Salmon & Trout Conservation

Agriculture and Us

Water woes – the unfriendly relationship between farming and rivers

The results from our Riverfly Census – analysing water insects with differing tolerances to river pollution – show that sediment and excess nutrients are two of the most frequent causes of poor river health. By supporting laboratory research, we have also found that sediment and phosphate can be directly lethal to water invertebrates, especially in combination. Damage to water insects can have a serious impact on the water food chain, affecting fish and all other water dependent life.

Modern agricultural production is one of the biggest contributors of sediment and phosphate to our water environments. Effectively managing these inputs is key to achieving living rivers and securing a healthy future for fish and all our river wildlife.

English and Welsh rivers are both under pressure from farming inputs, although both countries have different agricultural focus:

England

Sediment often enters English rivers because livestock are allowed to trample down land next to rivers, and often cattle and sheep actually wade into watercourses.

Cattle poaching on riverbank

This can be easily stopped by fencing off river banks and creating a 'buffer strip', which quickly becomes covered in vegetation and so stabilises soil and also acts as a filter for any water running off the land. Water can be supplied to livestock without them having to drink directly from the river.

By far the greatest threat to English rivers is the loss of soil and nutrients from arable land. It is estimated that about 2 million tonnes of soil enter watercourses this way each year, much of which will settle on riverbeds, smothering fish spawning gravels and generally altering the habitats for all water life.

A riverbed suffering from excess sediment load

There are solutions to these problems, which are very well documented by our colleagues in the Game & Wildlife Conservation Trust through their work in the Allerton Project at their experimental farm in Leicestershire

Learn more: *See Cultivating Healthy Soil & Clean Water*

The great advantage of the farming methods the Allerton Project is adopting here is that farmers benefit through decreased inputs and, in many case, increased yields, while watercourses and water life are properly protected.

Wales

Wales has more livestock than arable farming, and so the impacts on Welsh rivers differ from those in England. There was a time when sheep dips were causing major environmental damage in Wales, but we led a campaign to get cypermethrin – a highly toxic chemical to water life – based dips banned from sale, and so this danger has been greatly reduced (although still present – see Forestry).

Cypermethrin has been banned from sheep dips but remains in not-native Welsh conifer forestry

Now, though, the intensification of milking herds has become the most serious issue in Wales, with mega-dairies causing regular spillages of slurry into Welsh rivers.

Slurry is highly organic and so can rapidly deplete oxygen levels in the water. This loss of oxygen changes the biological community composition and abundance of organisms. For fish, different minimum oxygen levels are necessary to support activities such as reproduction, feeding and swimming performance.

Slurry spraying and the result of slurry input in a Welsh watercourse

The future – Agricultural Reform

Brexit offers a rare opportunity to change incentives for farmers to better protect the environment. Because we will be leaving the Common Agricultural Policy (CAP) in 2019, a new UK policy must be in place by then.

Bottles on the right: Water samples collected from a Welsh river degraded from agricultural input

We see a post-CAP situation whereby farmers are still paid grants as they are presently under CAP, but that these are dependent on achieving genuine environmental protection outcomes – in our case, ensuring minimum impact on rivers, lakes and water life. That way, farmers continue to benefit, but environmental protection is greatly enhanced.