



BBRO Advisory Bulletin No.3 - Week Commencing 10th April 2017

Emergence

For many of the earlier planted crops there has been sufficient moisture and warmth to encourage rapid and uniform emergence with plants at fully expanded cotyledons.

Some of the more recently drilled crops have been sown into rapidly drying soils, and on heavier land, some cobbly seedbeds have been produced. Under such conditions emergence is more uneven and delayed, with some seed sitting in dry and cloddy soil. A decent rainfall will be required for germination. Many crops have been rolled to preserve moisture and to help prevent wind blow.

Emerging seedlings from seed drilled 16th March:



Weed control

Unfortunately, the warm conditions are resulting in weeds emerging rapidly. Pre-emergence herbicides will be less effective in the dry conditions so don't expect too much from pre-em's during the current weather.

Don't delay in using a first post-em application, especially as some weeds are ahead in growth of beet, particularly where seedbed cultivations did not kill all germinating weeds. Also, be aware that weeds may be harder to control if they have more waxy leaves due to the dry conditions.

A guide to options and choice of post-emergence herbicides can be found in the 2017 BBRO Sugar Beet Reference Book or [online](#). Pay attention to the differences between herbicides in

respect of beet crop growth stage, weather windows and maximum weed growth stages as well as their effectiveness under dry conditions when crops are under stress.

Unfortunately, using your standard herbicide programme for all your beet crops drilled may not be the most effective option, especially when sown over an extended period and across different and drying soil types. Other herbicide options may be worth considering.

Remember that post-emergence blackgrass control is more effective at the 1-2 leaf stage and reduces considerably once blackgrass plants have begun to tiller.



Rapidly emerging weed seedlings alongside beet

Planting records

Ensure you have got good traceability and records of where and when different varieties have been planted. This will allow you to make a more accurate assessment of their performance and of course highlight and locate any problems, should they occur.

The same applies if you have sown seed stocks with different seed treatments. Use a marker in the field and ensure you have kept the seed label, alternatively, taking a photograph of the seed label in the field at the point of drilling is useful as on many phones this will also give you the location of the photograph. If you have drilled different seed treatments and have a comparable reference seed stock alongside or close by in the field, the period between emergence and the 6-leaf establishment stage is likely to be the period when any visual differences are more apparent. Any differences may be a matter of days so regular observations may be required.

Fertilisers

Target to apply any second applications of fertiliser once the crop has reached full emergence. Nitrogen is essential for rapid development of the leaf canopy, each unit of leaf area requiring between 30-40 kg N/ha, and three units of leaf area are needed to maximise radiation interception. Sufficient N is therefore required by the crop during the early stages to acquire the 90-120 kg N/ha to maximise canopy development. If you have applied 30-40 kg N/ha at drilling don't delay in applying the additional amount.

There are a number of foliar treatments being promoted to growers that provide additional nutrients and that can help to relieve and avoid plant stresses. This includes products classified as bio-stimulants. Some of these have recommended application windows starting as early as the 2-4 leaf stage and then require further repeat applications as the crop canopy further progresses. Crops will need to be monitored closely to ensure these application

windows are met.

BBRO has not undertaken any full testing of many of these products and is unable to make general recommendations. BBRO trials protocols require a minimum of three years testing and this would be especially relevant to products targeting a reduction of plant stress as the conditions and combinations of circumstances causing plant stress is likely to be very different across seasons. Understanding the reasons behind plant stress, especially early in the season, and remedying these is important.

BBRO has a full programme of research work, especially around plant and soil interactions to understand how early nutrient and water uptake can be improved, as well as identifying how to optimise seed bed properties and to improve crop establishment.

You will be able to see and discuss this work with the researchers at the BBRO Demonstration Days on 6th June at Morley in Norfolk & the 4th July at Bracebridge Heath in Lincolnshire. Dates and details will be sent to you soon.

BBRO has also now established a network of six **Demonstration Farms** with drilling dates ranging from March 16th to April 11th, across a range of soil types and regions. Among a range of topics being demonstrated, there will be strips of fertiliser rates and bio-stimulants at several of these sites. We will provide regular updates on all the work being undertaken as the season progresses so keep an eye on the BBRO website, under the '[On-Farm](#)' section. There will also be opportunities to visit the Demonstration Farms at different stages of the season. Again, details to follow.

Powdery mildew forecast

In February and March 2017 only 20 ground frosts were recorded at the base weather station. Consequently, the powdery mildew forecast indicates that 48% of the national crop is at risk from infection of this disease. However, with most of the crop now protected by a fungicide by early August, and with less than ideal weather for mildew development in recent years, this disease appears to have become less important than it used to be, and so rust may well be the disease to watch out for. However, as the 2015 and 2016 data show, weather will have a major influence on all the foliar diseases, their development and prevalence. Future BBRO bulletins will keep you informed of disease developments and the potential risks for the coming season.

Crop hygiene

Finally, with the recent warm, dry weather these conditions will favour the build-up of overwintering pests and diseases. In order to keep such risks to a minimum, please ensure that all root remnants and any remaining cleaner loader sites are destroyed as a matter of priority.

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

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