British Beet BBRO Research Organisation

Advisory Bulletin

Issued: 15th April 2020

IN BRIEF

- Most areas are now into the final phases of drilling. Rainfall has been patchy across the beet area and not enough for many crops. Seedbeds remain dry.
- Rolling of cloddy seedbeds to help conserve moisture has been deployed in many crops this season and is a worthwhile consideration.
- If drilling into fields or areas of fields such as headlands with a poor seedbed, consider using a higher seed rate.
- Many earlier drilled crops are now emerging and will require post-emergence herbicides although weed germination is slow in dry conditions. Careful monitoring of crop and weed growth stages, alongside weather conditions is required to give best control whilst minimising the risk of any check on crop growth by spray programme.
- The BBRO aphid monitoring programme will commence this week with yellow water pan traps being put out in fields. There are options for the use of Tepekki and Biscaya (via an emergency authorisation) as foliar insecticides this season, once aphid numbers reach threshold. BBRO are aware of potential supply problems with Biscaya and we are working on additional options for aphid control.
- Please do not use pyrethroid insecticides for aphid control on sugar beet as over 80% of the UK peach-potato aphid population are currently resistant to these products. Pyrethroids can also have a negative impact on beneficial insects too and these will be crucial in limiting the spread of virus yellows this year.

ADVISORY

Weed control

Below is a list of the actives available for weed control in beet crops this season. Remember, there are several changes you need consider for 2020:

- Chloridazon has a final use on farm date of 30.06.20, however very little stocks are available
- Any product containing desmedipham has a final use on farm date of 01.07.20. (if bought and already on farm)
- Lenacil can now only be applied post-em, after BBCH 10 (first leaf visible, cotyledons unfolded). Pre-em use has been withdrawn.
- Tri-allate is no longer approved for use on beet crops.

CONVISO ® SMART system herbicides (Foramsulfuron & Thiencarbazone- methyl) are not included as these are part of a separate approach to weed control in beet in 2020. This involves specific herbicide tolerant varieties and have several specific conditions and recommendations associated with their use. Contact the manufacturer (Bayer/KWS) or your supplier for further information.

Active	Product (examples)	Residual	Contact	Pre-	Post-	Strengths
ethofumasate	Efeckt Oblix 500	yes	yes	yes	yes	cleavers, knotgrass, bindweed
lenacil	Venzar 500SC	yes			yes	Brassicas, bindweed, knotgrass
metamitron	Goltix 70SC Bettix Flo	yes	yes	yes	yes	Mayweeds, knotgrass, AMG, fat-hen, annual nettle
chloradizon	Pyramin DF	yes		yes		
phenmedipham	Betasana SC Beetup Flo		yes		yes	Bindweed, charlock, ivy-leaved speedwell
desmedipham (in mixes with other actives)	Betasana Trio Betanal maxxPro Beetup compact		yes		yes	Useful in dry/cold conditions
trisulfuron-methyl	Debut Shiro		yes		yes	Brassicas, fool's parsley, cleavers. Mayweeds
clopyralid	Dow Shield Vivendi 200		yes		yes	Volunteer potatoes, thistles, mayweeds
Quinmerac (in mixes with other actives)	Goltix Titan Tanaris	yes				Cleavers, speedwell, fool's parsley
Dimethenamid-P	Tanaris	yes			yes	Cleavers, poppy, cranesbill, fool's parsley

Pre-emergence herbicides

Dry conditions have not allowed pre-emergence herbicides (ethofumesate, metamitron, chloridazon) to work effectively and are not an option for many crops. Where there is soil moisture, pre-ems will help 'buy some time' and can also help where blackgrass is anticipated.

Post- emergence herbicides

As crops emerge, **careful monitoring of beet and weed growth stages, alongside weather conditions, is required. This attention to detail will ensure the best possible control whilst minimising the risk of any physical impact on crop growth.** Minimum beet growth stages for different products range from: no restrictions, expanded cotyledons, 1st pair of true leaves at least 1cm long to 1st pair of true leaves fully expanded. Paying attention to these will minimise any checks on your crops. **See our Brilliant Basic message** https://bbro.co.uk/on-farm/brilliant-basics/.

Target early emerging weeds such as knotgrass, ivy-leaved speedwell, charlock and runch as soon as possible, as some of these weeds (when developed beyond the cotyledon/early true leaf stage) can become difficult to control.

