

Grazing the HARDD way makes paddock management easy

Whether you want to learn more effective ways to manage your horse's grazing or be in a better position to hire someone else to do it properly, Shirley Macmillan finds out that there are just five simple steps

Managing grazing for horses and ponies isn't easy, whether it's a pony paddock, 30 acres at home, or a livery business. But there are five basic things that everyone can do, regardless of paddock size, stocking rate, or soil type.

Equine grazing consultant Garry Holter has drawn up a list which he calls the HARDD way to manage grazing. It stands for **H**arrow, **A**erate, **R**est & recuperation, **D**rainage and **D**iversity. Following these simple rules will not only create a more natural equine environment, but also give horse owners more time for riding instead of repairing disasters.



Garry Holter.

Harrow

Many people don't fully understand how to use their harrow, so it tends to sit in a corner until its annual outing. Yet it should be used at least twice a year – and preferably after every grazing, says Garry. Harrowing is best done at a walking pace because the aim is to remove the build-up of dead material on fields and paddocks that have been hammered by horses.

“Harrowing removes dead thatch and lifts vegetation up. Its job is to allow air movement which helps the soil to breathe. It also reduces disease by exposing fungi and bacteria to sunlight and is basically essential for the health of the pasture,” he explains. “Don't harrow when it's wet as this will rip up the ground or break the tines. Don't do it when it's very dry, because it will simply rattle across the surface. And don't just go up and down the field: go across it as well to lift plants and grasses in both directions.”

Where a field is being rested from grazing, droppings can be left to dry out then harrowed to spread them out. The field should be rested for at least two months. Worm larvae will then dry out and die on exposure to the sun, while birds will pick out the daddy long legs (crane fly) larvae, which are known as leatherjackets and damage grass roots.

Aeration

After grazing, fields become so compacted from the weight and constant traffic of horses that they form a hard layer just under the surface known as a pan. This not only restricts drainage, but also aeration and root depth. “Plant roots have a hard time getting anything out of the soil, so can't function and grow well. Because water can't drain down through the soil, it sits on the surface and the pan prevents gaseous exchange between the soil and the atmosphere. Toxic gases



Gateways take a hammering as horses tend to congregate here.

such as methane or hydrogen sulphide (the rotten egg smell) are released by anaerobic soil bacteria and decomposing nutrients in the soil. But plant roots need oxygen.”

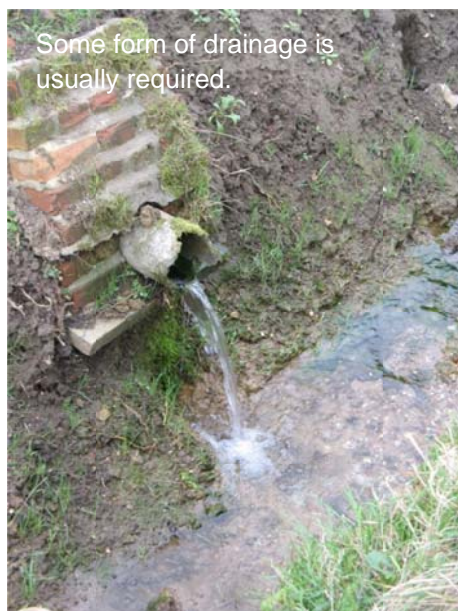
Garry says that breaking the pan allows gasses out, and oxygen and water in. This involves piercing it by using spike or knife rollers (they create slits 8-9” deep), or an ‘apple corer’ (this rolls across the surface and pushes out apple cores of soil to be harrowed). As always, the best policy is to prevent a pan forming in the first place by grazing paddocks for short intense periods, then removing horses to let the area rest, recover and breathe, he adds.

Rest & recuperation

“It’s easy to think you just have a field of grass, but you actually have a community – vegetation, insects and bacteria – under your horse’s hooves. Grasses, herbs and weeds are fighting a continual battle for nutrients and space, using their own chemicals to kill off neighbours and repel or attract plant eaters (such as horses). But if you keep putting the pressure on this community, it collapses. If you walk into the paddock and all you can see is mud, it has already collapsed. This is very expensive to rectify and takes up to two years to get back to normal.”

