

Protecting water from pesticide inputs

As a new spraying season commences, it is important to be mindful of the need to protect water bodies from pesticides. Legal limits for pesticides in water are specified under EU legislation in the Water Framework Directive (WFD), which covers all water bodies, and the Drinking Water Directive (DWD), which covers drinking water and the sources of supply.

Under the DWD a legal maximum concentration of 0.1ppb (0.1 parts per billion) is specified for any pesticide found in water used to supply drinking water. This is a blanket cut-off value, intended to ensure that only negligible levels of pesticides are present in drinking water. Exceedance does not automatically mean a health risk, since the level required to impact on human health would be much higher for nearly every pesticide. However any exceedance in drinking water or its source water bodies is a breach and is illegal.

Statutory threshold limits may also be set under the WFD. These limits are called Environmental Quality Standards (EQS values) and have been set for several pesticides. They are intended to protect sensitive aquatic species and apply to all water bodies. Unlike the DWD threshold of 0.1ppb, EQS values are science-based and therefore vary according to the characteristics of the individual pesticides for which they have been set.

There are two main ways in which pesticides can get into water bodies – i) point source inputs and ii) diffuse inputs. Point source inputs relate to pesticide handling (mixing, filling, washing, spillage, leaks etc.); while diffuse inputs refer to pathways arising during or after application, e.g. spray drift, runoff and drainage. Water bodies are particularly vulnerable to point source inputs from hard or compacted surfaces.

The statutory limits for pesticides in water are very low and can easily be breached through careless handling or use of pesticides. For example a foil seal from a pesticide container blowing into a stream 1 m wide and 30 cm deep could potentially cause an exceedance of the DWD threshold of 0.1 ppb along 30 kilometers (km) of channel length. Therefore it is essential to take particular care and follow best practice procedures when using pesticides near water bodies. Some key points to bear in mind are presented below.

Read Product Labels

The labels and information provided with plant protection products often specify measures to reduce aquatic exposure, e.g. buffer zones. If a buffer zone is specified on the label of a plant protection product, it must be complied with. An aquatic buffer zone is an untreated strip of a specified minimum width between the edge of a water feature, such as a ditch, stream, pond, river or lake and the edge of the treated area adjacent to the water body.

Do's

- Follow the label instructions (especially in regard to any buffer zone information).
- Be aware of the location of nearby water bodies and if they are used to supply drinking water.
- Maintain application equipment in good working order and ensure it is properly calibrated.
- Take great care to avoid spills. Consider using a containment system to catch spills (e.g. a bund or lip around filling area).
- Perform handling operations well away from water bodies and from drains (10-50 m).
- Minimise water volumes (rain and washings) on handling area.
- Keep the spray boom as low as possible and use the coarsest appropriate spray quality.
- Consider use of drift-reducing nozzles.
- Best practice for tank washings and cleaning sprayer exterior surfaces is to carry this out in the field. (Any washings should be discharged onto the previously sprayed cropped area, observing the maximum dose for that area.)

Don'ts

- Do not fill spray tank directly from a water body.
- Do not apply if heavy rain is forecast within 48 hours.
- Do not spray in windy conditions.
- Do not apply to saturated or frozen ground.
- Do not apply to dry, cracked soils or on areas with channels that drain directly to water.
- Do not apply on poorly draining or wet soils that slope strongly towards a water body.
- Do not apply if field drains are flowing.

Product update

A comprehensive list of recently withdrawn products and their use-by dates can be found at <http://www.pcs.agriculture.gov.ie/Docs/>

Details for some high profile products for use-up in 2013 are listed below (all products will have to be used on this Spring's crops).

Product Name	PCS No	Comment
<u>Cereals</u>		
Croplink Propyzamide	04247	Use by <u>22/05/2013</u>
Turbo Flo	04252	Use by <u>25/05/2013</u>
Tolkan Liquid	02500	Use by <u>30/06/2013</u>
Croplink Reaper	03073	Use by <u>28/09/2013</u>
<u>Maize</u>		
Theta	04285	Use by <u>25/09/2013</u>

Croplink Maize	03373	Use by <u>10/10/2013</u>
Prop	04296	Use by <u>06/11/2013</u>
<u>Potatoes</u>		
GloFlo	04133	Use by <u>22/10/2013</u>
Unichem Linuron	04379	Use by <u>29/10/2013</u>
Rapture	04353	Use by <u>29/10/2013</u>
Whelehan Linuron	04406	Use by <u>04/11/2013</u>
<u>Others</u>		
Barclay Tracker	00210	Use by <u>30/05/2013</u>
Metarex Green	01278	Use by <u>30/05/2013</u>
Optimol	00422	Use by <u>30/05/2013</u>

Final thoughts –

- Triple rinse empty containers and dispose of all containers safely – see leaflet in previous edition of IFJ or access the following link - [http://www.pcs.agriculture.gov.ie/Docs/Good Practice Guide for empty pesticide containers.pdf](http://www.pcs.agriculture.gov.ie/Docs/Good_Practice_Guide_for_empty_pesticide_containers.pdf)

The need to leave appropriate 'no spray' zones adjacent to water courses and water abstraction points is a legal requirement for all plant protection products. Do not allow pesticides to contaminate water courses, and avoid use if rain is imminent.

READ THE LABEL