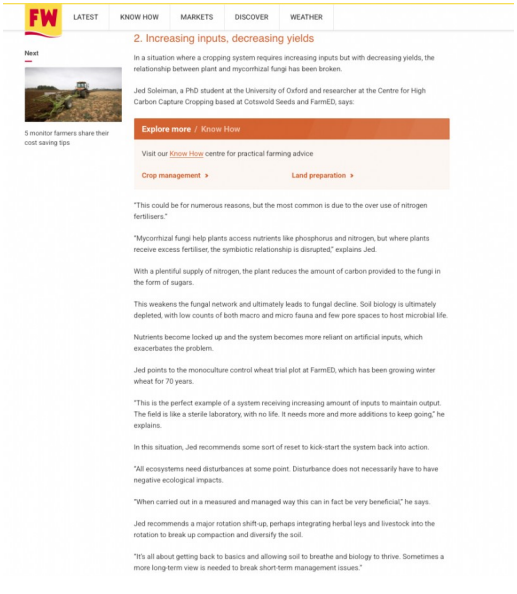
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CHCx3 in Farmers Weekly: 4 Ways to Solve Common Soil Issues on Arable Farms





A recent article in Farmers Weekly features an inteerview with Jed Soleiman, PhD student at the University of Oxford and researcher at the Centre for High Carbon Capture Cropping based at Cotswold Seeds and FarmED.

The feature looks at how 'Farmers are often swamped with different soil tests, nutrient analysis and data sets that flag up potential limiting factors on farm' and asks 'after initial observations, how can these results be effectively used to resolve problems, without overwhelming decision-making?'

Three industry experts unpick four common indicators that can be used to troubleshoot and identify limiting factors on farm.

Jed discusses increasing inputs and decreasing yields and how 'in a situation where a cropping system requires increasing inputs but with decreasing yields, the relationship between plant and mycorrhizal fungi has been broken.'

Jed explains:

“This could be for numerous reasons, but the most common is due to the over use of nitrogen fertilisers.”

“Mycorrhizal fungi help plants access nutrients like phosphorus and nitrogen, but where plants receive excess fertiliser, the symbiotic relationship is disrupted,” explains Jed.

With a plentiful supply of nitrogen, the plant reduces the amount of carbon provided to the fungi in the form of sugars.

This weakens the fungal network and ultimately leads to fungal decline. Soil biology is ultimately depleted, with low counts of both macro and micro fauna and few pore spaces to host microbial life.

Nutrients become locked up and the system becomes more reliant on artificial inputs, which exacerbates the problem.

Jed points to the monoculture control wheat trial plot at FarmED, which has been growing winter wheat for 70 years.

“This is the perfect example of a system receiving increasing amount of inputs to maintain output. The field is like a sterile laboratory, with no life. It needs more and more additions to keep going,” he explains.

In this situation, Jed recommends some sort of reset to kick-start the system back into action.

Read the full article here

Date Posted: 19th August 2025