



PROCAM
AGRONOMY THAT DELIVERS™

Technical Update
June '19

JUNE JOTTINGS

June is typically the month for the final agronomic inputs to combinable crops. These last decisions carry significant impact for optimum crop yields and quality.



As temperatures increased in the latter part of May cereal crops started to 'move through the gears' and are at or slightly ahead of typical growth stages for the time of year. Despite only receiving their 'T2' or flag leaf fungicides in the latter part of May, many winter wheat crops are already ranging from 'breaking boot' to full ear emergence. This necessitates consideration of a 'T3' or ear fungicide. Grain fill occurs at a rate of approximately 0.2 t/ha per day. The ear alone contributes around 20% to total grain fill so this final agronomic input can be critical for optimum performance.

Most grain fill occurs post-anthesis or 'flowering' so maintaining a healthy crop canopy from ear emergence onwards is critical to optimise yield performance and grain quality. A 'T3' fungicide needs to be applied at or just before 'flowering' to effectively suppress the 'ear blight' complex of diseases that can seriously affect yields and more importantly grain quality and ultimate marketability. This does mean that the interval between the 'T2' & 'T3' can be as close as a few days depending on prevailing temperatures.

Wet weather and high humidity around the flowering period are key factors to encourage the 'ear blight' complex of diseases. These largely fusarium species directly affect grain yield and quality but more importantly produce toxic metabolites known as mycotoxins. High mycotoxin levels reduce quality and marketability.

The only way of reducing the mycotoxin risk is through appropriate fungicide application.

Fungicides must be applied pre to early flowering for optimum efficacy. Triazole fungicides based on prothioconazole, tebuconazole, bromuconazole and metconazole are effective options, at a minimum 50% dose. In high disease pressure, and if yellow or brown rust is active, total fungicide loading will need to be increased.

Adjuvants such as Mica help improve the efficacy of the ear fungicides. Growth promoters/biostimulants e.g. phosphites can also lower the mycotoxin risk and reduce crop stress. Make sure you give your crops the best cover to optimise grain fill and grain quality this season.

A combination of cultural control and 'stacks' of pre/early post-emergence applied herbicides have generally given a satisfactory and effective level of grass weed control in autumn sown cereals this year. Again, it is clear that the key cultural option is to delay drilling, along with attention to seedbed quality to allow optimum residual herbicide performance. Anecdotal reports and crop observations show that even a delay from early to mid/late October in last autumn's conditions gave a significant improvement in control. It re-emphasises the need to wait for the main 'flush' of black grass germination before final cultivations and/or drilling and herbicide application.

In areas where grass weeds have 'escaped' the applied controls there is still an option to deal with the worst areas. Preventing seed return is a key measure to reduce grass weed populations. A single blackgrass head produces around 100 seeds. Consequently, even a modest population of 100 heads/m² can easily return 10000 seeds/m².

Glyphosate, applied in early June can still be effective at stopping viable seed from forming. It obviously means a loss of crop area, but will significantly lower the next crop's weed burden and may ultimately be a cost worth accepting.

Apply an appropriate, robust dose of glyphosate to ensure effective control of the weed and to minimise the risk of developing resistance.

WINTER WHEAT

INSECT PESTS 2019



By the last week of May Orange Wheat Blossom Midge (OWBM) had been caught in only two of the insect suction traps operated by Rothamsted. At the same point in 2018 OWBM had been recorded in all but two of the traps operating across the UK. This suggests that the pest is less well developed than was the case in 2018. Wheat crops are just reaching the susceptible growth stage (GS 53-59). Midge pupation is triggered when the soil is moist and at temperatures greater than 13°C. Air temperatures above 15°C after adults hatch are needed for them to fly and lay eggs. Eggs are laid on emerged ears, before flowering. Eggs hatch in 4-10 days, depending on temperature and the larvae move to a developing grain and feed for 2-3 weeks. Substantial loss of yield and quality can result, especially in milling varieties.

Crops are at risk from the start of ear emergence until the majority of ears are 'flowering'. Many varieties now have genetic resistance to OWBM but a number of key varieties do not e.g. Crusoe, KWS Zyatt, Trinity, Lili and JB Diego et al and could be at risk. OWBM can also cause problems in spring wheat varieties. Early indications are for a lower incidence of OWBM in 2019 but susceptible crops need to be monitored until well into the flowering stage.

Following a relatively mild winter aphid flight was predicted to be earlier than average in 2019. Aphids are being found in cereal crops, notably the rose grain aphid in the south of the UK. By late May numbers were still well below threshold levels to justify insecticide application. Thresholds for aphid control are:

- 50% or more of tillers infested before GS 61 - start of flowering
- 66% or more tillers infested after GS61

There are reports of large numbers of predators, particularly ladybirds, in crops this year. These, especially ladybird larvae, (pictured), are voracious feeders on aphids and can help to keep populations in check. Currently available insecticides for aphid control are broad spectrum and are likely to reduce predator numbers as well as aphids. Be sure to only apply insecticides once thresholds are reached to minimise any environmental impact.



SPRING BARLEY

T2 FUNGICIDES



Many spring barley crops were well established in the generally clement conditions in early spring and are at the flag leaf to awns emerging growth stages. Decisions will need to be made on the need for late growth regulators and fungicides. Disease risk is variable across the UK but in most years there is a yield benefit from applying a 'T2' fungicide to spring barley. ProCam's 4Cast system which analyses real farm data, has consistently confirmed the trend over a number of years that spring barley crops receiving at least 2 fungicide applications produced significantly improved yields over crops with a single T1 application, irrespective of drilling date.

Ramularia is a late season threat to both winter and spring barley, especially in wetter conditions. There is clear evidence from AHDB trials that the disease is becoming increasingly tolerant to the triazole, SDHI and strobilurin groups of fungicides. It is vital for effective suppression of Ramularia that any T2 fungicide application to spring barley includes chlorthalonil.

N.B. Final dates for the sale and use up for all products containing chlorothalonil have been confirmed as: 20th November 2019 for final sales and 20th May 2020 for final on farm use.

SPRING BEANS

INSECT PESTS 2019



Spring beans are developing rapidly and will soon be flowering and setting pods. This will require a focus on Bruchid Beetle, the larvae of which can seriously damage bean quality. Adult females fly to beans during flowering and lay eggs on developing pods. The larvae bore through the pod and into the seed where they feed until mature. An insecticide approved for use during flowering should be applied, using angled nozzles, at early pod set following 2 consecutive days when the maximum daily temperature has reached 20°C and repeated 7-10 days later. Typically, control has relied on the pyrethroid group of insecticides. Although since 2018 thiacloprid e.g. Biscaya now has approval for use on beans for Bruchid Beetle.

Forecasts for optimum spray timing can be obtained from your ProCam agronomist and the Syngenta Bruchidcast on: www.syngenta.co.uk/BruchidCast