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Progress of the NBS implementation and testing in the United Kingdom

THE CONTEXT

There are three NBS sites in The United Kingdom:

- one at Rothamsted Research's main research farm in Harpenden, Hertfordshire (north of London)
- one site in the east of England (Brooms Barn in Suffolk)
- one at the North Wyke research farm in Okehampton, Devon (southwest England)

Trials methodologies

North Wyke Site

Field trials faced difficulties due to drought conditions after spring wheat and oat sowing in April 2023, and excessive winter rainfall post-winter wheat and oat sowing in September 2023. While spring crops yielded lower than expected, a harvest was achieved. However, the winter crops failed due to field flooding, leading to plot abandonment.

Harpenden & Brooms Barns Sites

The wet conditions led to the failure of late-sown winter wheat at Harpenden and the discontinuation of this technique. Spring wheat also struggled due to the wet May weather. Wheat crops fared better in the wet conditions at Broom's Barn with its sandy loam soil. Oilseed rape harvest is expected to begin at both sites.

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Stakeholder engagement

Several stakeholder engagement events, both in-person and online, have been conducted, focusing on themes like soil health, pests, and compost management.

The British NBS site, despite facing weather-related challenges, is actively conducting research, engaging stakeholders, and exploring innovative approaches to sustainable nutrient management in agriculture.

Preliminary findings

Fertiliser Trial at North Wyke

A replicated block fertiliser trial commenced in April 2023, comparing the effects of standard industrial fertilisers, a farmyard manure and standard fertiliser mixture, and a novel bio-based fertiliser blend on spring wheat, spring oats, and a grass & clover ley. Plant biomass production was assessed, but conclusive results are pending due to unusual weather patterns.

Preliminary findings

Large-Scale Rotation Experiment (LSRE)

This experiment, running from December 2022 to May 2024, investigated the interactions of phased rotations, cultivation methods, nutrition approaches, and crop protection strategies on crop yields at both Harpenden and Brooms Barn. Initial findings revealed a significant cropping system effect on annual system calorific yield.