

BBRO Advisory Bulletin No.5 - Week Commencing 15th May 2017

After weeks of slow growth, recent rainfall and warmth has seen crops begin to accelerate with the more advanced crops now fully established beyond the 6-leaf stage. However, for many crops progress remains slow with patchy emergence and canopies somewhere between emergence and the 2-4 leaf stage. The forecasted rainfall for this week is essential to further crop progress.

Some crops are showing variability both within and between fields especially where there are differences in rainfall, soil type and field topography. The resulting range of different growth stages is a challenge when making decisions regarding herbicides, weed control and fertilisers.



A range of different conditions and growth stages

Weed control

Weeds have also benefited from the warmth and moisture but herbicide programmes are generally working well. Where timings have slipped, some weeds are now getting large and will require a robust approach to regain control. Beginning to see some thistles patches appear and potato volunteers are 'greening up' rapidly.

Where weeds have escaped beyond the cotyledon stage, increasing the amount of contact herbicide activity and applying on shorter spray intervals (check label recommendations) can help to get on top of the situation.

Where blackgrass is a concern, it is useful to find a window in the broad-leaved weed herbicide programme to apply a graminicide rather than waiting until the broadleaved weeds are controlled, and then spraying the grass. Label restrictions mean that there is a lengthy time interval requirement between broadleaf and graminicide herbicides and this can make it tempting to wait and spray the blackgrass later, however, it is essential to spray blackgrass before it tillers and for that reason it is better to deal with the blackgrass sooner rather than later.

Weed beet are also showing in some of the most forward crops and are now, or very soon will be, at a stage where they can be hoed. Hoeing can reduce weed beet populations in the crop by up to 80%, but to be effective it should be done before the weed beet have 4 true leaves after which point they can 'ride around' the hoe blade and re-set. Sharp L-blades are best at this stage for their cutting action and duck-foot, or A-blades have a place later when beet is larger and soil can be moved against the beet.

Remember that potato volunteers in sugar beet are highly likely to be a source of infection of blight and virus for potato crops. Don't delay in dealing with these as emerging and young potato crops are more susceptible to both at this stage of the season.

There has been some reported incidence of herbicide damage to crops particularly where applications were made in cold & frosty conditions. Many affected plants will recover but development will inevitably be delayed and yields will be potentially reduced.



Herbicide damaged plant

Unaffected plant in same field

Do check product labels for recommendations for minimum crop and maximum weed growth stages (paying attention to rates of usage) to avoid checks in growth and damage, particularly where crops are stressed. Some general guidelines are available

in the BBRO Sugar Beet Reference Book which can also be found on the BBRO website but always check the product labels to confirm rates or contact your agronomist.

Tailoring your choice of herbicide to control the key weed species present is key and being prepared to change rates and even products between fields may give you the best control. A summary of key post emergence options is given below (courtesy of Pam Chambers)

As temperatures increase remember to check the guidelines on the use of mineral oils. These are based on the maximum temperature on the day of spraying.

Using Mineral Oils: vary the dose according to temperatures below. Maximum temperature (°C) on the day of spraying	Dose of oil (l/ha)
Up to 14	1.0
14-18	0.75
18-21	0.5
Above 21	No oil recommended

Active (s)	Product (examples)	Strengths
ethofumesate	Efeckt 500 SC Ethosat 500, Oblix 500	Cleavers, Knotgrass, Black bindweed
lenacil	Venzar Flowable	Brassica species, Black bindweed, Knotgrass
metamitron	Goltix Flowable Bettix Flo	Mayweeds, Knotgrass, Annual nettle, Fat-hen, Annual meadow grass
phenmedipham	Betasana SC Beetup Flo	Black bindweed, Fat-hen, Charlock, Ivy-leaved speedwell
triflusaluron-methyl	Debut/Shiro As in Safari Lite WSB	Volunteer OSR, Brassicas, Fool's Parsley, Mayweeds, Cleavers
desmedipham phenmedipham	Beetup Compact Betanal Turbo Betanal Maxxim	desmedipham is useful in cool dry conditions or/and where weeds difficult to control.
clopyralid	Vivendi 200 Dow Shield 400	Volunteer potatoes, Thistles, Mayweeds

Remaining concerns about germination in later drilled crops?

A few crops have had to be re-drilled but generally the number of these is very low. However, some growers remain concerned about whether crops will germinate well enough across the field.

