

Circulation: NFU Advisers

Date: 28/112012

Ref: PS 12/091

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Purpose: To provide an update on issues with Metaldehyde during autumn 2012.

Briefing on Metaldehyde stewardship in autumn 2012

Background

Historic detections

Metaldehyde applied to crops to control slugs was first detected in surface water in autumn 2007 following the development of new analytical techniques. Metaldehyde was reaching surface water through drains and run off as a result of high rainfall events and soil saturation, with levels increasing mainly in the autumn.

Current drinking water treatment methods designed to remove pesticides are not effective at reducing the levels of Metaldehyde in water. As a result there have been occasions when very low levels of Metaldehyde have been detected in treated drinking water. These levels have always been extremely low, with the highest detections around 1ug/l but mostly much lower. However these levels are above the European and UK standards for pesticides in drinking water that is set at 0.1ug/l.

Health concerns

The Health Protection Agency has confirmed that there is no risk to health from the levels that have been detected in water supplies. Using toxicological studies it is possible to determine an “acceptable daily intake”. Such a calculation indicates that to get to that level the average size person would have to drink more than 1000 litres of water each and every day of their life. The generally recommended amount of water to drink for proper hydration is two litres. Although the levels being detected are above the standard for drinking water, the standard for individual pesticides is not set on a health basis, but as a near-zero value reflecting European Union legislation that pesticides should not be present in drinking water. This is in effect a political issue about meeting a technical standard set on a “one size fits all” basis.

Metaldehyde stewardship

Following detections in 2007 focus for reducing risk from Metaldehyde in watercourses and rivers has been based on voluntary stewardship and support programs for farmers. The water companies have agreed a programme of work with the Drinking Water Inspectorate to reduce the non-compliance risks for each affected waterworks. In particular companies have been working closely with Metaldehyde producers who have formed a Metaldehyde stewardship

group (MSG) and also with the Voluntary Initiative on pesticides to provide a major national programme of advice and training to farmers and their suppliers.

The MSG has undertaken a number of measures to reduce the risk of detections:

- Removal of pellets containing the highest doses of Metaldehyde from sale
- Voluntary changes to statutory label conditions to restrict the maximum dose allowed for one application and in one season
- [Best practice guidelines](#) and decision trees for slug pellet use, including practical support for farmers through training.

The MSG also carries out annual monitoring and reviews in spring to assess take up of advice and effectiveness of stewardship measurers.

Progress on stewardship

Until autumn 2012 there has been a demonstrable downward trend in the number of occasions where Metaldehyde has been detected in raw and treated water. This has been partly attributed to stewardship measurers and to the recent dry autumns, cold winters and dry springs that not been optimal for slug activity, and therefore the need for chemical control has been reduced.

In 2012 however the challenge has been the wet and mild summer, which has been the wettest since 1912 (371mm mean UK average Jun-Aug compared to 320.2mm in 2008). This was preceded by the wettest April in 100yrs and above average rainfall in May resulting in the wettest period from 1st April to 30th June since records began. These conditions significant increase slug activity and production of juvenile populations to levels which have jeopardised autumn sowings. An issue further compounded by poor cloddy seedbed resulting in slow emergence and subsequent growth. This has already resulted in significant crop losses with some crops being re-sow or abandoned.

There have been no severe frosts or very cold weather to provide a natural level of control on slugs. Added to this the difficulties that the very wet weather has posed to farmers attempting to employ non pesticide based practices such as rolling. The result has been an increase in concentrations of Metaldehyde in rivers, reservoirs and canals across large parts of England, with some catchments recording the highest Metaldehyde concentrations since intensive monitoring began.

MSG and VI have undertaken awareness campaigns to communicate the issues to the farming industry stressing the urgency and **imperative of observing good stewardship during the recent high slug pressure and wet conditions.**

The current situation is being compounded by limited stocks of all types of slug pellets. The autumn 2012 UK market requirement had not have been anticipated, particularly when we consider the drought conditions in spring 2012. The alternative products to Metaldehyde are Methiocarb and Ferric Phosphate, Metaldehyde production is estimated at 10-12000MT compared to estimates of 1000MT respectively for the alternative products.

Longer term consequences of exceedance

In the first instance the water industry has stated that it remains committed to working with agricultural stakeholders to ensure that Metaldehyde does not find its way into rivers and reservoirs. If a voluntary approach does not generate sustainable reductions in levels in drinking water sources then the regulators may deem it necessary for the introduction of tighter environmental restrictions on application or for water companies to invest in the development of advanced treatment solutions to protect essential water supplies. Currently work is on-going to assess the economic impacts of various legislative and voluntary approaches.

One particular point of consideration is the substitution of Metaldehyde with alternative molluscicide, however this is problematic: Methiocarb is not a suitable alternative for Metaldehyde, because of its poorer eco-toxicological profile. So the only viable long term alternative product is Ferric Phosphate, which has none of the treatment issues or eco-toxicological issues of the other products. However production of Ferric Phosphate would need to be significantly increased to meet demand. The product is also significantly more expensive at 2 to 3 times the price of Metaldehyde. Finally replacing Metaldehyde with Ferric Phosphate will alleviate the water treatment issues posed by Metaldehyde but will not lessen the issue of levels of molluscicide products found in surface water as a result of pollution swapping Metaldehyde for Ferric Phosphate.

What is the NFU doing on Metaldehyde?

- The NFU is liaising with Water Companies, Environmental Agency, MSG and the VI to ensure commitment to stewardship and to help safeguard Metaldehyde product availability.
- The NFU is developing supporting information to contextualise the untenable position this autumn for farmers. This will include case studies of farmers experience around the country.
- The NFU is lobbying legislators to ensure there is a good understanding of the importance of slug control and the importance of the product.
- The NFU is involved in projects through the VI that focus on the long term issues around product availability and alternatives.

Sources of further information

[Environment Agency position on Metaldehyde](#)

[Water UK](#)

[Metaldehyde Stewardship Group](#)

[Voluntary Initiative](#)