

Grassland Herbicide Use and Water Quality

Herbicide used to control grassland weeds, eg docks, thistles, rushes have the potential to be lost to surface or ground water. These chemicals are used in the management of grassland swards. However, herbicides need to be applied very carefully to prevent losses and impact on

water quality and drinking water supplies.

Point sources are losses in the farmyard: leaks from storage and spills from handling. Diffuse sources are losses in the field due to spray drift, surface runoff and drainage.

Monitoring of groundwater,

streams and rivers continue to show the presence of herbicide chemicals such as MCPA, 2,4-D, fluroxypyr. These chemicals are also in drinking water supplies across the country and levels detected frequently exceed Drinking Water standards.

How to Reduce Reliance on chemicals

- Use mechanical control of weeds, topping or mulching
- Reduce soil compaction due to machinery or outwintering practices
- Where appropriate maintain or improve drainage (Consult with your adviser before you carry out any works)
- Improve Soil fertility by liming, correct applications of P and K levels
- Ensure good grassland management practices e.g. rotational grazing
- Maintain dense sward cover by avoiding poaching and overgrazing

Tips to reduce the risk to Water Quality when using Pesticides

1. Assess if you need to spray – can your weed problem be resolved by non-chemical methods (see above).
2. Ensure that your sprayer is tested, calibrated and in good working order and that the operator is a registered Professional User.
3. Use the appropriate product and follow the label recommendations on use. Apply herbicide when weeds are actively growing and at the right stage of growth.
4. Ensure the sprayer operator is aware of the location of all nearby water bodies (ditches, streams, ponds, rivers, lakes and springs, drinking water abstraction points)
5. Do not perform handling operations (filling, mixing or washing the sprayer) near water bodies, open drains or well heads. Do not fill sprayer directly from a stream, drain, lake or pond.
6. Apply all herbicides in suitable weather conditions (no rainfall forecast, calm day with a morning or evening application in hot weather). Consider using drift-reducing nozzles when spraying.
7. Used pesticide containers should be triple-rinsed, washings added to the sprayer tank and empty containers should be disposed off correctly. Contact your Local Authority for guidance.
8. Clean and wash down the sprayer in a suitable field, well away from any water bodies or open drains.

MCPA Focus

Data from the EPA in 2019 show there were 82 exceedances above the limit, in 27 drinking water supplies. 52 of these (63.4%) were in relation to MCPA.

1. MCPA products can be used to control rushes. MCPA is water soluble and takes several weeks to break down
2. Rushes thrive in poorly-drained areas (with a water table near the surface), which are prone to run-off to nearby water bodies
3. Control using mechanical methods if possible
4. Apply to fresh, green and growing rush to increase effectiveness of chemical applied
5. Observe a non spray buffer of 5 meters for MCPA
6. Apply using boom sprayer only, weed lickers are not to be used
7. Do not exceed maximum spray rate as per label
8. The prohibited period for spraying MCPA is October to February

Summary

Grassland herbicides are an important part of good grassland management for many farmers. However, misuse can lead to impacts on water quality.

Farmers should try to avoid using herbicides where possible by applying good grassland husbandry techniques. Where herbicide use is necessary, best practice advice should be followed to ensure minimal losses to water.



For more information please visit www.teagasc.ie/water-quality