Playing the waiting game

66 It's essential to make the correct chemistry choices and apply them at the optimal time. ??

Technical OSR agronomy

Many OSR growers now adopt a wait-and-see approach before forking out on herbicides. *CPM* takes a look at the earlier post-em broadleaf options.

By Lucy de la Pasture

Not so long ago a pre-em oilseed rape herbicide was the norm, but there's been a sea-change in agronomy as growers wait for OSR establishment before committing fully to the crop in the ground.

One of the difficulties with this approach is that weeds can become well established. A compounding factor is the unpredictable British climate, which can make late autumn travel difficult by the time the cooler conditions suitable for post-em herbicides prevail.

Adama has launched a contact herbicide, Parish, for use in the early post-emergence 'gap' that now exists between traditional treatment timings. The active ingredient isn't a new one, it's been the mainstay contact herbicide in sugar beet for decades.

Parish contains 320g/l phenmedipham and can be applied to OSR when the crop has two true leaves and before nine leaves are unfolded. Weeds should be from cotyledon to two true leaves and there's a maximum total dose of 1.1 l/ha, with a seven-day interval between applications.

Proven and reliable

"Phenmedipham has a proven and reliable track record in sugar beet and has been developed by Adama for use in OSR to provide an effective, non-metazachlor option for controlling key weeds including common chickweed, red deadnettle, mayweed, groundsel, small nettle, common field speedwell and field pansy," explains David Roberts, herbicide technical specialist for Adama.

Parish is unaffected by soil type, is not an ALS-inhibitor herbicide and, crucially, does not limit following crop options in the event of OSR failure, he highlights.

"There's been a significant decline in the use of pre-emergence herbicides in OSR in recent years. This has largely been due to increased grower reticence towards spending on crops which may not survive. Subsequent cropping restrictions and the efficacy of later season herbicide options have also fueled the move away from early season treatments.

"Parish redresses this balance by providing an effective solution to hit vigorous young weeds when they are small and susceptible, without any potential ►



David Roberts believes phenmedipham (Parish) may be a useful substitute for metazachlor.



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knock-on risk for following crops. Parish therefore fills the gap between the Aug/Sept drilling window and the application of post-emergence treatments in Nov."

Parish has the added advantage of being a non-metazachlor option, highlights David Roberts. "With metazachlor firmly on the radar of regulatory and environmental authorities, anything growers can do to limit this vital active ingredient's entry into water will help ensure its long-term availability.

"Parish provides growers with an alternative, meaning they can consider removing metazachlor from their OSR programme," he adds.

Continuing the change in approach

to weed control in OSR, David Roberts advocates an early season application of carbetamide (Crawler), targeting blackgrass when it's small and at its most susceptible.

Correct choices

"The timeline for establishing OSR often limits the use of cultural techniques to combat blackgrass, so it's essential to make the correct chemistry choices and apply them at the optimal time," he explains.

This season's advice is to treat crops early and to stack actives, mirroring the approach used in cereal crops for blackgrass control.

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Turnip Yellows Virus threat



John Walsh says high levels of TuYV have been detected in crops this season and aphid numbers have been high.

With attention firmly set on avoiding flea beetle damage, growers are being urged not to take their eye off the ball when it comes to the peach potato aphid, responsible for the spread of Turnip yellows virus (TuYV).

A recent Limagrain survey showed TuYV infection levels of up to 100% in some of the UK's key OSR-growing areas this year. Coupled with a season that's been kind to aphids, it could all stack up to an increased threat this autumn, but it's too early to be sure, advises Prof John Walsh, University of Warwick.

TuYV is spread by the peach potato aphid (*Myzus persicae*), and can impact yields by as much as 30% in highly infected situations, oil content by more than 10%, while also increasing levels of glucosinolates and erucic acid. AHDB calculated that TuYV reduces yields by at least 15%, indicating the total cost to the industry was in the region of \pounds 78.5 million in 2016.

"The aphid acquires the virus by feeding on infected plants for a period of about an hour. There are a wide number of hosts that provide a reservoir of infection, including brassica weeds and other common plants such as dandelions and nettles."

There's always some degree of TuYV infection in OSR crops but its spread was largely limited by neonicotinoid seed treatments. But controlling its spread by controlling the virus vector has become more difficult in recent years.

Monitoring *Myzus persicae*, in collaboration with colleagues at Rothamsted Research, has shown that the proportion of aphids carrying the virus can be in excess of 90%. Once the virus has been acquired it is persistent, meaning the aphid carries it for life, explains John Walsh.

Because a relatively long period of feeding is required to transmit the virus, in theory foliar insecticides should help control virus spread. Because of increasing aphid resistance problems, chemical control of aphids might not be as reliable

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as it once was, he highlights.

