



**PROCAM**  
AGRONOMY THAT DELIVERS™

Technical Update  
Oct '21

## EARLY AUTUMN POINTERS

As October starts the urge to drill increases, but where grass weeds are a major problem a little more patience will bring its reward in better control and cleaner crops.



With memories of the difficult drilling conditions in the last two autumns still fresh in the mind, cereal drills have been rolling in some parts since early September. However, drilling early, before there has been a significant flush of grass weeds, especially ryegrass and blackgrass, may add to the weed burden on the crop and make control more difficult. Where significant rain fell in early September it has encouraged a flush of grass weeds and stale seedbeds are likely to make a considerable contribution to control this autumn where the drills have been held back.

In addition, the other key benefit from later drilling is that cooler, moister soil conditions are more likely to aid activity of the residual, soil-acting herbicides. These, of course, rely on high quality seedbeds, fine and firm with minimal clods, for optimum activity.

The trend for later drilling has been seen in data collected in ProCam's 4Cast system. From autumn 2010 to autumn 2019 the average drill date for winter wheat has gone back year on year by around 13 days from early to mid-October. With the obvious exceptions in autumns 2011 and 2019, this has been achieved with no significant effect on average yields. Obviously, there is a need to keep a close eye on changing weather conditions and monitor soil moisture levels, but where grass weeds are a major problem, patience and holding back the drill will reap rewards.

Later drilling will also minimise risks from BYDV and also take-all in second and later wheat crops.

The take-all fungus is active when soil temperatures are above 10–12°C. Average soil temperatures in late September were around 16°C. The cooler soils in the second half of October help to minimise take-all infection and this has long been the optimum drilling date for second wheats or crops at high infection risk. Seed treatment e.g. Latitude should be considered if drilling these crops earlier.

Irrespective of drill timing, the final part of the process for optimum grass weed control is to ensure attention to detail with the application of the herbicides to the target i.e. the soil. All steps must be taken to maximise their efficacy and minimise spray drift.

- For grass weeds, the pre-emergence timing is critical, ideally within 48 hours of drilling, especially if soils are moist. If dry, there is some justification for a longer delay but application must still be pre-weed emergence.
- Ensure sprayer boom height is at 50cm. This allows for the best coverage of the soil whilst minimising drift.
- Check wind speed — double the wind speed doubles the drift. Optimum 3–6 kph.
- High forward speeds increase turbulence behind the boom. Keep speeds below 12 kph.
- Use drift reduction nozzles e.g. air induction types to produce a coarser droplet.
- Apply at 100–200 l/ha. Syngenta's work on herbicide application has demonstrated better herbicide performance from higher water volumes. A practical water volume will need to be selected to suit the individual farm situation by balancing areas to be sprayed and available spray days.
- Soil-acting adjuvants e.g. Velomax can improve herbicide performance, reduce drift and reduce the risk of crop damage from the herbicide 'stack'.

# BYDV

## APHIDS AUTUMN 2021



Cereal aphid numbers caught in the suction traps run by the Rothamsted Insect Survey were increasing rapidly in the latter part of September, with an above average percentage of cereal colonising aphids among them. This demonstrates both a clear indication that the autumn aphid migration is well underway and a potentially increased risk of BYDV infection, especially for early, September sown cereals.

The Rothamsted Insect Survey has a free BYDV text messaging service to provide detailed regional information on cereal aphid vectors and local BYDV risk. To sign up for this service, visit: <https://insectsurvey.com/aphid-alert>

Despite availability of BYDV-tolerant varieties, suppression of BYDV still largely depends on cultural control and application of pyrethroid insecticides. Cultural control largely relies on drill date. Crops sown later into October will generally be at a lower risk of BYDV infection, but even crops sown after mid-October can be susceptible if mild weather persists into the late autumn, allowing on-going aphid invasion and in-crop multiplication. Typically though, aphid flights stop when temperatures drop below 11°C and aphid activity greatly reduces at temperatures below 3°C. There are no autumn thresholds for cereal aphid control.

Current advice is to apply insecticide when second generation aphids are present. These are the offspring of the first colonising aphids and, as they start to move away from the plants initially colonised, begin the secondary spread of virus within the crop. The second generation is likely to be present when the accumulated daily air temperatures, above a baseline temperature of 3°C, reach a 'T-Sum' of 170°C.

T-Sum calculations should start either:

- On the day of crop emergence
- or
- Following a pyrethroid application

Based on drilling date and air temperatures, the AHDB BYDV management tool predicts when the aphid second generation is likely to be present in crops and will give a more accurate guideline for the optimum spray timing in an individual crop. Your ProCam agronomist will also have full details of the aphid risk this autumn and the range of available insecticide options.

# OILSEED RAPE

## NUTRIENTS AUTUMN 2021



Oilseed rape crop establishment has been variable, as ever, depending largely on planting date and the activities of Cabbage Stem Flea Beetle (CSFB). With limited CSFB control options, encouraging vigorous plant growth is one way to help overcome the early attacks. Biostimulant/nutrient combinations e.g. Canola Bio, Talisman, Incite et al can encourage root and shoot growth making the plants more tolerant to the adult beetle grazing. Once crops are able to move away from the early damage attention needs to focus on maintaining a sound nutritional balance for healthy crop development.

Over and above the base nutrients e.g. N, P, K & S, micronutrients to consider for the autumn are boron and molybdenum.

Boron is vital for crop development. It is involved with cell division and enlargement and in the spring is important in flower and pollen production. However, it also has an often under valued role for the autumn in improving the plant's tolerance to cold and its winter hardiness. Despite a lot of awareness of the requirement for boron in oilseed rape, results from extensive tissue testing still indicate that this element is deficient in many oilseed rape crops. An autumn application of around 175 g/ha of boron is suggested, to be followed by a further application in the spring. Boron is susceptible to leaching and soil availability can be compromised after a wet winter.

Molybdenum is needed in relatively small quantities, but is essential to the development of oilseed rape as it is involved in nitrogen utilisation and production of amino acids. It also helps the plant to properly utilise sulphur. However, availability of molybdenum and boron can also be restricted where large quantities of sulphur fertilisers have been applied. Applications of products such as Promo, containing both boron and molybdenum in the autumn will ensure adequate availability for vigorous autumn crop growth.

Other essential nutrients for oilseed rape are magnesium and manganese as they play a vital role in photosynthesis and maintaining an efficient green leaf canopy. Perhaps requiring more attention in the spring, but should not be ignored in the autumn, especially on lighter soils.

Discuss with your ProCam agronomist and devise an appropriate nutrient strategy and tissue testing for your oilseed rape crops this autumn.