

# How to tackle damaged swards

The wet autumn and winter have left soils waterlogged and put many fields under water for prolonged periods. So what do producers need to do to get their grass back into shape for the year ahead? British Dairying speaks to the experts to find out.

While it may look like a disaster zone, it's not irretrievable. That's the reassuring opinion from Barenbrug's Roger Bacon. Grass is amazingly resilient, but it will need some help to recover.

"Make a plan now, then be ready to use it as soon as the time's right," he says. "You can identify the most important factors: What to consider, what assessments to make, and what actions will deliver the best results."

"Fields that were in good shape going into winter stand the best chance, but by using the same assessment across the farm, you can prioritise fields. Look at what's required to bring them back into production – and how soon. That's your best route back to operational efficiency in 2024."

Producers shouldn't underestimate the impact of prolonged periods of rain on soil structure, Roger warns. "When a field of one hectare is under water to a depth of just 25mm, you're talking around 250,000 litres of water and a 250t weight on the field."

## Compaction reduces growth

The resulting compaction will not only further impede the field's drainage abilities, but also grass growth. Studies show that soil compaction reduces grass growth – and yield – by between 10 and 20%.

"Some of that can be attributed to poorer rooting, reducing the ability to absorb nutrients," he explains. "Compacted soils are colder, delaying germination and root development, and nutrient cycling is reduced. That reduces grazing days, or gives a later start to cutting."

Areas remaining wet, or with lying water, should be further examined. Roger suggests digging holes in two parts of a field – a good area as well as the suspect area – to compare the differences. "Colour, friability and root growth; the presence or absence of worms; and even its smell, should provide an idea of the degree and depth of compaction through the soil profile."

"Now you can decide where and how to ease that compaction. A pasture splitter or sward-lifter can provide alleviation, although the best results come from autumn



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operations: Both methods will cause some root damage, and the last thing you want is to further impact grass growth."

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After assessing soil structure, Roger advises soil nutrient testing. "If you've not sampled for a couple of years, it's important to know where you stand on macronutrients – N, P and K. Another side effect of soil compaction is increased risk of runoff, soil erosion and nutrient loss."

Flooding doesn't just affect the soil, he explains. "Waterlogged soils stop grass photosynthesis, arresting grass growth. What's more, ryegrass does not enjoy having 'wet feet' and after prolonged waterlogging, it will die. Taken together, there's a risk of affecting the sward's ability to out-compete meadow grasses and weeds, decreasing nutritional value and overall productivity."

Following recent events, this is probably the biggest threat to

pastures and leys. "Unfortunately, it's likely that for some fields, the 2023/24 winter will prove the last straw. And while a field might appear to recover – regreening once temperatures rise and soils dry out – I'd suggest assessing each field in turn, to decide its state of health and the remedies it might need."

Barenbrug's grassland index (GI, see panel on p62) is a good place to start, says Roger. Using the company's knowledge of grass breeding and good practice in grassland management, the GI provides farmers with a simple, straightforward tool to get the most from a grass or forage crop.

"Its five outcomes range from GI5, where there's little or no room for improvement, to GI1, where reseeding is going to be the best or only option. By using these consistent criteria, farmers can make an overseeding or reseeding decision based on fact, rather than feeling," he adds.

## Once the decision is made

Reseeding won't appeal to everyone, but where the GI is assessed as only one or two, it really is the best option, notes Roger. "Applying nitrogen to older pastures is a false economy; you won't get more than 30-40% nitrogen efficiency, by feeding lower value

species. That's before considering the 15-17t/ha DM you'll get from a new ley, coupled with the increase in quality and palatability."

Interest is moving away from pure ryegrass mixes, as farmers lean towards alternative species like cocksfoot, tall fescue and Timothy. "The sense that these species are 'old-fashioned' is receding, partly thanks to more productive varieties; tall fescue particularly, but also because of favourable attributes like drought tolerance and resilience under stress."

**"Compacted soils are colder, delaying germination."**

Where a GI assessment indicates a reseed as the best outcome, Roger suggests taking local advice. "The best fields of grass are those with a seed mixture that suits the soil, your purpose, and the local climate."

"Seek out a recommendation from your seed merchant or agronomist. For silaging, you might find they'll

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advise a mixture like Hybrid 4x4 – a highly productive ley, designed to give four cuts a year over a four-year life.

**“Sheep grazing will reset the grass growth cycle.”**

“Where you want the option to graze, then Combi is a good solution, based on a mix of two diploid and three tetraploid perennial ryegrass varieties – including Tollymore, new to the Recommended List – plus clover.”



A wet autumn and winter have left many fields looking like a disaster zone

One further solution which Roger suggests, even for pastures scoring GI5, is a traditional and well-proven route to pasture regeneration: The power of the golden hoof.

“If you can identify an opportunity to graze sheep on drying fields, it will nail it. Their grazing will reset the grass growth cycle, if you’re careful about avoiding poaching – in gateways, watering and feeding areas – they’ll serve to ‘tidy up’ the sward in readiness for the spring growth spurt.

“Failing that, dragging a harrow through those same fields will clear out the dead grass and serve some of the same purpose.”

**Assessing the grassland index (GI)**

Anyone who has undertaken soil sampling will be familiar with following a W-pattern through the field to provide a variety of sampling points. Do the same thing for grass.

**GI5**

**WHAT TO LOOK FOR:** Field should have at least 80% of its original sown species remaining. Tight and dense sward, crowding out opportunists and weeds.

**ACTION:** Keep the field in this condition: Good sward management (don’t over- or under-graze), nutrient management plan, keep pH above six (especially if legume-rich).

**GI4**

**WHAT TO LOOK FOR:** 60-70% of original sown species. Damage and bare patches from over-grazing or poor silaging weather. Fewer tillers, more open stand. Unproductive species creeping in.

**ACTION:** Use the opportunity to oversow with clover. Manage height to encourage tillering and return to a denser, tighter sward to crowd out opportunistic weeds.

**GI3**

**WHAT TO LOOK FOR:** Presence of docks and weed grasses, 50% of sown species.

**ACTION:** Check compaction and soil nutrient status. Spray out weeds. Overseeding – boosting species mix, restoring balance – will remain a better bet than a full reseed. Add clover in summer.

**GI2**

**WHAT TO LOOK FOR:** Sown species below 50%. Weeds and bare patches.

**ACTION:** Still retrievable, but soil and nutrient run-off will already be happening. Similar actions as for GI3 might buy a nother three years, but if this is the worst field then it’s time to consider a reseed.

**GI1**

**WHAT TO LOOK FOR:** Open, gappy sward. Weeds and weed grasses present in large numbers.

**ACTION:** Reseed. Don’t be tempted to apply fertiliser: It’s a waste of time and money. If compaction’s confirmed, then consider ploughing to aerate the soil. Otherwise, go for direct drilling or no-till, to preserve soil health, organic matter and structure.

**RADICAL OPTION:** Seize the opportunity of a break crop, eg turnips. Helps with pest and weed problems; aids the breakdown of thatch. Follow with a spring reseed.



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GI3 - Presence of docks and weed grasses, 50% of sown species



GI1 - Open, gappy sward. Weeds and weed grasses present in large numbers