If you are unsure and need to decide on whether to re-drill or not – check the seed in the ground to see whether it has cracked and for the development of the radicle. If there are no or few signs of growth, collect some seed from the field and put them on moist blotting paper or paper tissue in a warm room. After a couple of days, you should be able to see whether seeds are going to germinate.

BBRO evaluate seed lots on two sites every season. This involves drilling and monitoring seed from all the key commercial seed bulks and associated treatments. To date we have not observed any emergence issues but under the cold conditions in April germination and emergence have been slower than usual.

Bird damage

We continue to see the signs of bird damage in several crops (see below), especially where conditions have been very dry. The incidence of Skylark damage, typified by the loss of the cotyledons is declining but grazing on more established leaves by birds such as pigeons is apparent.

As canopies develop and following recent rain will help recovery and reduce likelihood of further bird damage but it is worth monitoring crops closely and maintaining and deploying bird scarers and gas guns where feeding damage has been found.



Leaf Miner

Leaf miner eggs continue to be reported at low levels across all factory areas. Also, some mining has been reported in treated crops possibly due to the dry weather affecting the uptake of the seed treatments. Continue to monitor the situation and notify the BBRO if damage starts to increase over the coming weeks. **However, please remember that the emergency authorisation granted for the use of Biscaya expired last year and currently this product does not have approval for the 2017 season.** The use of Hallmark Zeon is permitted for leaf miner control.

Aphids

Aphid monitoring is now under way and the first peach-potato aphids have been caught in Essex and Norfolk, and the warmer weather has encouraged further flights. Again, the seed treatments will continue to give good aphid control and the recent rain should help to improve uptake of these to provide virus control.

Fertiliser

More advanced crops, especially where there has been some good rain and warmth are now rapidly approaching the 4-6 leaf stage, a few are even further forward.

There is a temptation to delay final nitrogen applications where conditions remain dry. If crops received 30-40 kg N/ha at drilling this should ensure crops have sufficient nitrogen to establish early canopy growth.



However, don't delay too long and ensure you have got your final fertiliser applications on before leaf cover gets too advanced. When crops are at the 6-8 leaf stage there is an increased risk of prills lodging in the canopy and causing localised scorch as well as not getting the fertiliser into the soil. As the risk of frost subsides, using liquid nitrogen fertiliser has a lower risk of scorch but be wary of applying on stressed crops especially on hot sunny days.

Nitrogen recommendations are given below for mineral soils. Further details can be found in the BBRO Reference book and on the BBRO website.

Trials in 2016 were part of an on-going series of work to validate these recommendations. No evidence was found for routine use of higher nitrogen rates and reinforced the need to match nitrogen rate to the SNS Index as well as the value of undertaking a SMN test to assess levels in the soil, especially where organic manures and amendments and cover crops have been used.

Soil Index	0	1	2	3
Mineral soils Kg N/ha	120	120	100	80

Ensure crops have sufficient manganese at time of rapid growth

It is likely that with some moisture and warmth in the ground plants will grow very quickly. Rapidly growing crops may benefit from manganese, especially on lighter soils but also in poor cloddy seed beds where plants may be struggling for root development. Applying manganese to the foliage (0.5-1.0 kg/ha) regularly, repeating at 10-14 days, should assist with rapid leaf expansion and growth. Don't wait until you see symptoms, such as those below, as growth will have already have been compromised.



Crops may also benefit from some foliar magnesium, again especially on light land and where there is a history of low Mg levels and deficiencies in other crops.

We tend not to see a lot of other nutrient deficient -related problems such as sulphur & boron at this stage of the season but if you are unsure you can submit a

sample to the BBRO Plant Clinic for assessment.

There is no doubt that with the slow start to the season and associated plant stresses that a range of other foliar bio-stimulant and fertiliser products will be promoted to help crops overcome this and to aid growth. It is difficult to make general comments as products vary considerably in their analysis and BBRO has not carried out extensive testing of these products and has preferred to focus on other areas of agronomy associated with crop establishment as a priority.

BBRO is undertaking some limited trials on foliar feeds this season and these will be discussed at the BBRO Open Days in July as well as being demonstrated on the BBRO Demonstration farm network. If you do use one of these products and are keen to assess its effect, remember to keep an untreated area in the field for comparison. Ideally, some untreated strips across the field will allow you to form a more consistent view.

Caution: *this information is based on results of experiments and experience but cannot constitute a recommendation.*

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