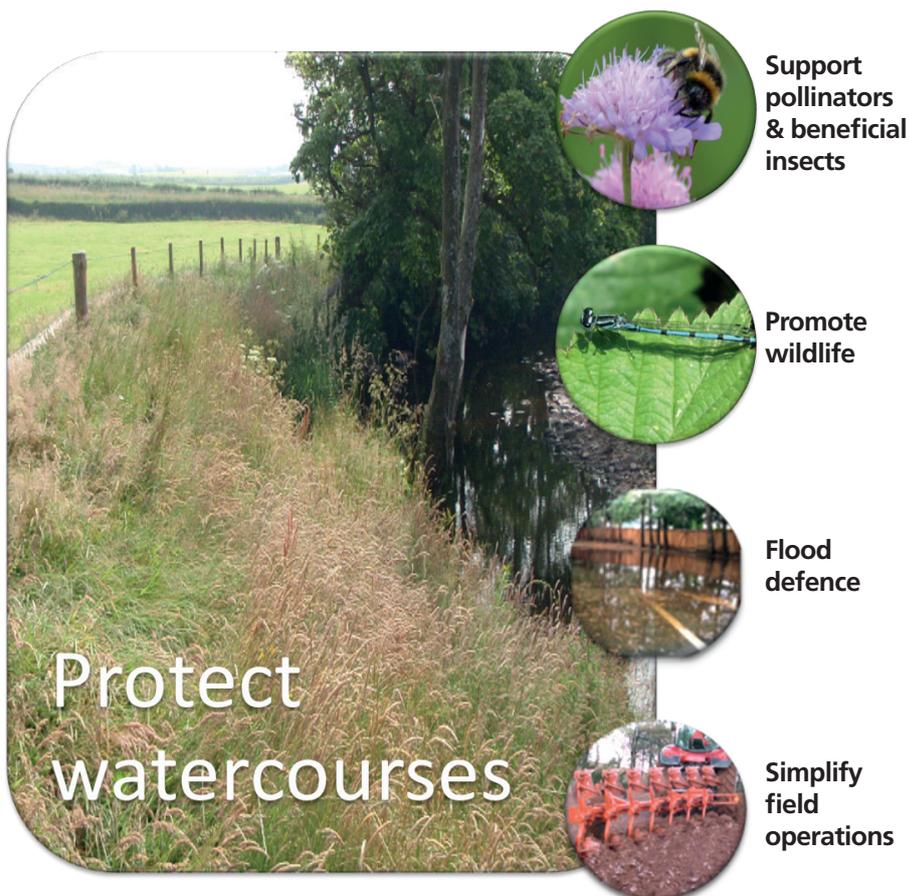


Improving Water Margins for Biodiversity and Multiple Benefits: Arable Farms

Practical Guide

Buffer strips help to protect watercourses from agro-chemical spray drift and soil run-off. Not only do they help achieve regulatory compliance, but if managed correctly they can also deliver wider benefits.

