

# techtalk

## Getting the best from spring weed control

Spring is a busy time of year for arable farmers, which makes it even more critical to implement a robust grassweed and broadleaf weed control programme. A global leader in the manufacture of cereal sulfonylurea herbicides, and with unsurpassed R&D back-up, FMC Corporation is pivotal in optimising control strategies by ensuring product continuity, consistency and quality.



# Weed'em and reap

**A cold start to the spring means waxy over-wintered weeds and a late start to spring drilling. In what's set to be a compact season, CPM seeks advice on how to get the best out of sulfonylurea herbicides.**

*By Lucy de la Pasture*

In many areas of the UK blackgrass dictates autumn weed control, with broadleaf weeds assuming a lesser importance. Strategies hinge around delayed autumn drilling and building a stack of residuals, largely based around flufenacet. As a result, a spring tidy up of broadleaf weeds that have survived the stack, or weren't targeted in the first place, has become the norm.

Several 'difficult to control' weeds species are best tackled in the spring, when it's possible to utilise the strengths of sulfonylurea (SU) herbicides to nail them.

FMC's herbicide product manager, Alistair McRobbie, shares his knowledge on the best tactics to ensure effective weed control, particularly where tricky species are concerned.

### Why apply a spring herbicide?

The trend towards later autumn drilling of wheat means successful weed control is highly dependent on the weather. In a dry season, residual herbicide activity is often compromised and if it's wet, then spray windows may be few and far between. Some of the stack may not be applied or is applied later



than planned, going on beyond the optimum target growth stage of some broadleaf weeds.

As well as a time for cleaning up surviving autumn-germinating weeds, the spring is the best time to tackle weeds which have come through when the autumn residuals have run out of steam. Additionally, some species are habitually spring germinating (black bindweed, black nightshade, charlock, fat-hen, fool's parsley, hemp-nettle, knotgrass, redshank and scarlet pimpernel), whereas others will germinate in both autumn and spring (cleavers, chickweed, common field-speedwell, field pansy, fumitory, groundsel and shepherd's purse and fool's parsley).

Other very competitive but difficult to control weeds, particularly from the family widely known as the *Umbelliferae* (now renamed *Apiaceae*), are best targeted with chemistry that can only be used in the spring.

### Which are the target weeds?

Falling into this category are bur chervil or (*Anthriscus caucalis*), wild carrot (*Daucus carota*), spreading hedge parsley (*Torilis arvensis*) and the more widespread, fool's parsley (*Aethusa cynapium*). Traditionally these umbelliferous weeds have been found on sandy soils but

are now being widely reported on heavier soil types.

Bur chervil began as a regional problem in the eastern counties, but it's becoming more widespread and is very difficult to control. It's a weed that's extremely competitive with the crop for resources such as water, nutrients and light because of its growth habit, which can be up to 1m tall.

Since the withdrawal of Lexus SX (flupyrsulfuron) last Dec (use up period ends 13 Dec 2018), the only option for their control is in the spring using an SU. It's important to target these umbelliferous



*Alistair McRobbie reminds growers to target small weeds and keep rates high, especially when treating poppy, groundsel and umbelliferous weeds.*





**“If the early spring conditions continue to be cold and dry then lower rates of an SU will struggle.”**

a tank-mix partner containing either CMPP plus dicamba, CMPP or fluroxypyr.

## What about cold conditions?

After the extremely cold spell in late Feb/early March, any over-wintered weeds are likely to be very waxy. If the early spring conditions continue to be cold and dry then lower rates of an SU will struggle, especially on weeds such as groundsel. Poor control of groundsel was reported in the spring of 2016 where applications were delayed due to cold conditions, by which time weeds were large and waxy. Pot studies highlight that larger groundsel requires higher rates of Ally Max SX (metsulfuron-methyl+ tribenuron-methyl) to control it, and the SU will struggle once the weed has passed the stem elongation stage. So it's important to target small groundsel with full rates, when the weed is

weeds when they're small for complete control because later applications to larger weeds will only result in some top-growth burn down.

For best results use a herbicide containing thifensulfuron-methyl, such as Harmony M SX (metsulfuron-methyl+ thifensulfuron-methyl), plus



At early growth stages it can be very difficult to identify the species of umbelliferous weed present. *Bur chervil* (left) *Wild carrot* (right).

actively growing to achieve the best results.

The polygonums (black bindweed, knotgrass, pale persicaria and redshank) may be weeds to watch out for in spring crops this season, since dormancy break is triggered by cold conditions.

## What about the following crop?

Cereal crops often provide an opportunity to use chemistry that's not available in following crops. This is particularly the case when considering control of brassica weeds prior to putting in an oilseed rape crop in the autumn, where they are difficult to control and can potentially

contaminate the rapeseed oil due to their high erucic acid content.

This is becoming of increasing importance because the European legal standards for erucic acid in rapeseed oil (for food products) is likely to be tightened from 5% to just 2%. In addition, the number of double-low rapeseed deliveries with erucic acid levels over the current 2% contractual maximum is already reported to be increasing, with consequent penalties and in some cases rejections.

Admixture from a range of cruciferous weeds, including volunteer OSR, charlock, runch and hedge mustard, is thought to be one of the reasons the number of erucic acid failures is on the ▶

## The edge is in the formulation

With a large hectareage of spring barley forecast to be drilled in the next couple of months across many of the mixed arable soils in Scotland, making use of products with a proven track record, and a sound R&D provenance is critical, according to Agrii agronomist Greig Baird, who covers Lothian and the Borders.

He says the 'spring cleanup' of grassweeds and broadleaf weeds in the crop is a priority, a combination of rapid growth and weed development means that timing and product choice are critical in order to achieve maximum efficacy.

