



PROCAM
AGRONOMY THAT DELIVERS™

Technical Update
Feb '21

FEBRUARY FOCUS

A wet and cold January may have depleted soil nitrogen reserves. Adjustments to planned application rates may be required together with checks on fertiliser spreaders.



Another wet autumn followed by more heavy rainfall in January will be causing concerns for fieldwork and in particular applications of nitrogen (N). There will be obvious concerns about how much N has been lost from soil in the wet conditions. Losses will have occurred through leaching, especially on the lighter soil textures, but also through denitrification where soils have been saturated, even for relatively short periods.

The exact level of N loss is hard to quantify and will depend on a number of factors including soil type and the Excess Winter Rainfall (EWR). EWR is the amount of rainfall the land receives after the soil profile becomes fully wetted in the autumn (field capacity) and before the end of drainage in the spring (around the end of March). EWR has an important influence on the amount of nitrate leached and, thus, the nitrogen availability to a crop. It must be taken into account when planning nitrogen applications. Estimates of EWR, based on Met Office rainfall data can be found at:

<https://ahdb.org.uk/ewr>

If there are uncertainties in estimating the Soil Nitrogen Supply (SNS), analysing soil mineral nitrogen levels may help to give greater confidence in finalising crop N requirements.

Although the funding arrangements for the Basic Payment Scheme (BPS) post-Brexit have changed, the need to follow Cross Compliance rules has not, and they continue to be a condition of BPS. Consequently, NVZ rules still need to be adhered to under Statutory Management Rule 1 (SMR1).

Before N applications start, the quantity of N to be applied must be planned on a field-by-field basis. The fertiliser plan needs to show that you have:

- Calculated the amount of nitrogen in the soil available for uptake by the crop during the growing season (SNS)
- Calculated the optimum amount of nitrogen that should be applied to the crop, taking account of the SNS (the crop nitrogen requirement)
- Calculated the amount of nitrogen, from any planned applications of organic manure (the crop available nitrogen)

And finally, taking account of all the above:

- Calculated the amount of manufactured fertiliser required.

Before applying any form of N, a field inspection is required to assess the risk of run-off into surface water. If soils remain wet, frosts may provide the only opportunities to get onto land without damaging soil structure. N must not be applied if soils have been frozen for more than 12 hours in the last 24, or when snow covered. Applications on a frost that thaws during the day are permitted. Normal common sense should also meet the requirement not to apply N to waterlogged or flooded ground.

In addition to assessing the quantity of N to be applied NVZ legislation in England requires any person spreading N fertiliser to do so in as accurate a manner as possible. Two problems can occur during spreading — applying the wrong quantity and uneven spreading. Accurate fertiliser application is reliant on the fertiliser being of adequate quality, but equally the fertiliser spreader should be in good condition and operated correctly.

Most fertiliser is now applied as granules or prills using twindisc broadcast spreaders. These should be checked in spring and at intervals through the season. The British Survey of Fertiliser Practice indicated that, in 2019 43% of farms reported testing spreaders annually, as recommended, but 36% were tested less frequently or not at all.

A professional tray test is a small cost compared with the impact on crop yield and margins from inaccurate and uneven fertiliser application.

ANNUAL TRAINING EVENT 2021



December's newsletter introduced the NROSO Annual Training Course, designed to replace the Spray Operator Roadshows that ProCam and others have usually organised through the winter months. Coronavirus restrictions have necessitated that this has evolved into an online training event. As of the middle of January, the e-learning course is now 'live', and can be accessed via the website: <https://www.eioperator.com>

The course is available as either an arable or fruit version and is worth 8 points for both NROSO and BASIS. The training takes the form of easy-to-follow lessons across a range of topics. Each section is followed with a short multiple-choice test. Once all sections are passed, ei-operator will forward the points directly to NROSO and BASIS.

It is anticipated that the total course will take approximately 2 hours and will be available until 30th June 2021. Anyone signing up to this course must complete it by 31st August 2021. The total course fee is £30.00.

In addition to the Annual Training Event details of 3 short courses for spray operators are also available via the ei-operator website.

BYDV

SPRING 2021



The percentage of bird cherry oat aphids carrying the BYDV virus was significantly higher in autumn 2020 compared with the previous year. It remains to be seen if this is reflected in eventual crop infection levels. After the wet autumn/early winter in 2019/20 there was relatively little BYDV in crops in the spring. Hopefully, the combined wet and cold conditions in autumn/winter 2020/21 will have had a similar impact on any surviving aphids in cereal crops.

The bird cherry-oat aphid, the main BYDV vector, is frost susceptible with an LT50 (the lethal temperature to kill 50% of aphids) of -0.5°C, compared with the more frost hardy grain aphid's LT50 of -8°C. Frosts in the latter part of January may have reduced aphid numbers, but unsprayed crops should be checked for aphids. Worthwhile reductions in BYDV infection can still be achieved from spring-applied insecticides.

FARM SUPPORT

COUNTRYSIDE STEWARDSHIP



The recent publication of impending changes to farm support may have stimulated thoughts on other sources of grant funding. One option, with the added bonus of aiding environmental protection, could be to consider applying for a Countryside Stewardship (CS) agreement. Defra is continuing to offer CS agreements in 2022 and 2023. CS will eventually be replaced with the new Environmental Land Management (ELM) scheme following trialling and testing and a national pilot that will start in 2021. The full ELM scheme is intended to be in place from 2024. Signing up to a CS agreement now will aid access to ELM. In addition, it will provide a viable source of income for providing environmental benefits as BPS payments start to reduce. If access to ELM is agreed, the CS agreement can be terminated early, without penalty, at the end of an agreement year to allow you to join the ELM scheme.

Two popular access points to CS for many will be the Mid-Tier options and the Wildlife Offers.

A Mid-Tier application allows farmers and land managers to choose from all available multi-year options and capital items to form an agreement which delivers local environmental benefits.

The Wildlife Offers are designed to help guide farmers to the most straightforward options for their farm type, making it easier and simpler to secure a CS agreement. Offers are split into different packages for farm types: arable, lowland grazing, upland and mixed farming. These applications are the easiest to complete, and can be done online via the Rural Payments Service.

Countryside Stewardship options also include:

Higher Tier — involving more complex environmental land management projects.

Hedgerows and Boundaries — providing grants for hedgerow and boundary restoration.

Woodland Support — grants available for woodland creation and management.

An outline of all the options, capital items and supplements available in CS can be found at:

<https://www.gov.uk/countryside-stewardship-grants>

Full details of the schemes, along with application procedures, support and advice for CS agreements to start from 1st January 2022 will be available from mid-February 2021.