



A clear solution for farmers

CATCHMENT SENSITIVE FARMING

Catchment Sensitive Farming Cotswolds Newsletter – July 2014

Welcome to the summer edition of the Catchment Sensitive Farming (CSF) newsletter for the Cotswolds Catchment. In this edition we cover upcoming CSF events, the results of our 2013/14 green manure/cover crop trials, recent CSF activity, an update on the work we're doing to help reduce metaldehyde pollution, as well as a reminder of the free specialist 1:1 visits available.

CSF works with farmers and growers, on a voluntary basis, to provide free and confidential assistance in managing natural resources, products and infrastructure with the aim of reducing the risk of run-off and leaching to local surface and ground waters. This can bring benefits in efficiency, regulatory compliance and staff training as well as investment through our Capital Grant Scheme.

CSF Farm Event: Capital Grant Scheme farm walk

Monday 14th July 9.00am - 11.30am, Milton Farm, Fairford, GL7 4HZ

On Monday 14th July we will be holding a farm walk at Milton Farm, by kind permission of Tom Paton, to look at a range of capital items that have been funded through the CSF Capital Grant Scheme (CGS).

This is the ideal opportunity to find out more about the various items that the scheme can fund. We will be looking at roofing of manure and livestock areas, a sprayer loading area and biofilter, rainwater storage, livestock tracks and hardstandings, pasture pumps, and a livestock drinking bay. It will be particularly useful if you have CGS funding this year for any of these grant items or if you are thinking of installing them in the future – come along and see how someone else has done it!

Invitations have been sent out which include booking details. Alternatively, if you are interested in attending please get in touch:

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The 2014/15 Capital Grant Scheme

During February and March CSF invited farmers from within the Cotswold catchment Capital Grant Scheme (CGS) target areas to apply for up to £10,000 towards capital items aimed at reducing water pollution. These items included roofing for livestock feeding/gathering areas, yard concreting, sprayer loading areas and biofilters, and rainwater harvesting.

We received 14 applications in the Cotswolds. Natural England is aiming to inform all applicants if they have been successful by the end of June. Agreement offer letters must be signed and returned before agreement holders can go ahead with the capital works. For this round of CGS the work needs to be completed and claimed by the end of January 2015, and no deadline extensions will be available.

Green manure/cover crop trials

Following a really mild and wet winter season, the evidence gathered from our green manure demo plots has shown they have prevented significant nutrient loss from the “brashy” soils of the Cotswolds. We believe cover crops are the key for significantly reducing nitrate leaching over winter; and green manures will help to provide a sustainable future for arable farming. At the end of March we held an evening meeting to discuss the findings of the trials.

All the crops were sampled for nitrogen content and organic matter by taking a 1m² of the biomass and sending it to the lab for analysis.

| | Seed £ /ha | Fresh ton /ha | Ton DM per ha | % Nitrogen content | Kg N/ha |
|-----------------|---------------|---------------------|------------------|--------------------------|------------|
| W.Turnip rape | 35 | 27.5 | 3.2 | 3.15 | 123 |
| Oil Radish Top | 45 | 29.0 | 2.9 | 4.76 | 140 |
| Forage Rye | 97 | 17.9 | 2.3 | 4.6 | 105 |
| Mustard | 70 | 14.5 | 2.2 | 3.18 | 69 |
| Stubble Turnips | 30 | 28.2 | 1.37 | 3.42 | 108 |

Table: Nitrogen analysis results



Photo: forage rye root structure

Some of the crops had taken up a notable amount of nitrogen and produced large volumes of organic matter, perfect for returning to the soil to improve its structure and water retaining capacity for the following crop. Reducing the amount of fertiliser needed also adds to the economic benefits.

As the trial plots were so successful, we are going to replicate them across the rest of the river basin district in the Thames region. Funding has been secured and we're looking forward to developing our knowledge further. A case study is currently being written to summarise the results of the trials, which we will circulate to you when complete.



PA4s training event, March 2014

One of our aims within the catchment is to reduce the risk of metaldehyde (the active ingredient in some slug pellets) pollution to both ground and surface waters.

In March we held a free training event for farmers which provided the specific training needed for the City & Guilds Land Based Services (formerly NPTC) qualification PA4s pesticide slug pellet applicator. Eight farmers attended the training, seven of whom went on to take the assessment. Topics covered included best practice for pellet storage, handling and disposal; pathways of metaldehyde pollution; field procedures and testing application rates; and applicator cleaning and storage.



