



Soil Health Practices for Grazing Management

GREENVILLE COUNTY
SOIL & WATER
 CONSERVATION DISTRICT
GreenvilleSoilandWater.com

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helps with:

5 Soil Health Principles



management practices	forage	disease	parasites or flies	keep it covered	minimize disturbance	keep a living root	add diversity	integrate animals	additional information
don't overstock									This is by far the most important management practice. If you are overstocked, none of the other management practices will do any good. As in nature, when pastures are overstocked it causes starvation and disease. It costs the producer time and money to avoid this starvation and disease while overstocked.
move animals more									Moving animals between paddocks mimics nature. Shorter grazing times associated with proper rest periods are recommended. This allows the grass to recover, limits disturbance, keeps a living root in the ground, and encourages diversity through the seed bank in the soil. All of these things lead to better forage, less disease and fewer parasites and flies.
provide water source/shade in every paddock									If there are water and shade in every paddock, the ground around those areas stays permeable and vegetated because those areas get rest and regrowth when the animals move on to the next paddock. Taller grass decreases uptake of parasites in small ruminants. Shade and water together often make muddy areas so place these apart to encourage movement in the pasture.
limit chemical deworming									Chemical dewormers can be a disturbance. The dewormers (avermectins, for example ivermectin products) disrupt the life cycle of dung beetles. Dung beetles 1. fertilize soil by burying manure, 2. spread the manure so that it dries and fly eggs/larvae don't thrive, and 3. spread the manure so that it can naturally incorporate into the ground faster.
plant cover crops									Plants shade soils from the baking sun and anchor the soil to stop erosion. Cover crops count as covering the soil. The plants also provide extra forage for the animals. Usually cover crops are planted in addition to perennial forage, so they add diversity. Cover crops often have flowers that bring in pollinators and pollinators add diversity to the system.
feed hay on ground in winter and/or drought (unroll or bale graze)									Leftover hay on the ground is not wasted. It helps to keep the soil covered, adds organic matter and extra grass seed, and improves forage quality in the next season. Hay can be either unrolled or bale grazed in the winter to improve pastures when ground conditions permit. Hay can also be fed in a sacrifice area during drought if the next paddocks are not ready for grazing. This way when the drought lifts there will be more forage in the next paddocks and it will protect your soil health there.
graze multiple species									Mimic nature by including different species. Different species have different grazing habits and plant preferences. This can be a way to minimize weeds. The different animal species can also break parasite cycles for each other and make better use of the pasture you have.

Note: Since we are graziers, animals are automatically incorporated on every management practice, but read the descriptions to see how to add more.

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go barnless									Barnyards tend to be congregating areas where the soil becomes compacted and bare. Compaction counts as a disturbance. The barn's closed-in spaces can exacerbate diseases like coccidiosis and pneumonia. Barnyards tend to be overgrazed and can be a place for small ruminants to pick up parasites. If you have shade in the pastures, try to allow access to barns only in the worst weather or for short-term special animal care.
transition to novel endophyte fescue									KY31 fescue can cause tall fescue toxicosis because of an endophyte that lives in the plant cells. Novel endophyte fescues have been cultivated that are proven to improve animal performance. Even if you don't see signs of tall fescue toxicosis in your animals it is probable that it is affecting them.
minimize herbicides									Herbicides can be a disturbance. Moderate amounts of weeds can add to the diversity of a pasture and help to keep the soil covered. Weeds also add flowers that native pollinators love and some weeds deter parasites. While too many weeds will compete with your forage and harm your yield, they can act as an indicator as to what is wrong with your soil. Heal the soil and many weeds will disappear. Adding a different livestock species that will eat the weeds or teaching your animals to eat the weeds can improve your pastures without herbicides.
add clover or other legumes									Legumes add diversity and fertility (as a natural nitrogen fixer). Complementary clover planting with tall fescue can reduce effects of endophyte toxicosis. A full clover stand is not recommended due to potential toxicity and disorders: bloating, especially in cattle and sheep; phytoestrogens which can affect reproduction and could cause abortion; and profuse salivation in horses caused by red clover infected with a fungus. The drooling is normally only a nuisance and will not harm the horse.
encourage fly-eating birds									Barn swallows are the most prevalent fly eaters in upstate SC. Cattle egrets become more common closer to the coast. Adding nest sites for the swallows in and around structures encourages these voracious fly eaters. Cattle egrets nest in trees and forage for insects that thrive in lush forage.
test your soil									Get your soil tested at your local Extension office. This test will tell you what nutrients your soil is missing, and just as importantly, what pH your soil is. When your soil pH is too high or too low, the plants cannot uptake nutrients efficiently, even if the nutrients are already in the soil. If the plants can't thrive, you have no living root and bare soil.
minimize chemical fertilizers									Chemical fertilizers add macronutrients (nitrogen, phosphorus, and potassium) to your soil quickly, but if you add too much or add it at the wrong time the fertilizer will runoff and leach into water bodies. You are wasting money. One way to minimize fertilizer need is to ensure that your pH is in the right range. In addition, rotating your animals spreads their manure (fertilizer) evenly on your pastures. Up to 80% of nutrients that a ruminant consumes can be returned to the pasture as manure and urine. You may still need to add chemical fertilizers, but it will be a lot less if you allow the animals to spread their manure and urine through rotational grazing.

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