Where desmedipham is not used, more crop monitoring will be required. Adjust the rates and active ingredient choice according to weeds present, weather conditions and the effect of previous sprays. Don't assume that the rate of phenmedipham selected will be equivalent to the rate of desmedipham + phenmedipham in formulated mixes. You will require potentially more phenmedipham.

Adjuvants

- Check to see if approval for use with a beet herbicide is specified on the adjuvant label.
- Check the growth stage specified on the adjuvant label, for many adjuvants, if the beet crop has more than 6-leaves then the rate of the herbicide being used should be reduced.
- Check the maximum concentration (% of spray solution) that applies to the adjuvant being used as these vary.
- Vary the rate of mineral oils according to temperature. Do not use mineral oils above 20/21^{o}C.

If crops are stressed especially in warm and dry conditions, be wary of adding manganese and nitrogen in with the herbicide as this can be cause a check in growth.

Nitrogen fertiliser

Remember to ensure that there is 30-40kg/ha of nitrogen fertiliser available at, or soon after drilling. This is important to support early seedling leaf growth. **Apply any outstanding nitrogen fertiliser once the crop is fully emerged to ensure there is enough nitrogen for early leaf growth. Do not delay with this, as this can compromise early canopy development.**

Don't delay in applying this in dry conditions. Prilled nitrogen may take longer than liquid forms to become available. Remember to tailor your total nitrogen to the soil nitrogen supply index, especially where organic manures and/or cover crops have been grown. On nitrogen index 0 or 1 soils, 120 kg N/ha is required to optimise yields whereas, on index 2 and 3 soils, 100 and 80 kg N/ha are required respectively.

Virus-carrying aphid control

- The BBRO aphid monitoring and yellow water pan network, will operate from 48 sites this year, and is currently being deployed.
- Due to COVID-19 only water pan samples from the BBRO trial sites will assessed in the laboratory for winged sugar beet aphids and their virus content. Photographs of all other yellow water pan contents will be taken for review.
- Aphid counts on plants will a be undertaken at all sites in 2020. These data will be used as the early warning for growers and agronomists to check their crops and for the need to apply aphicides in your area.
- There are already reports of aphids flying, so it is important to monitor aphid numbers in your crops to ensure that you plan insecticide applications most effectively.
- It is imperative that all foliar insecticides are applied at the threshold of 1 wingless aphid per 4 four plants up to the 12-leaf stage.
- 2020 insecticides options include Tepekki and Biscaya.

- The Emergency Authorisation for the use of 'Biscaya' (MAPP 15014) is for up to two applications at 0.3l/ha (and not 0.4l/ha as in 2019), to be made via horizontal boom sprayer in a minimum of 200 litres water per hectare. Application intervals between 7 and 10 days must be observed.
- Alternating insecticides with different modes of action is a recognised anti-resistance strategy and Biscaya must be used in alternation with insecticides of a different mode of action, giving consideration to the overall treatment programme on the crop against a range of pests.
- BBRO are aware of current supply problems with Biscaya and we are working with the industry to secure an alternative insecticide option. This is subject to an additional EA and as soon as we receive further information, we will share this with you.

EVENTS

2nd May 2020 Join the BBRO on twitter @onlineagshow for a fun packed day of virtual fun! #GreatestAgShows

BeetField20 – Virtually Live! 6th – 10th July
Watch-out for our programme of short presentations being released as of the 6th July, culminating with a live webinar with Prof Mark Stevens, Dr Simon Bowen and the wider BBRO team on Friday 10th July – all streamed directly to a screen near you!

Monday 6th July: RL 2021 varieties and Conviso technology
Presented by Mike May (RL Board Chairman) and Daniel Godsmark (BBRO)
Tuesday 7th July: Varietal traits: Pest & disease resistance and drought tolerance
Presented by Dr Alistair Wright (BBRO) and Georgina Barratt (PhD student with University of Nottingham)
Wednesday 8th July: Soil Management; variable drilling, drill testing results and nutrition
Presented by Dr Simon Bowen (BBRO) and Stephen Aldis (BBRO)
Thursday 9th July: Putting the ABC (Aphids-Beneficials-Control) into IPM
Presented by: Prof Mark Stevens (BBRO)
Friday 10th July: Beeting Change with BBRO
Join us via our website link to speak to the team and hear growers' questions.

CONTACTS

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