Winter Pasture and Paddock Management

Protecting your turnout now can help ensure green pastures later

Winter: The word could call to mind images of snowy fires and delicious hot chocolate—or muddy muck and frozen trowels. (Your perspective all depends on how many consecutive days you’ve had to chase gate latches and plow the driveway, eight?) With a little presenescencealeigh, however, winter at the barn can be much less miserable ... hey, maybe even rather nice. The goal? Keeping outdoor enclosures and other horse-keeping spaces as ice- and mud-free as possible, which will help make way for productive pastures come spring.

Designate Off-Limit Areas
For your horse to enjoy quality grazing in the waning months, mimicking winter

wear-and-tear on your pastures is a must. Wet and frozen pastures must be no-go areas if your healthy plant growth later.

Deep roots and a strong soil base are crucial for healthy pasture plants. Horse traffic on wet ground both compacts the soil and diminishes water filtration, causing runoff, depriving the plants of winter moisture, and impeding growth. This disruption can also destroy the top soil layer, leading to erosion.

A few other factors contribute to the perfect storm of paddock problems.

"First of all, the grass in the winter is not actively growing. It has to rest," explains Ann Switzer, PhD, professor of equine science and horse Extension specialist at Penn State University, in State College. "Grazing in the non-growing season damages plants down to the crown and tears up the roots. The plants won’t recover, and you’ll end up with a lot of bare spots and undesirable invasive weeds" taking over those areas.

"Without desirable grasses, legumes, and forages, you’ll have a poor-quality pasture," she continues. "You have to manage your pasture like a crop. In the semi-arid climate in the West, you really have to follow the ‘take half/leave half’ (i.e., percent of plant removed/grazing principle); or, you’ll reduce the stand or eliminate it; the pasture stand is then very hard to re-establish. In the Northeast, the climate is a little more forgiving (plenty of rainfall), but you don’t want to push it. It’s very expensive to renovate and reseed, and the pasture requires significant recovery time within roots establishing.

Other plants besides your desirable pasture grasses go dormant during the winter; too, and certain ones pose health risks after the first hard frost of fall.

"There are plants that change chemically when the leaf is disrupted by frost," says Switzer. "Some become toxic—the prime example is wild cherry leaf, but there are also other plants that can change their chemical compounds. For example, the common weed Johnsongrass under certain conditions can develop high nitrates, which, when consumed in large amounts, can cause colic and diarrheas in horses. Here, being familiar with the plants in your pasture is key; your local equine Extension office is a valuable resource.

Meanwhile, pastures in warmer climates look very different. Horses might continue to enjoy winter grazing on areas that farm owners “rented” to make way for dense regrowth in late summer and early fall. In the South, ‘stackpiling’ 6 to 8 inches of pasture grass or annual ‘small grain’ grass lets horses graze into winter," says Switzer.

Perfect Prep: Overseeding and Fertilizing

Another way to prime pastures before the winter for optimal spring growth is overseeding, which adds other plant species and reintroduces overgrown desirable plants says Switzer. This can be expensive (ranging from $200 to $600 per acre), so she recommends splitting seed and fertilizer applications into fall and spring to distribute the cost throughout the year.

"We recommend overseeding pastures that you want to make more productive," says Krisdoma Martinson, PhD, associate professor and equine Extension specialist at the University of Minnesota, in Minneapolis. For fall overseeding, be sure you get started early enough that plants have ample moisture to establish before the first frost.

In the fall, "we recommend first graz ing the grass very lightly—this is the only time we recommend actually overgrazing the pasture; new seedlings need sunlight, and they can’t compete with existing forage if it’s really tall," Martinson says. "Seeding with a slitter-seeder; a no-till drill for pastures, gives good soil-to-seed contact without tearing up the grass you are trying to save."

She suggests keeping horses off the overseeded area, allowing the new seedlings to grow to about 4 to 6 inches before moving them down to around 3 inches. "Do that cycle two to three times, which simulates grazing and helps roots get established," she says. "Then gradually let horses on the pasture. Horses graze with a lot of force, so if you don’t allow roots to establish, they can completely pull new seedlings out of the ground."

