



Best Practice Soil Management

Sheet 18.0a

Recognising soil loss and damage

Why change?

Soil is the most important resource on your farm. Awareness of soil condition and potential loss is an important part of **Cross Compliance and the Farming Rules for Water**. Avoiding soil loss and damage can save money and protect the environment by reducing:

- soil erosion, run-off and flood risk
- watercourse pollution
- loss of inputs
- crop damage
- extra field operations
- your carbon footprint



Reduced production due to soil erosion

Steps to Success

1. **Know** the overall condition of the soils and the distribution of erosion risk on your farm. Use this knowledge to help you to identify locations where soil loss and damage might occur.
2. **Identify** potential opportunities for improved soil management on your farm. Look out for evidence of soil erosion and degradation, such as:



3. **Develop** an action plan to identify soil loss and damage on your farm:
 - check for evidence of soil erosion and degradation during routine farm walks and heavy rainfall
 - look for run-off pathways between adjacent fields, between fields and watercourses. Pathways concentrate run-off and increase soil loss and damage and the potential for watercourse pollution. Pathways could include ditches, vehicle wheelings, farm tracks, convoluted slopes, rills and vehicle access gates. Long, steep, bare slopes are likely to generate higher run-off than short, flatter vegetated ones
 - map vulnerable areas and high-risk crops to help prioritise and target your management response.
4. **Manage** soil loss and damage. Correct any current problems and avoid the risk of future costs by adapting the layout of your farm, matching land use to erosion risk and protecting your soils using best farming practices.



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Recognising soil loss and damage - practical examples

Reduced soil erosion

Soils on a 10ha field with a steep slope were classed as a sandy loam and assessed as having a risk of capping and erosion.

The soil was ploughed, pressed and drilled with winter wheat that resulted in a weatherproof coarse seedbed. No rolling was carried out.

The costs were:

Plough and press @ £60.69/ha = £606.90p

Spring tine harrow @£19.80/ha = £198

Drill @ £52.47/ha = £524.70p

Total cost = £1,329.60p

The savings included:

Reduced loss of yield @ £10/ha = £100

Less additional field operations = £115

Less highway clearance = £110

Reduced need for ditch clearing = £40

Annual saving = £365

Additional un-costed benefits include:

- Reduced risk of pollution and associated prosecution and civil damages
- Reduced loss of nutrients
- Reduction in loss of topsoil
- Reduced risk of local flooding
- Less impact on wildlife.



Run-off can lead to crop loss



Rills and gulleys increase cultivations

Remember

- Nutrients, pesticides and seeds can be eroded with soil and transported as run-off with significant financial and environmental costs.
- Look out for soil loss and damage on your farm and use best farming practices to help you save money.
- If soil erosion and run-off from your farm causes water pollution you could be liable to prosecution costs and fines under the Water Resources Act 1991.



This information sheet is part of a series produced by Westcountry Rivers Trust providing farmers with advice on land management practices to protect water bodies. The advice enables farmers to use farm resources more efficiently, helping to meet Nitrate Vulnerable Zone, Cross Compliance, Farming Rules for Water and other regulations while protecting our environment and natural resources.

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