Within the catchment we work closely with Thames Water, who kindly agreed to fund the assessments for the farmers (approx. £100 each). Thames Water are keen to reduce the concentrations of metaldehyde at their drinking water abstraction points in the catchment, and funding more farmers to obtain the relevant certification should help achieve this.



We are running another free PA4s training event later this year (likely to be in September) and subject to availability of funding Thames Water may be able to help with the assessment cost. If you or your farm workers are interested in attending please get in touch to let us know.

Free PA1 and 2 training events

CSF are planning to run free PA1 and PA2 training courses in the Autumn – please contact us to register an interest.

The introduction of the Sustainable Use Directive will effectively remove 'grandfather rights', whereby anyone born before 31st December 1964 does not require a certificate to use Plant Protection Products (PPPs). After 26th November 2015 anyone using PPPs for professional use must have a recognised certificate.

A new qualification has been developed to replace the 'grandfather rights': Level 2 Award in the Safe Use of Pesticides. People born before 31 December 1964 who will only be using pesticides on their own or their employer's land will need to obtain this qualification. Alternatively, you can obtain one of the existing Level 2 Safe Use of Pesticide awards (such as PA1 or PA2) appropriate to the work and type of equipment you use. You **must** take this route if you intend to work as a contractor or apply PPPs to land you or your employer do not own.

There are also changes relating to equipment, buying PPPs and Integrated Management Plans (IMPs) too. The NFU have published some helpful FAQs at the following website:

www.nfuonline.com/science-environment/pesticides/faq-the-sustainable-use-directive

Further information is also available at: www.voluntaryinitiative.org.uk and www.nptc.org.uk

PA1: principles of safe pesticide application **PA2:** boom sprayer pesticide application

Reducing Metaldehyde in the Cotswolds catchment

One of our priorities is to work with farmers to help reduce the concentration of pesticides, particularly metaldehyde, finding their way into surface waters, and in turn the downstream drinking water abstraction points.

Since 2010 Thames Water, and water companies nationally, have consistently recorded metaldehyde concentrations in river water used for abstraction at greater than the 0.1 µg/l drinking water standard. These typically occur in autumn and winter when metaldehyde is applied to crops, but do not present any risk to human health, and as far as current evidence suggests do not have any ecological impacts. However, this has resulted in close scrutiny of products such as metaldehyde and many of you will be aware of the guidance provided by the Metaldehyde Stewardship Group (MSG) and Voluntary Initiative (VI).



Farmers are playing a key role in addressing the problem. Through further advice and training, alongside partners such as Thames Water, CSF aims to work with farmers to help reduce the pollution levels that have been recorded in the Cotswolds. We are keen to ensure that drinking water is as clean as possible, and also want farmers to be able to grow crops successfully and efficiently by utilising the range of chemicals available. It also makes good business sense for the majority of any treatment to remain where it is most effective – in the field.



Across the country there are various projects and trials in place looking at different ways farmers can help address the problem of metaldehyde pollution. This includes a substitution trial in the Cherwell CSF catchment, where Thames Water and CSF have encouraged the use of ferric phosphate based pellets in the Upper Cherwell catchment, as an alternative to metaldehyde based pellets. This produced a positive impact by reducing metaldehyde concentrations at the downstream water treatment works and proved to farmers that crops can be kept safe with this alternative product.

Closer to home, over the past year CSF have been involved in a Payment for Ecosystem Services (PES) project in the Ampney Brook sub-catchment, which extends from Chedworth Laines down to the south of Down Ampney. This is a partnership project, led by Gloucestershire FWAG and the University of Gloucestershire's Countryside and Community Research Institute (CCRI), with partners including Thames Water, Royal Agricultural University (RAU), University of West of England (UWE), Environment Agency, NFU and Ecotricity.

The project has been investigating the potential of making payments to farmers to deliver ecosystem services, or environmental benefits, above and beyond what is already covered by Cross Compliance and Agri-Environment schemes. One element of the project has been looking at the levels of metaldehyde, as well as propyzamide and carbetamide, in the Ampney Brook. Since autumn 2013 Thames Water and UWE have been collecting and analysing water samples from a number of points throughout the project area. Working closely with the farmers in the area, these data were looked at alongside rainfall figures, pesticide applications and field cropping and management. The results were less spectacular than in the previous winter but there was some correlation between chemical application and concentrations found in watercourses, even though applications were made in accordance with good practice.

