

Best Practice Information Sheet

A joint project between the Environment Agency and Natural England, funded by Defra and the Rural Development Programme for England, working in priority catchments within England.

Land management

Sheet 51a

Harvest and Storage

Why Change?

In combinable crops, on average 70-80% of runoff from fields is down tramlines through the compaction and regular trafficking on these areas.

Various benefits can be realised, including:

- Reduced soil erosion
- Increased water and nutrient retention
- Reduced artificial inputs
- Soil structure damage reduction
- Reduced environmental impact



Steps to success

1. **Review the current situation** by identifying where there are problematic tramlines in the field. Identify any high risk fields that have steep topography.
2. **Calculate the cost-benefit of these opportunities by:**
 - Identifying the benefits of reducing losses in sediments, nutrients and pesticides.
 - Reducing run-off can have cost benefits associated with decreased flooding.
 - Removing sediments from entering watercourses can reduce de-silting operations and help with reducing flooding.
 - Identifying the payback period so it can be built into business planning.
3. **Implement the action plan:**
 - Prioritise high risk fields that have steep slopes and are nearby to watercourses.
 - Plan where tramlines are located and consider putting an extra tramline headland in low points in the field.
 - Look at where gateways and entrances are positioned when entering fields. If possible move to the highest point in the field.
 - Once compaction is seen in the tramlines and conditions are suitable, look at running over with your tramline disruption kit.
4. **Monitor progress** by looking at soil and water movements after rainfall. Look at crop progression and quality. It maybe worth travelling more than once over the season if the conditions

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Sheet 51b

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Practical Examples

The Earthwake, transferring water and nutrients back into the crop

The Earthwake is a piece of machinery that acts like a corkscrew which travels on sprayer tramlines and cuts diagonal channels to allow for any water running down tramlines to enter back into the crop. This has many benefits as available nutrients, sediments and pesticides are not lost as well as allowing for access to be increased due to tramlines not being saturated for as long. This item can travel at around 10km/ha and costs to buy the equipment is around £7,500. Payback on a farm of 270 ha from working on 12m tramlines through just reducing sediment loss is 5 years at the average rate of loss at £8.58 a year/per Ha



Tines and Cultivations to reduce runoff

There are several tine and cultivators which can be used to disrupt tramlines, including some which go behind sprayers, saving fuel and cultivation costs. The tines will create channels and better infiltration in the tramlines. Studies have seen runoff reduced by 72%-99%. This can add up to savings of between £9-80 per ha per year in losses of sediments, pesticides and nutrients based on soil type, slope and conditions

Some items can also be built and developed on site. Please contact your local advisor for advice and guidance.



Simba spiked harrow attached to a sprayer

This information sheet is part of a series providing farmers with advice on land management practices to protect water bodies, produced by The Rivers Trust with support from Catchment Sensitive Farming. The advice will also enable farmers to use farm resources more efficiently and help meet Nitrate Vulnerable Zone and Soil Protection Review requirements under Cross Compliance and environmental regulation.. Information for these sheets was provided through the Broadland Catchment Partnership and Cam and Ely Ouse Catchment Partnerships Water Sensitive Farming project



**A clear solution
for farmers**
CATCHMENT SENSITIVE FARMING

