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Technical Update
Apr '21

APRIL OUTLOOK

Promising crop and market prospects mean attention to detail for all agronomic inputs will be critical to encourage crops to take advantage of all available resources.

Although a larger area of cereals was established last autumn compared with autumn 2019, there was a similar range of drill dates. Some crops sown in September to early October were at or approaching the stem extension or GS30 growth stage towards the end of March. For later-sown crops that is not likely to occur until early or even mid-April.

The GS30 or 'T0' timing is the first key intervention point to set up sound disease control and growth promoting strategies for the season. Wet autumn and winter conditions will have restricted root development, especially in later sown crops. Early application of plant growth regulators (PGRs) in combination with biostimulants +/- foliar nutrients will stimulate root growth and strengthen stem bases in more forward crops.

Yellow rust is visibly active in a range of wheat varieties and is often particularly virulent in more backward, less vigorous crops. The 'T0' timing is crucial to gettng on top of this disease at the start of the spring season. Triazole and strobilurin fungicides will be the main options for effective control. N.B. strobilurin fungicides must always be applied in a mix with products with a different mode of action.

Septoria tritici levels are also high in most wheat crops. The main intervention point for Septoria is the 'T1' timing, with fungicides targeted at protecting the emerging leaf 3. However, including a multisite fungicide at 'T0' will help to suppress infection levels and improve the efficacy of following fungicides, especially if the 'T1' is delayed for any reason. Without chlorothalonil this year, folpet or mancozeb are the main options in this category of fungicide.

Following around 3 weeks from the 'T0' timing, preparations need to be put in place for the 'T1' fungicide application, and timed to coincide with the emergence of leaf 3. Leaf 3 in wheat crops sown in September and early October emerge around GS32 or the second node stage. This can mean 'T1' is around mid-April in these crops. In later-sown crops, leaf 3 is more likely to emerge in late April to early May.

Remember that late-sown crops e.g. those drilled from November onwards, will produce fewer tillers and leaves before entering the stem extension phase. Leaf 3 may emerge at the first node/GS31 growth stage, or even at earlier growth stages in very late-sown crops.

SDHI fungicides have been relied upon for septoria control in recent years, but tolerance to this group of single-site fungicides is increasing. The introduction of the triazole mefentrifluconazole in products, such as Lentyma and Provyto, offers improved efficacy on septoria in this fungicide group. To both maintain these improvements and avoid further development of tolerant isolates, all fungicides must be used in mixtures of products with different modes of action. Key to this is the inclusion of multisite protectant fungicides across the fungicide programme. If omitted at 'T0', ensure that they are included at later timings.

New analytical techniques to detect early disease infection, and varieties with much improved resistance ratings are in the mix of the management tools available to assess disease risk and plan fungicide programmes. Most current fungicides need to be applied prophylactically for optimum effect and the vagaries of the British weather can disrupt the best made plans. At current cereal prices ensuring your fungicide programme is adequate and robust across all varieties will be the best insurance to optimise yields and ultimately, margins.

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OILSEED RAPE

LLS & SCLEROTINIA 2021

Oilseed rape crops, despite the best efforts of pests and weather over the winter, are generally in better condition than last year. Growth stages range from stem extension/green bud up to yellow bud/early flowering.

Light leaf spot (LLS) continues to be a main disease threat with symptoms clearly visible in fields across the UK, without the need to incubate leaves. Previous fungicide trials have indicated that a 15% infection of plants with LLS at stem extension equates to a 5% yield loss. Early treatment is essential to manage the disease and protect yield. Fungicides should be applied at the first signs of the disease or at the first opportunity after light leaf spot is found.

As crops move into the yellow bud and flowering stages the risk from sclerotinia infection starts. AHDB will again be running their weather-based alerts for infection risk. Details are available online at: https://ahdb.org.uk/sclerotinia-infection-risk-alerts-for-oilseed-rape

Forecasts for the following 48 hours for temperature and humidity conditions (air temperatures above 7°C and relative humidity (RH) above 80%, exceeded for 23 continuous hours) which promote sclerotinia infection are available for multiple locations across the UK. The forecasts are updated every weekday and give 'traffic light' warnings with red indicating high risk, amber 'near misses' and green/white low risk. There will also be weekly information on regional airborne spore levels for sclerotinia infection.

In the dry conditions of last year the forecasts indicated a low risk which was confirmed by observed infection levels, but the previous year's infection is no guide to future risk so, be prepared to reassess fungicide requirements.

Without reference to forecasts and risk maps, the guidance for optimum timing for sclerotinia control is a single spray just before mid-flowering on the main raceme and prior to significant petal fall. Persistence of full dose fungicides after application is approximately three weeks. If flowering continues for longer than this, a second spray will be required to maintain fungicide cover throughout the flowering period.

Fungicides targeted at sclerotinia must be applied as protectants, ahead of infection, so fungicide spray strategies need to be considered before the main flowering period.

CEREAL APHIDS

FORECAST SPRING 2021

AHDB have published their forecasts for cereal aphid activity this spring. The best predictor of the timing and size of aphid migration is the mean temperature in January and February. Temperatures in November/December and March/April have little apparent impact.

In comparison with recent years January–February air temperatures finished around 1–1.5°C colder than average in Scotland and Northern England and around 0.5°C colder than average elsewhere, despite milder temperatures in the latter part of February. The forecast is therefore, that unless spring weather conditions from now on are wildly abnormal, aphids will fly around 2–3 weeks later than in an 'average' season and around 1 week later than 'average' in the rest of England. Full details of the forecasts and actual aphid migration are available at: https://ahdb.org.uk/aphidnews

CROP NUTRITION

SPRING 2021

Optimising nutrient use efficiency is a key element to producing optimal yields. Nitrogen, usually considered to have the biggest influence on crop yield, is a prime focus for improving nutrient use efficiency; not least as it is one of the biggest contributors to greenhouse gas emissions from agriculture. However, nitrogen's use efficiency is also linked to the availability, uptake and utilisation of all essential nutrients.

Potassium (K) and sulphur (S) are closely associated with nitrogen use efficiency by improving its uptake by plants and the nitrogen cycle within them. After another wet winter soil levels of both, but particularly S, may well be depleted, especially on the lighter soil textures.

Regular tissue testing can help to measure and monitor both macro and micronutrient levels in crop tissue. Results can then be acted upon in-season to correct nutrient imbalances and assess the impact of applied inputs. Ideally, to monitor crop nutritional status, samples should be taken at several stages through the season. If this is not feasible, a sample at the early vegetative growth stages, when nutrient deficiencies are most likely to occur, is the best compromise.

Check with your ProCam agronomist about tissue testing, sampling methods and the appropriate nutrient options to keep your crops nutritionally well balanced.