According to Garry, grass at a uniform 2.5cm across a field, with the occasional rough patch, is on a point of crashing. Once a field is 50% mud, bare patches are soon colonised by weeds such as ragwort and docks. At this level, the best option is to plough up and reseed, he says. When vegetation is grazed too short, it becomes stressed and responds in ways that are not good for horses. In the case of ryegrass, for instance, it produces vast amounts of sugar which is bad for laminitic horses. “A grass can’t flower and self-seed if it is grazed to death,” he points out.

Rest & recuperation depend on factors such as soil type, rainfall, whether horses are stabled and their feeding regime: “As an example, working on a stocking rate of one horse per acre, ideally graze a paddock for two weeks then rest it for at least four weeks.”



Drainage

Many people buy or rent fields based on location (close to home), rather than suitability for horse grazing. Consequently, Garry estimates that 75% of the horse grazing he sees has no form of drainage: either ditches around the edge, or underground land drains. He has even encountered properties where ditches have been filled in to increase the grazing area. But without some form of drainage, fields simply become mudbaths in winter and concrete-hard pads in summer.

“If you want to maintain reasonable quality grazing – and turnout – throughout winter, you need to install ditches to get the surplus water off the field and into the nearest stream or river. Then some land drainage is needed to take water to the ditch. If you rent or buy fields from a farmer, ask him for the drainage plans and find out about rodding (to clear out) drains, or replacing any that are damaged,” he suggests.

Proper land drain installation is initially expensive because it involves digging trenches, laying plastic drainage pipes, replacing soil and reseeding. Yet the benefits are long term. A cheaper option for clay soils is mole draining. This involves dragging a torpedo tube on the end of a blade, 18” below the surface, from the ditch right across to the other side of the field. Rainwater then falls down the narrow surface slot into the hollow tube created in the soil, and away.



Muddy areas around water troughs can be avoided.

Unfortunately, ditches and drains only work with regular maintenance to keep the system moving. And this requires hiring a man with a digger, so it isn't cheap. Not doing it, however, costs more money in the long run as it results in a return to wet muddy gateways, no grazing and, consequently, higher feed bills.

One very-cost effective job with immediate visible benefits is protecting gateways and trough areas. "Whether horses are conditioned to come in at a certain time, they are cold, hungry or bored,

they collect and stand around water troughs or gates. Putting hardcore down isn't the answer: grass can't grow over it and horses don't like it – they just stand on the edge which increases the muddy area," says Garry.

"Instead, use a flexible mesh (squares 1cm x 1cm) made from recycled plastic which comes in rolls 20m long and 2m wide. This helps spread the weight of the horse over a huge area. Lay the mesh on both sides of the gateway, going at least 3m into the field. Spread it around the gate area, cover with top soil and sow with a fine grass mix."

Diversity

Grass isn't just grass: there are more than 40 difference species of it, as well as a number of hybrids and specially-bred species for farm animals. Since world war two, most productive grassland has been turned over to these agricultural grasses. "Ryegrasses have been designed to suit modern agriculture, but are low in necessary fibre and produce far too much sugar for horses. Horses want more traditional grasses such as timothy, fescue and bents. If you want a healthy horse, feed it what it needs. In the wild, this means many different types of food ranging from grasses and herbs, to hedges, twigs and trees."



For a healthy horse consider the types of grasses it needs.

He explains that single species (known as monoculture) paddocks lack the nutrient balance from other plant material, leading to health issues such as gut ulcers. High sugar grasses can also lead to obesity in horses, which may cause diabetes or insulin resistance. He suggests horse grazing should comprise a broad spectrum of plants: 5-10 species of grass (Timothy, Creeping Red Fescue, Smooth Stalked Meadowgrass, and Cocksfoot), plus 10-30 species of herbs (Chicory, Dandelion, Sage, Salad Burnet).