The main weed species Greg encounters regularly includes fumitory, groundsel, redshank, knotgrass and other polygonums.

"We need to ensure that these spring cereal crops get off to as clean a start as possible," he explains. "The only way to achieve this effectively is to

use a well-timed programme, which includes an SU herbicide. We like to try and apply it pre-GS30 so the SU has the best chance of achieving maximum control on those species.

Greg adds that he prefers SU products with the SX formulation, which he believes is superior and gives him the confidence that a second post-emergence application is unlikely to be necessary.

A tank-mix combination of either Chimera SX (metsulfuron-methyl+ thifensulfuron-methyl) or Inka SX (tribenuron-methyl+ thifensulfuron-methyl), plus a partner product such as Pixxaro EC, provides a greater degree of control, especially if conditions are less than favourable or the application timing is later than advised, he says.

"In some cases, this might be considered a 'belt and braces' approach. But what we don't want to do is compromise efficacy and promote

resistance. There's a huge amount of R&D behind these products. Their provenance and tank-mixing flexibility are exceptional and anything less than that, quite frankly, would be a false economy."

Agrii run an extensive contract spraying operation nationwide and with five machines operating out of the Lothian and Borders depots, efficiencies and economies of scale are paramount in achieving results on the ground.

Greg is convinced that FMC's SX washout procedure gives them the edge when trying to accommodate all their spring spraying operations. Using the technology means that the spraying operation is more likely to be cost effective, due to the savings made in wash-out down time, time between loads and the resultant increase in output.

"With a lot of spray application activity occurring over a relatively short



Greg Baird believes the SX formulation in the FMC products helps keep the sprayer on the move.

period, time is of the essence and our machines need to be able to maximise output, without compromising the result," he says. "SX formulations allow us flexibility in the field, whilst maintaining the quality and integrity of operations on our clients' farms at a busy time of the year, and for us that's critical."



*Poppy are only fully susceptible to Ally Max to the six true-leaf stage, any larger and control declines in efficacy.*

► rise. Charlock seed typically contains 32% erucic acid, wild radish around 27% and hedge mustard 21%, so it's vital to keep on top of these. Most SU herbicide will do a good job controlling the brassica weeds, with Ally Max plus Prompt (CMPP+ dicamba) a reliable option.

## How do you get the best results in winter cereals?

Weather conditions in the spring will dictate timing of spring sulfonyleurea herbicides, which require an actively growing plant to work well. This is because this class of herbicides acts through inhibition of an enzyme in the weed that's crucial for cell division and this is how the SU stops growth, killing the weed.

All weeds are easier to kill when they're small, even ones that are very susceptible to the herbicide. There's a misconception that common poppy can be controlled with SUs when they're

large, but poppies are only fully susceptible up to six true-leaves. Beyond this growth stage they're only moderately susceptible, so it's important to treat early, using high rates.

## How do you get the best results in spring cereals?

In spring cereals, Harmony M forms the backbone of most herbicide programmes, particularly in spring barley. It can be mixed with a number of tank-mix partners, including the phenoxy herbicides (CMPP), fluroxypyr and increasingly, Pixxaro (halauxifen-methyl+ fluroxypyr).

When using in tank-mix with Pixxaro, it's important to include Harmony M at a minimum of 75% of the full label rate. Any lower than this and it's too low to reliably control some important weeds, notably the polygonums which aren't supported by the Pixxaro in the mix.

## What about sequencing SUs?

SU herbicides should be added to the tank first when using in a tank-mix. The advice is to quarter fill the spray tank with clean water, start the agitation and add the required quantity of herbicide directly to the tank without prior creaming. Agitation should be continued while topping up the tank and during spraying.

Generally, only two applications of SU herbicides are permitted. There are also



*Left uncontrolled in the spring, weeds such as chickweed are very competitive with the crop.*

sequencing restrictions, dependent on individual product labels and tank-mixes, and sequences can be checked for legality using the FMC ALS-sequence app, which will shortly be relaunched and contains the most up-to-date information from CRD.

## What about crop safety?

Non-cereal crops, sugar beet in particular, are very sensitive to SU herbicides. So it's important to follow the approved wash out procedure using All Clear Extra to avoid any possibility of crop damage caused by SU residues left in the sprayer.

All FMC SU herbicides have the SX formulation which means they have a faster, safer wash-out procedure and less risk to the following crop. Always check the product label for the correct washout procedure, but in general all equipment should be cleaned immediately after use by completely rinsing all interior tank

surfaces (including lid) with water, taking care to remove any visible deposits. Then flush the pump, filters and boom after removing in-line strainers, nozzle tips and screens (clean separately). Finally drain the tank and repeat the procedure. ■

## Getting the best from spring weed control: top tips

- **Target weeds when they're small** – at early growth stages, weeds are more susceptible.
- **For umbelliferous weeds use a thifensulfuron-based SU (such as Harmony M)** – keep rates high and add a tank-mix partner, such as Prompt.
- **When weeds are well waxed-up** – aim to treat asap, when they're small, with a minimum of 75% of full rate and full rates for poppy and groundsel.



*Some weeds are harder to control in an oilseed rape crop, and can potentially contaminate the rapeseed oil due to their high erucic acid content.*

## Sponsor message

For more than a century, FMC Corporation has served the global agricultural, industrial and consumer markets with quality products and innovative solutions. Last Nov, FMC acquired a significant proportion of DuPont's Crop Protection business including the well-known cereal sulfonyleurea herbicides. These herbicides,

including brands such as Ally Max SX will continue to be produced at the same manufacturing facilities located in the Alsace, France, ensuring product continuity, consistency and quality for the end user.

For additional information on the use of FMC SU herbicides, please call the dedicated technical helpline on 01423 205011.