



PROCAM
AGRONOMY THAT DELIVERS™

Technical Update
August '19

HARVEST POINTERS

Harvesting is in full swing but consideration must be given to early season crop husbandry to ensure optimum crop establishment and weed control strategies.



The weather conditions in the latter part of July allowed good progress with harvest. As land is cleared thoughts will be turning to establishing next season's oilseed rape. While the headlines mostly focus on issues with cabbage stem flea beetle, other pests e.g. slugs can also be a major hindrance to good and rapid crop establishment. After the high temperatures of July slug control may not be thought of as high priority, but generally there has been sufficient rain in most parts, not least from thunderstorms, to keep populations 'ticking over'. In addition, slugs are remarkably resilient to adverse conditions and will surge in numbers as soon as favourable conditions return. The increased prevalence in many areas of the Spanish Slug - *Arion vulgaris* which is more adapted to hot, dry conditions is another risk factor to bear in mind.

All sales and distribution of metaldehyde slug pellets had to be completed by 30th June 2019. The deadline for these pellets to be used up on-farm remains 30th June 2020. Once farm stocks are used up ferric phosphate will be the only viable alternative for broadacre use.

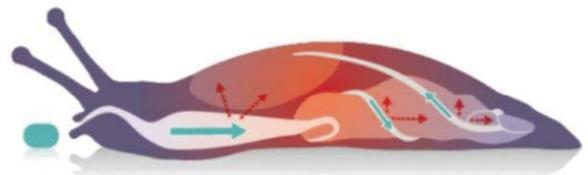
Ferric phosphate is an effective and comparable alternative to metaldehyde. It works as a stomach poison; once eaten there is no recovery.

Ingestion of the pellet leads to vital organs being overloaded with iron, resulting in death.

It impairs the digestion process and limits the ability of a slug to process food. Feeding stops almost immediately and slugs retreat underground to die. For this reason the effects can be less visible; fewer dead slugs are seen on the soil surface but a visible reduction in the amount of plant damage quickly follows application.

A slug pellet is the only applied pesticide in agriculture where the target has to be attracted to the pesticide. The key to successful control, as with any metaldehyde product, is pellet quality and consists of 4 criteria - Spreadability/Ballistics, Attractiveness, Palatability, Persistence.

Ironmax Pro is a ferric phosphate option that fulfils all these criteria to very high levels. It is a durum based, wet process pellet, comparable with the best metaldehyde options. In trials it has been proved to work as quickly and as effectively as metaldehyde.



As with all pesticides it is important to use as many cultural control options as possible to reduce the reliance on pellets as the sole means of slug control.

- Remove any 'green bridge' which offers slugs a food source and shelter
- Soil cultivation, significantly reduces slug populations and exposes slug eggs to the surface for desiccation.
- Move any trash
- Produce a fine seedbed (essential for residual herbicides) and Roll if possible
- Conserve natural predators

Obviously, a range of ferric phosphate options are available. Discuss with your ProCam agronomist to find the appropriate product for your crops and how it fits into an integrated slug control programme.

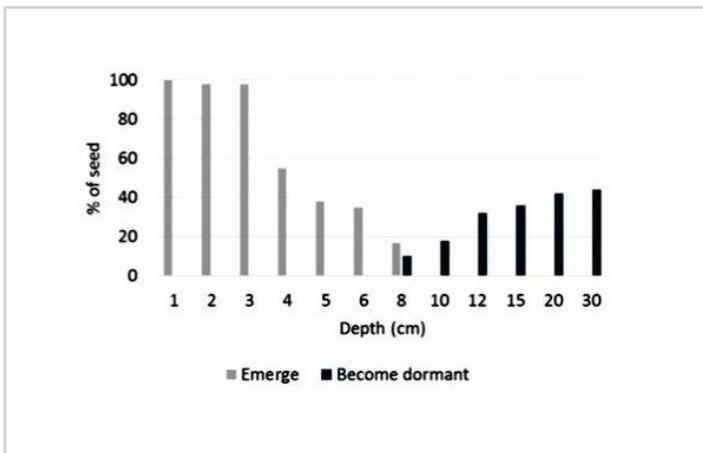
CULTIVATIONS

AUTUMN 2019

As harvest proceeds thoughts quickly turn to next year's cropping and preparing seedbeds for the 2019/20 season. Much of the effort in cultivations is focused on weed control, especially grass weeds, notably blackgrass.

In the haste to turn the ground over optimum stubble management for the dominant weed species in the individual field can be overlooked. The best strategy post harvest in most cases is to do nothing and leave the stubble alone. Cultivations done in the stubble will bury seed, remove it from predators and can induce a deeper dormancy.

The graph shows that weed seed is less likely to emerge from depths of 10cm or more but at these depths seed is more likely to develop increased dormancy.



Most weed seeds are best left on the surface. The two exceptions to this rule are sterile brome and volunteer cereals. These need to be placed into darkness, although the presence of chopped straw is usually enough to induce emergence.

After oilseed rape the number of volunteers in following crops is dependent on the seeds achieving secondary dormancy. Moving shed seed into dry soil provides the ideal conditions i.e. darkness and water stress to achieve this.

If there is sufficient moisture a compromise approach would be a shallow, superficial cultivation followed by consolidation to move seeds into moisture and ensure good seed/soil contact to encourage rapid germination. Going too deep will encourage moisture loss and move seeds to depths where they are less likely to germinate and are less likely to be picked up by birds and other predators. Whatever the dominant weed species the aim with all cultivations must be to adopt a flexible approach and to react to the individual field/farm/weather circumstances.

OILSEED RAPE

CROP ESTABLISHMENT 2019



Numbers of Cabbage Stem Flea Beetle (CSFB) in the harvested crop indicates that the threat of CSFB damage in the new crop will be as great as ever. As the range of the pest spreads ever further some pointers on how to minimise the threat from CSFB:

DRILL DATE Drilling early increases the ability of the crop to tolerate the shotholing and grazing damage from the adult CSFB. The plants will simply be bigger when the beetles return from their aestivation or 'summer rest' in late August/early September. The downside is that early drilling results in higher larval populations. An AHDB project showed that larval numbers only reduced significantly for crops drilled into September.

Whatever the drill date the key to successful oilseed rape establishment is to place seed into moisture or if soils are dry, to only drill if significant rainfall is imminent. Easier said than done but ensuring good seed to soil contact in moist soils and conserving soil moisture are critical factors to successful early crop growth.

SEED RATES

Much work has been done looking at seed rates as an aid to limit CSFB effects. Larval numbers per plant showed no difference in crops planted from 40 - 120 seeds/m². With more plants established, this actually meant the overall numbers per m² actually increased at higher seed rates. Yields also were similar across the range of seed rates tested. On balance there is little evidence for increasing seed rates on conventional varieties much over the 'standard' 40 seeds/m².

NUTRITION Starter fertilisers e.g. Umoplast which place N&P close to the seed at drilling can encourage early, rapid root development — not an option suitable for all drilling methods. Otherwise, ensure that base nutrients and soil p.H. are all at adequate levels to avoid any restriction to growth. Early post-drilling N will promote growth; up to 30 kg/ha is allowed to be applied to oilseed rape in the autumn under NVZ rules.

Post crop-emergence foliar application of nutrients and growth promoters e.g. Universal Bio, Hadron and phosphites maintain and support continued rapid crop growth.

Insecticide options are limited and further affected by resistance issues. Work by ProCam in recent years has shown certain adjuvants and water conditioners appear to improve insecticide activity.

Check with your ProCam agronomist for the latest nutrient and insecticide options to get your crop off to a flying start.