

Sheep Dip Pollution Reduction Programme RFERAC paper FERACW/06/45

Written comments from Carmel Jorgensen, Thames RFERAC member
for October 31, 2006 meeting

This EA R/FERAC Sheep Dip Pollution Reduction Programme paper, FERACW/06/45, confirms the EA's continued support for the use of sheep dips. This support casts serious doubts on the EA's commitment to a healthy aquatic environment and the continued survival of protected and endangered places and species.

The whole of the paper and the Sheep Dip Pollution Reduction Programme implies that synthetic pyrethroid cypermethrin and organophosphate diazinon sheep dips can be used safely, with an acceptable amount of pollution. In developing this Sheep Dip Pollution Reduction Programme, the EA appears to have ignored the evidence showing the minute amounts that cause harm and the serious scale of impact. A reduction of sheep dip pollution is neither legal nor feasible.¹²

Since 1992, both sheep dips have been the largest cause of Environment Quality Standards (EQS) failures, accounting for 30-40% of freshwater pollution incidents.³⁴ Everywhere the EA looks for sheep dip pollution it finds EQS failures. This suggests the actual number of pollution incidents are much higher, and a lack of adequate monitoring masks the true extent of the problem.⁵ *If the EA does not have the capacity to adequately monitor the environmental impacts of chemicals licensed by the VMD and VPC, why is the EA continuing to support their use?*

Evidence from just three sheep dip pollution pathways are highlighted below.

1. Where sheep are treated and grazed.

In 2001, 92% of the 50 sites sampled exceeded the EQS for sheep dip chemical pollution.⁶ More recently, in the Upper Teifi in Wales, an SSSI and SAC and home of world famous sea trout and endangered and protected Atlantic salmon, 100% of the sampled sites exceeded the EQS.⁷

2. Where spent sheep dips disposed.

Sheep dips are Class 1 chemicals given exemption to be disposed of to land. However cypermethrin remains biologically active in soil after 133 days. Animal slurry mixed with cypermethrin sheep dip increases faecal coliform and pathogens, such as *Salmonella spp.* by a magnitude of four. A 2003 study showed lapwing chicks survival diminished on sheep dip disposal nesting sites due to lack of food.⁸

3. Where sheep wool cleaned.

In 1999, the EA found that 27 of the 27 sewage treatment works that receive wool fleece exceeded the Maximum Allowable Concentration EQS for both sheep dips.⁹ That is 100% EQS failure. 47,000 tonnes of wool is cleaned in the UK annually.¹⁰

Minute amounts¹¹ of sheep dip pollutions cause harm to fish, freshwater shrimp, crayfish, stoneflies, and mayflies and drives threatened species to extinction.¹² Research from

CEFAS show that as little as >1 nanogram per litre causes harmful effects of fish and their ability to spawn, on embryo survival and development, and survival at sea. The CEFAS research also notes that the recorded levels of sheep dips found in surface water exceeds the Environmental Quality Standards by as much as 34,900 nanograms per litre.¹³

Additionally, this R/FERAC paper is misleading by stating cypermethrin sheep dip products are “withdrawn” and “suspended”, thus implying that synthetic pyrethroid cypermethrin sheep dip can no longer be used. This is not the case. In July 2006, SEPA, EA and VMD published a joint statement assuring farmers that it is still legal to use synthetic pyrethroid cypermethrin sheep dips.¹⁴ This is despite the fact that since February 21st 2006 the product has been suspended from manufacturing.

Sheep dip chemicals are mobile, persistent and found in exceedence of the permitted amounts in 100% of the locations the Environment Agency looks for them. Given the evidence of the minute amounts required to cause an impact and the demonstrated scale of impact, it is not practicable for the EA to support advising farmers to ‘stop every drop’ and to suggest the chemicals can be used without causing damage to the environment.¹⁵

The EA’s primary statutory duty is to protect the environment. *Why, given the evidence and the EA’s statutory duties, does the EA support the continued use of the top polluting chemicals?*

¹ Salmon & Trout Association. 2006. S&TA sheep dip update – the threat remains. S&TA Water Resources Group. 22 Aug 2006.

² Salmon & Trout Association. 2006. Initial reply to for Sheep Dip Pollution Reduction Programme Specification Study. S&TA Water Resources Group. 25 Aug 2006.

³ National Rivers Authority. 1995. Pesticides in the Aquatic Environment. Cited in Griffiths, 1997.

⁴ Environment Agency. 2005. Environmental impacts of sheep dip chemicals: a review of available information. Annex 1 to EA RFERAC Report, Sheep Dip: impacts on aquatic life. Chemicals Science, EA. July 2005.

⁵ ENDS. 2006. Field Tests uncover massive increase in sheep dip pollution. ENDS Report 373 quoting EA p.15.

⁶ Environment Agency. 2005. p. 19

⁷ Rutt. G. 2004. A summary of investigations of sheep dip pollution in Southwest Wales 2002 – April 2004. Environment Agency. Technical Memo. TMWO_10.

⁸ Walker, L.J., Butterfield, J.E.L., Standen, V., Evans, P.R. 2004. Effects of sheep dip disposal on terrestrial invertebrates. R&D Tech R P2-250/1/7/TR. Contractor: Durham University. CCW and EN. Published by Environment Agency. May 2004.

⁹ Patterson, D A, Boxall A, Cooper C, Sinclair C, France B, Thornton A J. 2004. Review of methods for reducing sheep dip chemicals released from the textiles industry. R&D Tech R P2-250/5/TR. Atkins Water, Cranfield University, Yorkshire Water. Published by the EA.

¹⁰ Petrie, OJ. 1995. Harvesting of Textile Animal Fibres. FAO Agricultural Services Bulletin No. 122. FAO of the United Nations. Chapter 1. <http://www.fao.org/docrep/v9384e/v9384e00.htm#con>

¹¹ A nanogram is one billionth of a gram, this is equivalent to 1 second in 11,574 days. One sugar cube (1 cm³) of synthetic pyrethroid sheep dip diluted in 5 million cubic litres of water just meets the annual average EQS of 0.2 nanograms per litre of contamination.

¹² Wallace, I. 2005. *Glossosoma intermedium* Assessment. Biodiversity Action Plan (BAP) Priority Species Review. BAP Review – Invertebrate Group England and Wales.

¹³ Moore, A. 2003. Sublethal effects of pollutants on salmonids. Research on migratory salmonids, eels and freshwater fish stocks and fisheries. Sci. Ser. Tech. Rep., CEFAS Lowestoft, eds. Potter, E.C.E. and Dare, P.J. 119:64

¹⁴ SEPA, EA, VMD. 2006. Public notice. Use of cypermethrin sheep dip products following suspension of their marketing authorizations. July 2006.

http://www.vmd.gov.uk/general/sheepdip/publicnotice.pdf?lang=_e

¹⁵ EA and VMD. Sheep dip pollution reduction programme. August 2006.