

PESTICIDES AND DRINKING WATER

June 2018

Using MCPA and protecting drinking water



Spraying rushes can easily lead to breaches of the drinking water standard for pesticides.

In the past few years, high levels of MCPA (e.g., Mortone, Agritox, M50, Lupo) have been found in some drinking water sources. Many different pesticides are at risk of entering groundwater, especially MCPA. Any herbicide used to control docks and other grassland weeds are equally at risk of entering water sources;

therefore, the information in this newsletter applies to all grassland herbicides. MCPA, primarily used for rush control, is very soluble so it can travel easily in waterlogged areas or water bodies. MCPA takes several weeks to break down, and can persist in surface water for some time.

Edited by
Tim Hyde,
Environment
Specialist

In this issue

- Using MCPA and protecting drinking water
- How to control rushes
- GLAS and rush control
- MCPA and drinking water
- Best practice
- Key messages



MCPA cannot be used within five metres of a water body.

Why have rushes become so common?

Rushes thrive in poorly drained areas (with a water table near the surface), which are prone to runoff to nearby water bodies. Soft rush, the most common type of rush, is characterised by an erect mode of growth with no leaves and a very tough outer skin, making it difficult to control with herbicides. Also, the plant is deep rooted with large root reserves of food. They can produce 8,500 seeds per fertile shoot per year.

Seeds from rushes only germinate if conditions are favourable, so maintaining a fertile, dense, leafy grass sward is the best method to prevent rushes establishing. Encouraging grass growth will, in turn, reduce the existence of rushes. Having a fertile soil with adequate levels of nitrogen (N), phosphorous (P) and potassium (K), along with a suitable pH for grass growth is critical. Avoid any poaching, overgrazing or damage to grass swards.

How to control rushes

Frequent topping, timely fertilisation, application of lime and good drainage will help limit rushes spreading. If rush infestation is heavy then mulching rather than cutting should be carried out before chemical control. If using a weed licker or spraying rushes, topping/mowing/mulching three to five weeks in advance of spraying is advised to promote fresh green regrowth capable of taking in the herbicide. This also helps weaken the food reserves within the plant. Remove any mown rushes before spraying as these can hinder herbicide penetration into the emerging rushes underneath.

GLAS and rush control

Spraying of rushes is not permitted on land parcels/fields in the low input permanent pasture (LIPP) or the traditional hay meadow (THM) options of the Green Low-carbon Agri-environment Scheme (GLAS). Spot treatment



Observe buffer zones when using MCPA near water bodies.

MCPA cannot be used in a weed licker. Glyphosate is the only product which can be legally used in weed lickers/wipers.

is permitted in these GLAS areas. Boom spraying with herbicides will damage the grassland plant species present in the LIPP or THM sward. This could result in a penalty under cross compliance and GLAS. Spraying is not permitted in any special areas of conservation (SAC). Rushes can be controlled by topping after July 15. Consult your GLAS planner if considering any control of rushes in land parcels involved in the GLAS scheme.

MCPA and drinking water

Herbicides can enter water bodies from leaks from storage areas, spills or drips from handling operations such as mixing, filling and washing (mainly in the farmyard), or during application with spray drift, runoff and drainage. MCPA residues can be slow to break down under anaerobic conditions (waterlogged soils or sediment in watercourses), which can delay it being detected in drinking water. A single drop of

MCPA can contaminate a stream for more than 30km. MCPA levels are based on EU monitoring levels. The limit for pesticides is 0.1ug/L or 0.1 of a part per billion, which is the equivalent of one drop of MCPA in an Olympic-sized swimming pool. Water authorities have increased the monitoring of water from April to November and detections are becoming more common.

Best practice

When spraying rushes with a boom sprayer, you cannot spray within 5m of any water bodies or dry drains. Ensure you know where the local abstraction points for drinking water are located, as there is a minimum 200m no-use zone from these. The local authority or the National Federation of Group Water Schemes can advise on this. Read the product label carefully and follow recommended rates. Ensure there is two to three days of good growth weather before spraying and



Remove any mown rushes before spraying.

another two or three after application. Avoid grazing sprayed areas for 10 days post spraying. Triple rinse the empty container and put the washings into the sprayer and spray this onto grassland. Ensure that the

application equipment is properly calibrated and working correctly. Using low-drift nozzles and keeping the boom as low as possible is recommended. Use a wetting/sticking agent if possible to improve uptake of the herbicide.

Key messages

- Beware! Spraying rushes can very easily lead to breaches of the drinking water standard for pesticides, particularly if using MCPA. Where MCPA enters a stream it can be detected in surface water (drinking water abstraction point) a long way from where it was applied, i.e., >30km.
- All MCPA products have a 5m buffer zone from watercourses and dry drains. They cannot be used within 5m of these. This includes dry drains that could hold water.
- MCPA products cannot be used in weed lickers or knapsack sprayers.
- All MCPA containers should be triple rinsed after use with the rinse put into the sprayer.
- All foil lids from MCPA containers should be put back into the triple-rinsed containers and the cap screwed tightly on.
- Mechanical control and good soil fertility should be the first option and then spray the regrowth and target only the rush-affected areas.
- Do not fill sprayers from watercourses.
- Ensure that the sprayer operator is aware of any drinking water abstraction points or wells in the local area (5m to 200m safe guard zones).
- Don't apply MCPA if the soil is water logged or if there is rain forecast.
- Only apply MCPA if the grass and rushes are dry and avoid windy days where spray drift could spread into watercourses.