Helping you to help the environment

The new Agricultural Sustainability Support and Advisory Programme (ASSAP)

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Ireland has been set a target of achieving good status for all waters by the EU Water Framework Directive. Despite good work over the last 20 to 30 years, we are falling short of this target and water quality has actually declined slightly over the last few years.

ASSAP is a new free advisory service with 20 advisors from Teagasc and 10 advisors from the dairy industry working in 190 catchments or priority areas for action (PAs) across the country. It is designed to work closely with the farming community to assess farms for any potential issues that may be having an effect on the water quality in local streams. Farmer participation is voluntary.

How does diffuse phosphorus (P) loss occur?

Phosphorus (P) loss typically occurs on soils that have low permeability. These are heavy, poorly draining soils that have high clay content and get quickly saturated with rainfall. When there is heavy rainfall on these saturated soils, this leads to the water staying on the surface of the soil. This in turns leads to overland flow of water, particularly on fields with slopes. Water flowing across fields brings with it P available to plants in soluble form from applied fertiliser. It also washes off soil particles that have P attached to them. P binds tightly to soil particles. The soluble P and soil particles can then be washed into drains and streams and end up impacting on water quality.

ASSAP advisors will advise measures to prevent P leaching into ground water, streams and rivers. Careful management of nutrient use is required in susceptible areas. P losses can be minimised by using the correct P fertiliser (protected area) at suitable application rates, in suitable fields and at correct times. Tillage farmers can help further by sowing catch crops to avoid the soil lying bare in autumn/winter.

How does diffuse nitrogen (N) loss occur?

Nitrogen (N) loss typically occurs on soils that have high permeability. These are light, free-draining soils with a high sand content. Water permeates quickly through these soils. Where nitrogen fertiliser above the crop requirement is applied, the N is not utilised and is left in the soil. Nitrogen in the soil is also naturally released through mineralisation, particularly in autumn. Unlike phosphorus, nitrogen does not bind tightly to soil. When there is heavy rainfall, the water leaches N away to groundwater, streams and rivers.

ASSAP advisors will identify areas on farm where this could occur and advise measures to prevent N leaching into ground water, streams and rivers. Careful management of nutrient use is required in susceptible areas. N losses can be minimised by using the correct N fertiliser, particularly in autumn. Unlike phosphorus, nitrogen does not bind tightly to soil. When there is heavy rainfall, the water leaches N away to ground water, streams and rivers.

Careful management of nutrient use is required in susceptible areas. N losses can be minimised by using the correct N fertiliser. It is in everyone's interest to work together to improve Ireland's overall water quality. This will have many benefits across the local community and will help with achieving Ireland's obligations under the Water Framework Directive. It will also help to strengthen agriculture by reinforcing our green image as food producers and underpin the future development of sustainable Irish agriculture.