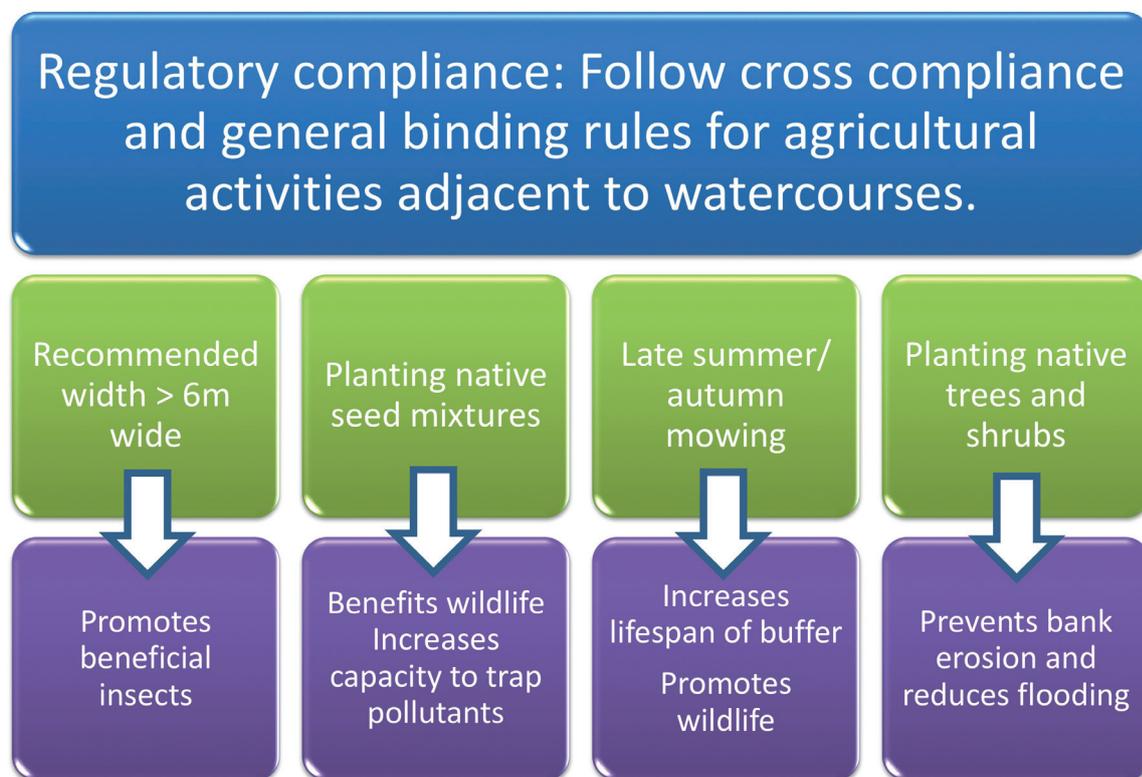
- **Protect watercourses:** Buffer strips create a barrier between watercourses and field management practices and can minimise diffuse pollution risk. Their dense vegetation traps soil run-off from cultivated land and therefore protects watercourses from pollution by soil and soil-bound pollutants (such as phosphorus and certain agro-chemicals).
- **Support pollinators and other beneficial insects:** Buffer strips provide food, shelter, nesting and overwintering sites for pollinators (e.g. bees, butterflies and hoverflies) and crop pest predators (e.g. beetles and parasitic wasps). These 'ecosystem services' provide direct economic benefits to farming.
- **Promote wildlife:** Buffer strips can provide breeding and/or feeding habitat for a wide range of plants and insects such as dragonflies, as well as larger animals such as voles, otters, barn owls and other farmland birds. Buffer strips can also provide connected 'wildlife corridors' that enable species to move between different habitats.
- **Flood defence:** Tall dense vegetation slows the flow of surface waters into rivers. Planting trees can increase the rate water infiltrates into the ground which in turn reduces the risk of flooding downstream. Well vegetated margins can also reduce bank erosion.



- **Simplify field operations:** Buffer strips can be used to create a straight edge alongside meandering watercourses and this makes it easier to work the field with machinery.

Top Tips for managing buffer strips to optimise benefits

- **Regulatory compliance:** Follow cross compliance and general binding rules for agricultural activities adjacent to watercourses. For example, cultivation and the application of pesticides are not permitted within 2m of the top of the bank of a watercourse.
- **Width:** Buffer strips over 6 metres wide create more stable habitats for a range of wildlife including beneficial insects such as pollinators.
- **Planting seed mixtures:** Sowing a variety of native grass and wild flower species can increase the buffer's ability to trap pollutants and support a wider range of insects and other wildlife.
- **Management:** Mowing in late summer/autumn and removing the cuttings prevents buffer strips becoming saturated with nutrients. It can also help prevent tall, dense grasses from shading out smaller plants and maintains botanical diversity.
- **Planting trees:** Consider planting areas of native trees and shrubs to help reduce bank erosion and flood risk downstream. Inclusion of willow can provide food for insect pollinators early in the year.



For more information contact:

Lorna Cole: Lorna.cole@sruc.ac.uk

Paul Chapman: Paul.chapman@sac.co.uk