The aim going forwards is for the PES project partnership to identify and test potential solutions that result in acceptable levels of chemicals being measured in watercourses across a range of weather conditions. This may mean changes to field cropping or management, or type of pesticide used, with the incentive being that once a robust approach has been identified payments to the farmer may be a possibility. CSF will continue to work as part of the PES project partnership as it moves into the next phase.

Focusing on the Evenlode catchment

Thames Water's catchment monitoring network has recorded metaldehyde concentrations in the River Evenlode (at Cassington) that exceed the drinking water standard. This year we plan to focus efforts on the Evenlode catchment and will be working with Thames Water to provide help and advice to farmers to reduce the levels of metaldehyde found in the surface waters. We are keen to hear from farmers within the Evenlode catchment who would like to get involved or have a free farm visit to discuss the issues further, so please get in touch if you are interested. We are also offering free slug pelleting training for farmers to obtain their PA4s certification, and subject to availability of funds Thames Water may be able to help with the assessment cost.



Headline metaldehyde application advice:

The advice is very much focused on being very careful with application timing, weather forecast and drain flow, so remember these 3 top tips:

- 1) Use minimum amount of active per hectare** to avoid metaldehyde exceedances.
- 2) Know when the risk is highest on the land:** metaldehyde must not be used when soils are at full water holding capacity, when drains are flowing, or when heavy rain is forecast.
- 3) Know when to stop:** Once the metaldehyde maximum application limit of 210g/Ha in autumn is reached, do not apply any more. Switch to an alternative slug control method if needed.

Further information is available at: www.getpelletwise.co.uk and www.voluntaryinitiative.org.uk

Catchment Sensitive Farming is working!

The latest CSF Evaluation Report (Phases 1-3, 2006-2014) looking at the evidence collected over the life of the CSF project concludes that **'across the Priority Catchments, 62 % of mitigation measures recommended through one-to-one advice had been implemented by March 2014'**, thus confirming that farmers are making voluntary changes themselves to improve water quality.

The report also states that there is **'clear evidence that CSF is delivering improvements in water quality that contribute to achievement of Protected Area, SSSI and WFD targets'**. In other words, cleaner water for all.

Free 1:1 Advice and Training

We are continuing to offer free 1:1 visits from specialists on a range of topics (see below). Subject to availability, these visits are available to all holdings within the Cotswolds catchment. For farms in a Capital Grant Scheme target area, it can help inform grant applications. If you are interested in a visit please get in touch or complete and return the request form.

- **Whole Farm Plan**
A general survey of the farm with protection of soil and water in mind, which may lead to recommendations for more in-depth surveys, as listed below.
- **Farm Infrastructure Audit**
A review of the buildings and yards in terms of clean and dirty water separation, muck / slurry storage and run-off risks. This can also act as an NVZ or SSAFO 'health-check', allowing confidential discussion.
- **Nutrient Planning Review including 5 free soil samples**
A review of your nutrient and manure management plan in terms of accuracy, appropriateness and NVZ compliance. This helps ensure you are achieving optimum crop / grass yields.
- **Run-off management**
Investigating potential and historic run-off issues from fields (including tramlines), tracks and gateways. Recommendations will be made to reduce issues at source and along pathways. Measures to protect any run-off receptors, e.g. rivers, roads and houses will be identified. Recommendations may include cultivation and tramline management techniques, buffer zones and sediment traps.
- **Soil husbandry**
An assessment of the fields most at risk of poor soil health, including an examination of soil health, type, structure and texture (topsoil and subsoil).
- **Pesticide handling, wash-down and disposal facilities, including bio-beds and bio-filters**
A review of existing practices and provision of specific guidance on the design and location of possible improvements, from low-cost drip trays and in-field solutions, to in-yard bio-beds and bio-filters.
- **Calibration of fertiliser applicators, slug pellet applicators and sprayers**
Offered primarily to those who have not had their kit calibrated for 3 or more years.

Advice Request Form - please complete and return ASAP to:

Sarah Howells, Natural England, Block B Government Buildings, Whittington Road, Worcester, WR5 2LQ.

- Capital Grant Scheme farm walk
- PA4 slug pellet application training
- Capital Grant scheme visit
- Whole farm appraisal 1:1 visit
- Farm infrastructure 1:1 visit
- Soil sampling & nutrient management
- Calibrate my pellet applicator
- Contact me to discuss any of the above
(tick all that apply)

Name.....

Farm.....

Postcode..... CPH.....

Email.....

Tel /Mobile No.....