

Farmer bulletin

August 2023



Results from 2022 Nutrient Leaching Tool

In this bulletin find analysis from the NLT 2022 and next steps for 2023

Introduction

At the end of March, the Poole Harbour Nutrient Management Scheme (PHNMS) closed for the 2022 cropping year which resulted in over 200 members signing up. This far exceeded expectations. The following months have been taken up with the validation and verification processes of the Nitrate Leaching Tool (NLT) and Agricultural Compliance Tool (ACT). Validation is the process all the Tools have gone through, focusing on ensuring both have been filled in correctly, ensuring consistency throughout. Verification is a step on. We must verify 10% of returned ACTs and NLTs (we actually have done over 20%) by proof checking the data inputted and questioning any above or below average figures. This has been such an important exercise, we know many of you are wanting the feedback, not just on your NLT but on the findings and trends from different crops and farming systems across the catchment.

As this is the Scheme's first year, being the important baseline gathering year, it has been key to ensure that all NLTs have been completed as accurately as possible. PHAG would like to thank all the farmers who have been willing to give us some of their time to run through their NLT and verify the results further. It has really helped the process and highlighted some glitches and trends giving us valuable feedback to go back to the Environment Agency (EA) with. All this work has led to producing the catchment N leaching figure from farmers in PHNMS and gives us confidence in that figure.

So, without further ado, some headline figures and statistics for you, bearing in mind the EA end target is 18.1 and this year's glidepath was 26.6 kgN/ha:

Total number of farm businesses in PHNMS: **202**

Total land area covered by these businesses within the PH catchment: **46,661.46 hectares**

Total N Loss per hectare from PHNMS members for 2022 (Actual Land Use (ALU)): **17.96 kg N/ha**

Scenario N Loss per ha from PHNMS farms for 2023 (Scenario Land Use (SLU)): **14.17 kg N/ha**

From the membership to date, we have started to get an indication of a baseline figure. This was always our main priority for the 2022 year, to get actual data on a decent scale, rather than rely on the EA's modelled, and out of date, figures. In the following pages there are thoughts and analysis on these figures, please take the time to read through it to get a clearer picture of what these figures mean.

Many thanks,

Louise Stratton, Development Manager

Analysis

We expect for many this catchment figure seems lower than expected, given our glidepath target figure. But as always, we should put this in context of the farming year: a very dry early summer 2022 where many grassland farmers did not put the level of fertiliser on their fields as expected and some high yielding winter arable crops. Both these factors might not seem much on an individual field and farm level, but when it is calculated up over multiple farms and the catchment, it has had a big impact on the final figure.

Likewise, we would treat the Scenario Land Use (SLU) figure for 2023 with serious caution. Although some completions of the NLT SLU tab have been realistic, most completions are either a copy across from 2022 or using the tab as a 'what if' exercise. The latter is really good to see, experimenting with mitigation measures, fertiliser usage and timings of options and seeing how these impact on the N loss for each field, but, it doesn't represent an SLU prediction figure that we have confidence in. We appreciate that last year just completing the ALU was the priority, but going forwards it would be helpful to PHNMS if the SLU was completed to the best of your knowledge, so we know where we are standing for the year ahead.

From the verification process and the farm visits and calls that have been undertaken and speaking to you about your farming practices, we expect the figure for 2023 to potentially rise a little from this year's baseline figure of 17.96 kgN/ha. Obviously, each year there will be a degree of fluctuation mainly due to the impact of weather. To help you plan with this, if you have time, by making changes to the NLT through the summer as field management and harvest yields get confirmed, you can see the impact of each management. Do look at the impact the mitigation measures have, certainly establishing the cover crops early.

Statistics:

Looking at the data that has come out of the NLTs from 2022 in a bit more detail, we have some key findings and trends. A lot of the analysis that we have now done in the past few weeks has been at the EA's request and is above and beyond what was initially planned, but it certainly gives us a better understanding of our position.

From the membership, arable and livestock farms totalled 21.4%; arable farms totalled 18.4%; dairy was 15.9% and beef was 15.4%. Mixed livestock, rough grazing, dairy and arable, sheep and horses brought up the remaining c.30% of farms.