Dr Vasilis Gegas, senior oilseed rape breeder with Limagrain, explains the TuYV survey threw up some surprising findings this season.

"You would expect to see high levels of infection in the more traditional OSR-growing regions, but even here, levels of infection are higher than ever before. 100% of the samples taken in Fincham, Kings Lynn and 90% of samples taken from the Woolpit site in Suffolk were infected with TuYV in the survey.

"Most surprising of all was that 75% of leaf samples taken from the Balbeggie site in Perth were infected, and this is the first time that we've seen such high levels of infection in Scotland. We're also seeing higher than expected levels of infection in the west country, with 50% samples infected at the Brackley site in Northants, and 45% at the Agrifocus site in Swindon, Wilts.

"We know that levels of TuYV incidence are associated with the distribution of aphids in the previous autumn. Levels of aphids in the autumn of 2016 were comparable with 2014, which was a high infection year, and this year again the link between high numbers of aphids in the autumn and corresponding levels of infections is clear," he says.

Whether these levels of infection will be repeated in 2018 is dependent on the number of aphids on the wing from Aug to the end of the year, says John Walsh.

"Aphids have a secondary flight during Aug and Sept. It's smaller than the summer peak but its size will determine the risk of infection to OSR crops."

Information on up-to-date aphid activity can be found on <u>www.tuyv.co.uk</u> and through the AHDB Pest Bulletin at <u>www.syngenta.co.uk/ahdb-pest-bulletin</u>



Symptoms of TuYV can be difficult to recognize, looking very similar to nutrient deficiency.

(pre-emergence to 4 true-leaves) application of Crawler (600 g/kg carbetamide), followed by propyzamide in Nov, when a second flush of grassweeds has emerged, will give OSR growers the best chance of keeping ahead of blackgrass populations.

"Where blackgrass pressure is extremely high, an effective foliar graminicide may be required between the Crawler and propyzamide treatments."

Crawler kickstarts blackgrass control by targeting the roots of young, shallow-rooted plants, making them more susceptible to subsequent herbicide applications. Using carbetamide early has been proven to optimise the efficacy of herbicide programmes with propaquizafop and propyzamide, claims David Roberts.



Steve Townsend says improving carbon levels can support OSR establishment by enabling it to grow fast and compete with weeds.

"It's also effective against chickweed and speedwell, with ryegrasses, meadow grasses and wild oats also showing ►



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Rob Gladwin emphasizes the 1 Oct cut-off date for using metazachlor on drained land in DWSZs.

 susceptibility. Applying Crawler early in the season, as part of an integrated resistance management strategy, can cost-effectively deliver more than 96% control of blackgrass," he adds.

"Bringing carbetamide timing forward also has the added advantage of reducing the risk of chemical losses to water-courses due to heavy rainfall. Whenever possible,

applications should be made when field drains aren't running."

Where herbicides are being applied either pre- or early post-emergence, the consortium of manufacturers are asking growers to adopt good soil management practices in their Metazachlor Matters campaign.

ICM techniques

With the issue of metazachlor and guinmerac reaching raw surface waters and exceeding drinking water levels, BASF's Rob Gladwin, representative of the Metazachlor Matters stewardship initiative, stresses the importance of adopting Integrated Crop Management techniques when planning on using them as part of an OSR herbicide strategy.

"A well planned ICM strategy can lessen the need forunplanned herbicide use and encourage activities on the farm that support the principles of the stewardship initiative," he says.

One of key messages of the stewardship initiative is timing of these herbicides, with a 1 Oct deadline advocated where they're applied to drained land situated in drinking water safeguard zones (DWSZ). Applications on drained land per se aren't advised after this date, though if ground conditions are favourable

application may continue until mid-Oct, provided drains aren't running.

Steve Townsend, independent adviser at Soil First Farming, stresses that looking after soils is part of good stewardship practices.

"The biggest influence we have on soil health is the provision of organic matter in the many forms of carbon it provides. Improving carbon levels can support crop establishment, particularly in OSR, by enabling it to grow fast and compete with weeds.

"Good soil management can result in a much better tilth and seedbed conditions in the short term, with consequent improvements in residual chemical activity. In the long term, better soil structure facilitates soil stability and water infiltration, which both help to keep the pesticide in the field," he explains.

"Increased carbon levels can be achieved through implementation of ICM practices, such as reducing tillage or ploughing depth, which reduces carbon oxidation losses from the soil. Organic matter, or carbon, in the soil should be treated like a bank account - you have to put more carbon in each year than you take out if you want to see your soil health and structure improve,"he advises. ■



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