

## Weatherproof Your Farm @ FarmED



Soil health expert, Niels Corfield, has been observing and monitoring two hundred farms across the UK, and what he has seen has convinced him that problems caused by increasingly wet winters and summer droughts are not caused by the weather per se, but are largely down to soil health factors'. He has developed a Weatherproof your Farm course which he will be leading at FarmED on 17th September to show farmers how to turn the weather to their advantage.

Hot summers create a huge opportunity for growth', says Niels. 'If you think about it, growers erect polytunnels to mimic drought conditions, amplifying light and heat to accelerate growth. By raising temperature you allow photosynthesis to occur and of course summer is the peak growing season for this reason - there are more sunlight hours, which drives growth better than any chemical. As long as water is not a limiting factor. If you turn the irrigation off in your polytunnel, everything goes backwards.'

'Drought is not about a lack of rain', Niels explains. 'It still rains in winter and this is the opportunity to get water into your soils. This is what weatherproofing your farm is all about. Wet winters are not a problem if soils allow moisture to flow down into them and then retain them for the drier months ahead.'

And by soil health, Niels is referring to compaction and aggregation.

He makes the case by referring to on farm examples, where the soil has been dug up with a spade. For instance, he shows an image of standing water on a field, but under the standing water the soil is dry and the hole that has been dug, is also dry. 'There is plenty of water at the surface but none in the soil,' says Niels.

What he has observed across the hundreds of different farms, with different soil types, weather patterns and uses, is much the same. Soils that are boggy in winter and burning off in summer, are compacted. 'We think of compaction happening at the surface, that the primary vectors for compaction are the compressive forces of heavy machinery or poaching by livestock, but soils that manifest poaching and rutting are suffering compaction below the surface. What you see when you dig into them is that soils at a lower depth display a blocky structure. Compacted soils are hard underfoot and exert resistance against the spade and when you get the soil out of the ground to do a visual assessment you see these blocky structures. When soils

are dense and blocky there is essentially no pore space. On a winter's day looking out on wet fields, the standard conclusion is that soils are saturated. But you would never use the term saturation when referring to a solid structure and these soils are solid. Solid structures displace water. The soil lies wet simply because soil can't pass through.'

Compression is not the cause of compaction, rather compaction is a symptom of soils lacking structure.

Conversely, on healthy, aggregated soil, the spade disappears easily into the soil. 'The soil is springy and spongy. You can feel this underfoot. Aggregated soils have good moisture retention. They allow water to pass into the soil in the first place and they also retain moisture like sponges.'

Averaged across the UK, a hundred head of cattle housed for five months costs £37,500 as a gross outgoing. For every additional month that animals are out grazing, farmers save between five and eight thousand pounds, based on AHDB's current benchmark figure of £2.50 per day per animal. By improving soil health and aggregate structure, land lies wet for shorter periods and to a lesser degree.

The day-long Weatherproofing Your Farm course demonstrates 'how soil structure plays out with weather' says Niels, who uses visual on farm evidence and data before offering solutions in terms of management, mechanical and mineral interventions. The balance of theory and practice includes in the field observational exercises.

Delegates will be shown how to monitor soil health and take steps to relieve compaction. 'I will show you how to make soils more free draining and use the weather to your own advantage in summer. This means that rain events and ground conditions become two separate factors, and however wet it is, we can house for shorter periods.'

'You can look back in yield reports and see every single drought across the UK writ large,' concludes Niels. 'Weatherproofing your Farm is about reducing the cost of production and also increasing production. Winter is about chipping away at the bottom line and summer is about boosting the top line.'

Join us on our Weatherproof Your Farm and learn how to move towards a subsidy free, profitable operation, becoming less reliant on fertiliser, maintaining grass growth through the season and decreasing housing periods. 5 BASIS points available.

More info & Book Your Place

*Niels Corfield is an independent farming advisor and trainer. He works with producers and landowners to implement*

*regenerative systems, across all farming types. He has carried out soil and pasture monitoring work on over 200 farms across the UK. His passion is helping farmers to understand the root causes of the issues they work with day-to-day, enabling them to create profitable operations that are nature-friendly and productive.*

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