Each sector provided a range of N loss figures; within the arable enterprises the rotation heavily influenced the results, so we will expect this to affect each year's figure for those individual farms. Table 1 is interesting to show the different farm type's average N leaching figure, but the range of leaching within each type is very wide.

Farm Type	Average farm size (hectares):	Average farm N leaching figure (kgN/ha):	Range of leaching:
Arable	294	28.86	6.62 - 50.2
Arable & Dairy	418	24.06	5.50 - 31.60
Arable & Livestock	287	20.23	3.62 - 49.64
Dairy	222	15.10	4.62 - 28.10
Sheep	89	9.64	4.16 - 27.65
Beef	115	7.95	3.77 - 22.20
Horses	27	7.87	3.6 - 15.48
Mixed Livestock	198	7.14	3.91 - 26.35
Rough grazing	259	5.72	3.65 - 19.1

Table 1: Farm type average size, N leaching and range.

Therefore, when we looked at the groupings of farm types within each of the following N leaching figure bands, we saw clear trends on farm types, which is explained in the comment column for Table 2. The percentages won't add up to 100% - this is because it is broken down by how many farms in each leaching band had beef, sheep, arable etc. For example, in the 0 - 10 kgN/ha range 63% of the farms had beef, 52% had sheep - clearly some farms had both.

N leaching figure	Comments
0 - 10 kgN/ha	Dominant grassland farms: 63% beef farms, 52% sheep and few dairy farms.
10.1 - 18.1 kgN/ha	55% beef farms, 25% sheep and 29% dairy.
18.2 - 25.6 kgN/ha	15% dairy, av. 325hd, 36% sheep.
25.7 - 35 kgN/ha	40% large dairy/dairy and arable farms and beef farms averaging 150hd.
35.1 - 45 kgN/ha	Dominant arable farms, higher percentage of sheep, one beef herd.
45+ kgN/ha	All arable; very small grassland areas, averaging 80head.

Table 2: Observations on farm type trends within N leaching figure bands.

Year ahead:

You will shortly receive a letter correspondence from the Environment Agency, detailing the timeframe for 2023 of the NLT and ACT.

We must highlight that 2023 is a new membership year for PHNMS, we are reviewing our administrative costs of running the Scheme on an annual basis and will be releasing further details in due course, with a view of re-opening the membership in the autumn, ahead of the ACT and NLT release. As always, we endeavour to keep these costs to you as low as possible as we only need to cover the costs of running PHNMS.

The EA have committed to, and now commissioned improvements to both the ACT and NLT on the back of last year's feedback. PHAG had submitted a complete list of improvement recommendations on the tools' usability, based on a lot of your feedback during the completion process, then there have been the technical recommendation discussions, which are on-going. It is clear there are a lot of improvements to do, but it is also clear that the EA's budget is tight, so we have spent a lot of time explaining and sorting the top improvement priorities. The amended tool is scheduled to be released in August for us to trial and report back on, if there are any willing volunteers to get involved with this, please contact PHAG.

The new NLT should be available end of September, (we understand this will be available online for you to download). We want to reassure you that the number one priority from us to the EA, has been the ability of the new NLT to copy across last year's NLT data, to save you having to re-start the whole process with inputting field names etc. The same will apply with the ACT. You will then need to complete these by the end of this calendar year, remember the Actual Land Use (ALU) tab will be for the farming year 2022 - 2023, which was effectively your Scenario tab from last year's submission.

Note, you are advised to complete the NLT first and then the ACT, allowing the NLT data to be imported. As a member of PHAG, remember that you only submit these two tools to us and not to the EA as well.

Trading:

We are now looking at how the trading component of PHNMS will work going forwards for 2023. As you can imagine it is an incredibly complex, but a vital element of the Scheme to develop, and we are pleased to have some external, specialist assistance with this. We may be coming to you for your thoughts as we develop this, and we always welcome your contributions on how this could be done.

As always please don't hesitate to get in touch if you want to talk any of this though or have some points for us to consider, this is your Scheme, and we want your input.

We are also happy to come out and talk to a group of farmers if you feel this would be beneficial. We can talk through the 2022 results in more detail, some findings and trends within crops and discuss how trading can work.