

ADOPT



NIAB WORKS WITH FARMERS TO ADOPT NEW APPROACHES FOR ARABLE CROPPING

Adopting resilient sugar beet at farm scale

Farmer lead: Morley Farms Ltd

The challenge: Sugar beet is a cornerstone crop in UK rotations. However, the withdrawal of neonicotinoid seed treatments has left growers vulnerable to virus yellows, transmitted by aphids, increasing risk of yield losses. Additionally, sugar beet harvests often occur in wet conditions, leading to soil compaction and erosion, which compromise soil health and subsequent crop performance.

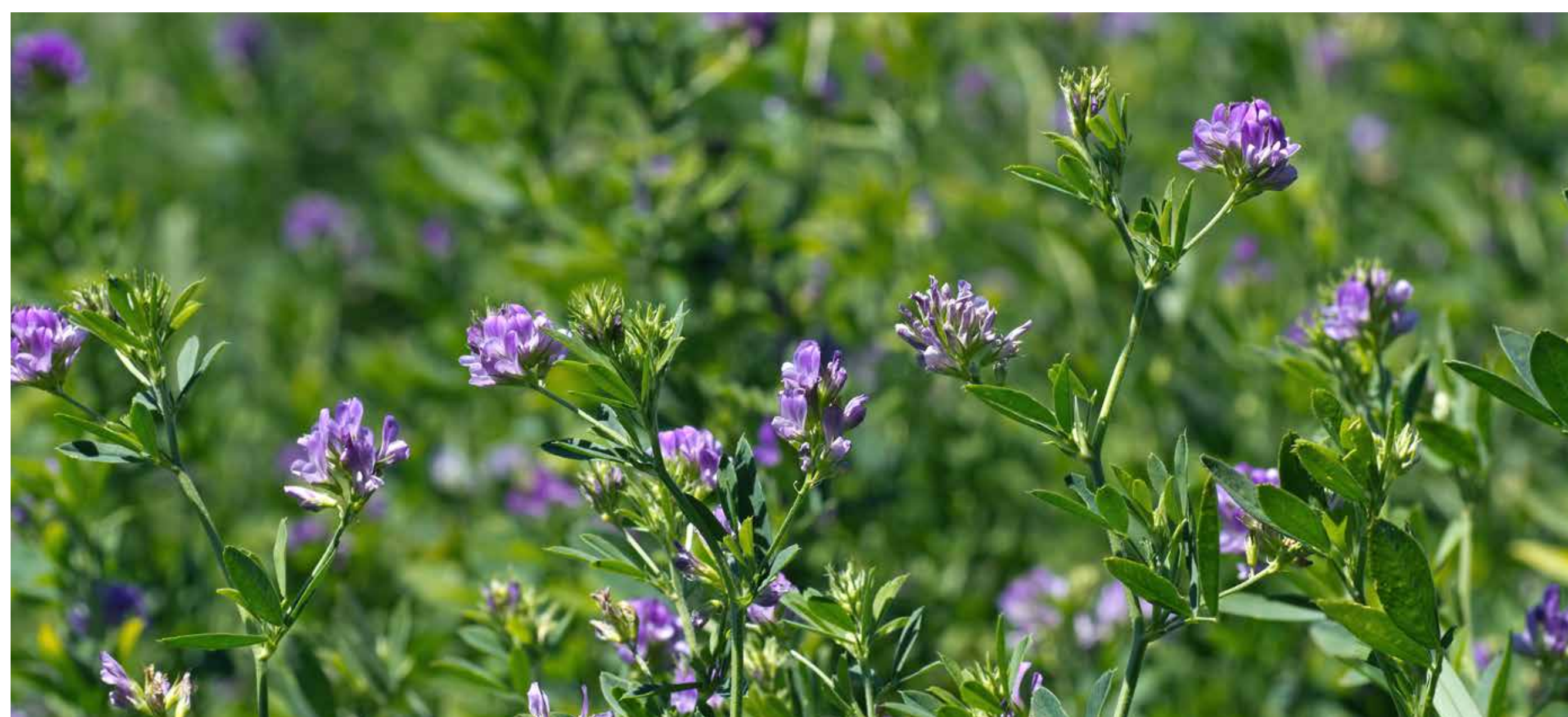
The solution: Trial of an integrated approach combining endophyte grass cover crops and strip tillage to improve pest resilience and soil structure. The goal is to develop a sustainable, low-input system that enhances crop resilience, reduces pesticide reliance, and improves soil health.

Roots of change: investigating the role of cover crops in reducing carbon footprint

Farmer lead: Dennington Hall Farms

The challenge: The agricultural sector is under pressure to adopt sustainable practices, reduce reliance on synthetic fertilisers, and improve soil health.

The solution: Exploring how integrating pulses and legumes within cover crop mixtures and as companion crops can help farmers reduce dependence on synthetic inorganic fertilisers. Trials with spring barley and winter wheat will explore and measure the impacts of a range of strategies that aim to maximise the value of legumes, and consider any impacts e.g. increased nitrogen loss, reduced crop yield or quality.



Targeted supramolecular nutrition for low P&K high-performance wheat

Farmer lead: Heritage Farming Partnership

The challenge: A large proportion of P and K applied to soils become unavailable to the crop, leading to higher costs, and unnecessary C emission from fertiliser manufacture and transport.

The solution: A targeted foliar supramolecular nutrition programme applied at flag-leaf, anthesis and grain-fill stages will be tested in replicated tramline trials over two years on two farms.



Match-making organic amendments for soil health and yield resilience

Farmer lead: Berry Farming

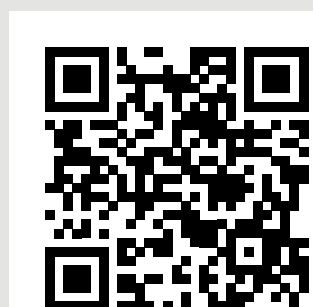
The challenge: As a tenant farmer, long-term investment in soil health can be hard to justify. Farm-waste derived biochar has been proposed as a solution but it can lead to nutrient lock-up if not combined with other inputs. There are also challenges for application at field scale.

The solution: Testing a range of pelleting approaches initially developed for poultry bedding, and also evaluating whether co-application or activation of biochar with cultivated seaweed products can overcome any short-term impacts on nutrient supply while delivering long-term benefits for soil health and crop yield.

Find out more about ADOPT funding

Funders website:

<https://farminginnovation.ukri.org/adopt/>



ADOPT support hub:

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