

ASSAP – providing advice on measures to minimise nitrate losses from farms in high-risk catchments

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Summary

- The agricultural sustainability support and advisory programme (ASSAP) and the local authority waters programme (LAWPRO) work in collaboration to identify pressures from agriculture on water quality.
- Recent EPA water quality reports highlight deteriorating water quality due to increasing nutrient levels including nitrate in waters.
- Targeted action is required to help minimise diffuse nitrate losses to water from agriculture.

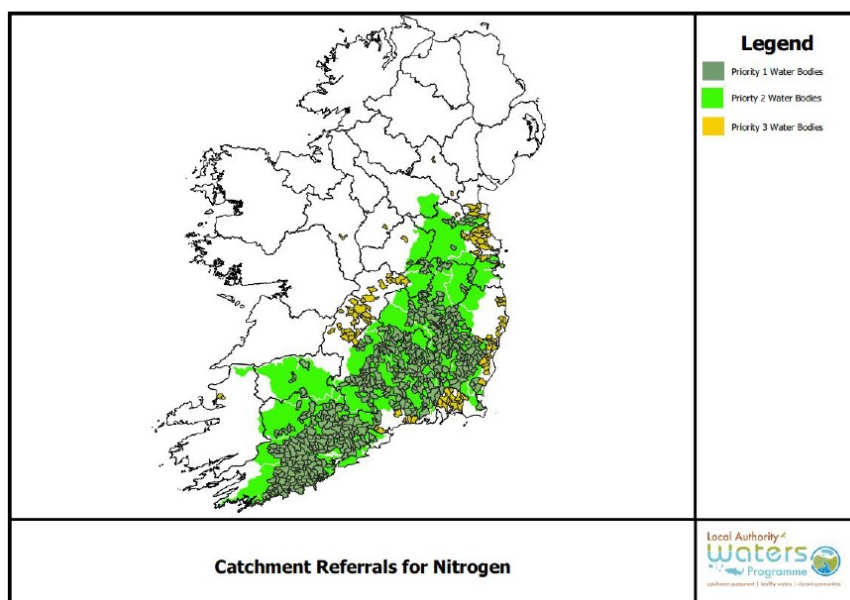
Introduction

ASSAP – The Agricultural Sustainability Support and Advisory Programme works in collaboration with LAWPRO (Local Authority Water Programme) to improve water quality. This is done by carrying out science-based catchment assessments on the pressures impacting waterbodies. This information is then utilised to provide detailed advice to farmers to mitigate agriculture pressures on water quality. The majority of the nitrogen lost to water is from agricultural sources.

In 2022, ASSAP and LAWPRO developed a catchment referral process for nitrogen. This identified over 1,200 waterbodies within the catchments of concern identified with elevated nitrogen concentrations as published in an EPA report in June 2021 (EPA, 2021). The purpose of the nitrogen referrals was to facilitate farmer interaction in these catchments. The waterbodies were categorised as shown in Table 1 and are located as shown in Figure 1. Using the information provided in the referrals, ASSAP advisers, particularly those employed by the dairy co-ops have begun to focus their efforts in the areas identified. This involves the prioritisation of farm visits at waterbody scale based on the concentration of nitrogen. Farms are selected for assessment based on risk of nitrate loss to water. The process involves identifying practices contributing to the loss of nitrogen and recommending mitigation actions.

Table 1. Priority categories for catchment referrals for nitrogen

Priority category description	No. of water bodies	
1.	Water bodies contributing high nitrogen within catchments of concern	404
2.	High pollution impact potential nitrogen areas in catchments of concern (not included above)	733
3.	Water bodies with elevated nitrogen (outside of catchments of concern)	94



Source: LAWPRO

Figure 1. Map indicating catchments where reduction in nitrogen losses is required

ASSAP – providing advice to maximise nitrogen use efficiency

Advice provided by ASSAP advisors is focused on optimising nitrogen use efficiency at farm level by promoting a series of practices including:

- Application of nutrients in optimal conditions for uptake particularly during times of restricted growth (early spring, late autumn and in drought conditions).
- Ensuring adequate slurry storage to facilitate matching application to crop requirement.
- Valuing and accounting for the nitrogen content of organic manures.
- Matching application to soil temperature, soil moisture content and growth rates.
- Taking account of current and forecasted weather when applying nutrient.
- Promoting good soil fertility (pH, phosphorous, potassium).
- Encouraging the increased use of sulphur with nitrogen applications.
- Increased use of clover and multi-species swards (MSS).

Conclusion

Urgent action to minimise diffuse nitrate losses to water is required and all advisors and farmers have a role to play in achieving this. It is particularly crucial in the catchments of concern identified by the EPA.