"If you have a pasture that is very rocky, has a lot of trees, or is really too difficult to get equipment in to seed, we recommend frost seeding," says Martinson. This involves overseeding or broadcast seeding pastures in early spring, when fluctuating frost and thaw conditions cause the ground to expand and contract, allowing seeds to work downward into the soil; spring rains then help seeds germinate. "Frost seeding has only about a 20% success rate," she adds. You will be spending a lot of money on seed for very little benefit. The biggest thing with seeding is good soil-to-seed contact, and you just can’t ensure that with frost seeding.

Martinson goes on to say that all newly seeded pastures need about a six-month window when they are not treated with herbicide. "Those newly growing grasses are pretty susceptible to herbicide damage," she says. "Your best bet in that first year is to just rely on mowing until new plants are fully established."

Fertilizing is heavily dependent on both regional climate and individual pasture health. Have your soil tested to gain a clear picture of how and when to fertilize; soil sample results are good for up to three years, says Martinson.

"Doing a soil test allows you to know what nutrients are needed. Your pasture’s nutrients should be balanced, just like your horse’s diet," says Switzer, who also recommends applying properly composted manure to help replace organic matter; enhancing soil quality and microbial population (remember that pasture is like a crop and, as such, it requires nutrients from the soil). As an added bonus, composting also kills internal parasite eggs and larval living in the manure.

Implementing Runs and Drylots
When pastures are unsuitable for turnout or are resting for regrowth, you need a sacrifice area; this all-weather paddock or run is the perfect solution to winter turnout woes.

"We always recommend a run off the stalls," says Matthew Johnson, BS, PC, architect and owner of Equine Facility
NUTRITION

SHANNON PRATT-PHILLIPS, PHD

Deciphering Your Feed Tag, Part 3: Senior Horses

In the final installment of our series, learn what nutrients are in your senior horse’s feed and why his body needs them.

A shite years pass, we see shifts—both subtle and dramatic—that remind us how our horses are aging. Backs, tensed muscles, swayback, uneasy movements, changes in temperament, diminished performance, and changes in appetite and stall demeanor are all telltale signs that a horse may be having difficulty meeting his nutritional needs.

Senior horses need feed formulas that are easier to digest and contain more easily assimilated nutrients. Feed companies are well aware of the challenges senior horses face, and they have responded with a wide variety of specialized products. The key to selecting the right feed for your senior horse lies in understanding his nutritional needs, his current level of activity, and the physical condition of his teeth.

A Helping Hand

You don’t have to fly solo in your efforts to keep your horse in great shape over the winter. In certain states, the NRCS (USDA’s Natural Resources Conservation Service) has money available to cost-share projects such as installing automatic waterers in pastures to encourage rotational grazing, or creating grazing areas in small plots to encourage water intake. Equine specialists at Penn State University, in State College, have released a program designed to encourage people who use horse management practices to keep pastures greener for environmental stewardship. Explore details at this program online at ucsf.ca.gov/EquineDeFoeMendol.

All-Weather Footing

Be sure to top off the well-draining base layers in your paddocks, runs, and high-traffic areas with all-weather footing. Options ranging from various buds in the hay and straw-filled traffic zones, while soft footing, such as sand and soft fuel, provides a forgiving surface for equine living areas such as runs. Cover footpath in other areas with a thin layer of crushed rock, sand, or hay that is a footpath to prevent horses from walking down the track. The best solution is to raise the horse and to install surface layer, while creating a foundation for the footpath layer, in addition to spreading the horse and to maintain surface layer.Commonly used at gates, around water sources, and along traffic, these areas can often be left exposed without a surface layer.

Most farms opt for a mixed approach, with different footing types serving different locations on the property, such as constructed rock at water sources and sand or crushed rock in high traffic areas. Whatever system(s) you choose, keep the areas more environmentally friendly and less likely to develop mud-and-grass problems. This means you can use a variety of the approaches described. Essentially, you remove the top 8 inches of soil, put in a 1 inches of soil, and then add a 1 inches of soil. We recommend this basic high-traffic area anywhere you have a road issue, as in areas going to the pastures, around waterers, and near where you feed hay. It can be expensive, so we recommend it in problem areas.

Take-Home Message

You can find detailed instructions for constructing appropriate hardened surfaces and buffer zones, as well as personalized pasture management programs, through your NRCS or conservationist projects. Explore details at this program online at ucsf.ca.gov/EquineDeFoeMendol.

About the Author

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