyer whether the proposed treatment is acceptable and conforms to any grain storage protocols.

WEED RESISTANCE

TESTING OPTIONS 2020



Weed control has been especially difficult this season.

The wet autumn followed by an intensely dry spring has not been ideal for optimum herbicide performance and numbers of both grass and broad leaf weeds are higher than desirable in many crops. However, increases in resistance to herbicides may also be a contributing factor to poor weed control. A degree of resistance to a number of the main herbicide actives has been identified in the UK as summarised in the table below.

Active	Black-grass	Italian ryegrass	Wild oats	Bromes	
Clethodim	✓				
Clodinafop	✓				
Cycloxydim	✓	✓			
Fenoxaprop	✓		✓		
Fluazifop	✓	✓	✓		
Flufenacet		✓			
Glyphosate					
Mesosulfuron + Iodosulfuron	✓	✓	✓	✓	✓
Pendimethalin	✓				
Pinoxaden	✓	✓	✓		
Propaquizafop					
Prosulfocarb					
Pyroxasulam	✓	✓	✓		
Quizalafop-p-ethyl	✓				

If resistance is suspected as a contributor to poor weed control, seed from surviving plants should be collected for testing. July is typically the time to collect samples as the seed matures. Unfortunately, this may be too late to collect samples of the early-maturing Sterile and Great Brome species, but still in time for the Soft and Meadow bromes. The seed needs to be collected when ripe and it falls easily from the seed head.

As well as the 'standard' resistance tests, a range of 'bespoke' tests are available for specific herbicides. Check with your ProCam agronomist for more details of these tests. Knowing the resistance status of your weeds will allow a more effective weed control programme to be planned for next season.