



Reducing Oilseed Rape Herbicide Losses

Background

Anglian Water is part of the Voluntary Initiative's "OSR Herbicides? Think Water" campaign where pesticide manufacturers, water companies, agronomy companies and other industry stakeholders come together to promote best practice in the use of oil seed rape herbicides.

The issue

OSR herbicides can be reduced through normal surface water treatment processes, however, some herbicides such as propyzamide can be a challenge for treatment works when seen in high amounts. Propyzamide is a particular risk as its application period coincides with when land tends to be wet and field drains are flowing.

The River Kym catchment was monitored in the run up to local work with farmers and high levels of oilseed rape herbicides were found in its tributaries, located above the Great Ouse abstraction into Grafham, which abstracts 400 ml/day – an important drinking water source for the area.

The River Kym catchment is made up of 90 farms, covering 3,287 ha, with oilseed rape typically used as a break crop in this predominantly arable area.

The Trial

A trial was set up in the River Kym catchment to explore whether OSR herbicides could be voluntarily reduced or whether further resource protection measures could be implemented to prevent field applications reaching water - focusing on which measures are practical on farm. The trial was driven by farmer feedback and included a range of measures which were investigated from the removal of the highest risk areas out of OSR production to black-grass resistance testing and local weather station access.

Temporary/Rotational buffer strips

Farmers decided to test temporary/rotational stubble buffer strips alongside OSR (& Beans) where there were vulnerable areas next to ditches that were outside long term stewardship agreements. To measure the efficacy of these newly established 'temporary' buffers, catch pits were installed with a waterproof cover, to catch any water run off before it reached the ditch.



Figure 2- Catch pit example next to the farmers ditch

The water in the catch pits was sampled during the winter cropping season. Results detected high readings of propyzamide in December 2018 and high levels of Carbetamide in March 2019 from catch pits at the back of the 6m stubble buffer, indicating the buffer was breached by run-off (on a field of gentle gradient). We think of field drains as pathways at this time of year, but the results also indicate the significance of surface run-off post application, as a key pathway for losses of **propyzamide and carbetamide** into ditches.

The trial is being extended this autumn (2020) with resistance testing and a plot trial experiment with Dr. Stephen Moss looking at optimum rates and alternative mixes to full rate propyzamide for effective black-grass control.

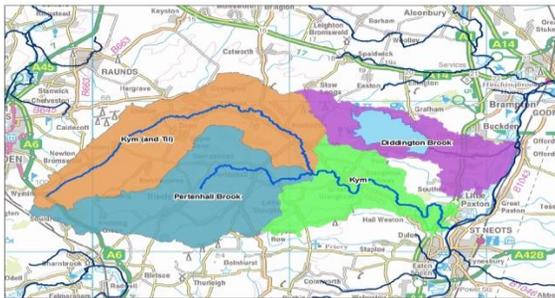


Figure 1 River Kym catchment map



Joanne Pollock
Catchment Management Team
07802 856662
jpollock@anglianwater.co.uk
Twitter: @AWCoastCountry



Love every drop
Come rain or shine
Find out more at
AnglianWater.co.uk/farming

