



ROTHAMSTED
RESEARCH



RESILIENT
FARMING
FUTURES

Resilient Farming Futures

Engaging with farmers on the effects of extreme wet weather on agroecosystem regulating services

What's the issue?

Climate change is already being observed in the UK, but we lack a robust understanding of how stresses like saturation and, drought most disrupt agricultural goods and services. This is particularly true of water quality regulation. We also lack tools to identify and pre-empt changes in agricultural resilience to different combinations and levels of these stresses.

Such challenges are particularly manifest in our river catchments. More people in the UK are now living in areas where water runoff can be problematic. In addition, rainfall intensity is projected to increase by up to 20% by 2070. New data and tools to help land managers understand how this will change the resilience of farmland and find appropriate management strategies are urgently needed.

What did we do?

A collaboration with the Game and Wildlife Conservation Trust and Environmental Farmers Group is making commercial farmers (~1000) across our new network more aware of the impacts of weather extremes on water regulating services, including for example, via visits to the North Wyke Farm Platform, online seminars, and upskilling of farm clusters in

CONNECTIVITY



the network in self-monitoring of water quality and sediment sources for assessing the impacts of extreme weather. This work has involved the installation of on-farm laboratories and training of farmers in water sample collection and analysis as well as data processing and interpretation. Upskilling of additional farmers in understanding the role of extreme wet weather in elevating agricultural water pollutant losses has been delivered via an on-line LEAF Surgery to members, a Farmers Weekly Transition Walk event on the North Wyke Farm Platform NBRI, and collaboration with the Southern Streams farm cluster in Wiltshire.



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WHAT ELSE WILL WE DO TO INCREASE OUTCOMES?

We are continuing to promote the co-working with farmers to new clusters across the country including in Devon and on the Isle of Wight. Those clusters, should they join the initiative, will receive on-farm laboratories and corresponding training. Annual workshops are being planned to discuss the collective experiences to date and to refine the co-working between scientists and farmers.

How are we going to monitor the outcomes?

Outcomes are being monitored using a variety of indicators including, for example, the number of farmers engaged, number of on-farm laboratories installed, number of soil and water samples collected and changes in current farm management in response to the new evidence base assembled.

