

Horse Feeding Management

Drylots Preserve Pastures

Pastures should provide space to maintain a dense stand of forage adequate to meet the horse's nutrient requirements. Experts generally recommend a minimum of two acres of pasture per mature 1,100-pound horse in a rotational grazing system. Two acres, with just modest management, can produce 6 to 8 tons of forage annually, enough to feed one to two mature horses in most situations.

Perennial forage stands in pasture can remain productive and provide a significant source of horse nutrients for up to 15 years, if properly managed. Routine fertilization, use of herbicides to control weeds, manure management, and mowing as needed are critical factors for maintaining pastures. Overgrazing, resulting from stocking more horses per acre than the available forage can support, seriously limits the persistence of a pasture stand. Periods of high pasture stress, such as drought or prolonged wet periods, will further challenge pasture longevity and forage availability.

What is a Drylot?

Drylots provide an opportunity to move horses off the pasture during high-stress periods to prevent overgrazing. Drylots can vary in size, but should provide a minimum of 400 to 500 square feet for one horse. As herd size increases, an additional 400 square feet should be allotted per horse. These paddocks are typically situated near barns, are used only to provide exercise, and generally contain a limited amount of vegetation. Drylots can serve as a holding area during periods of heavy rainfall or drought until pasture conditions improve. Extremely wet pastures can be damaged by the tearing action of horses' hooves. During a drought, forage growth rate slows and eventually stops, and soil

is compacted. Continued grazing during droughts will destroy the plant growth reserves, which will reduce future forage available in the pasture. The resulting reduced plant regrowth will limit the longevity of the forage stand.

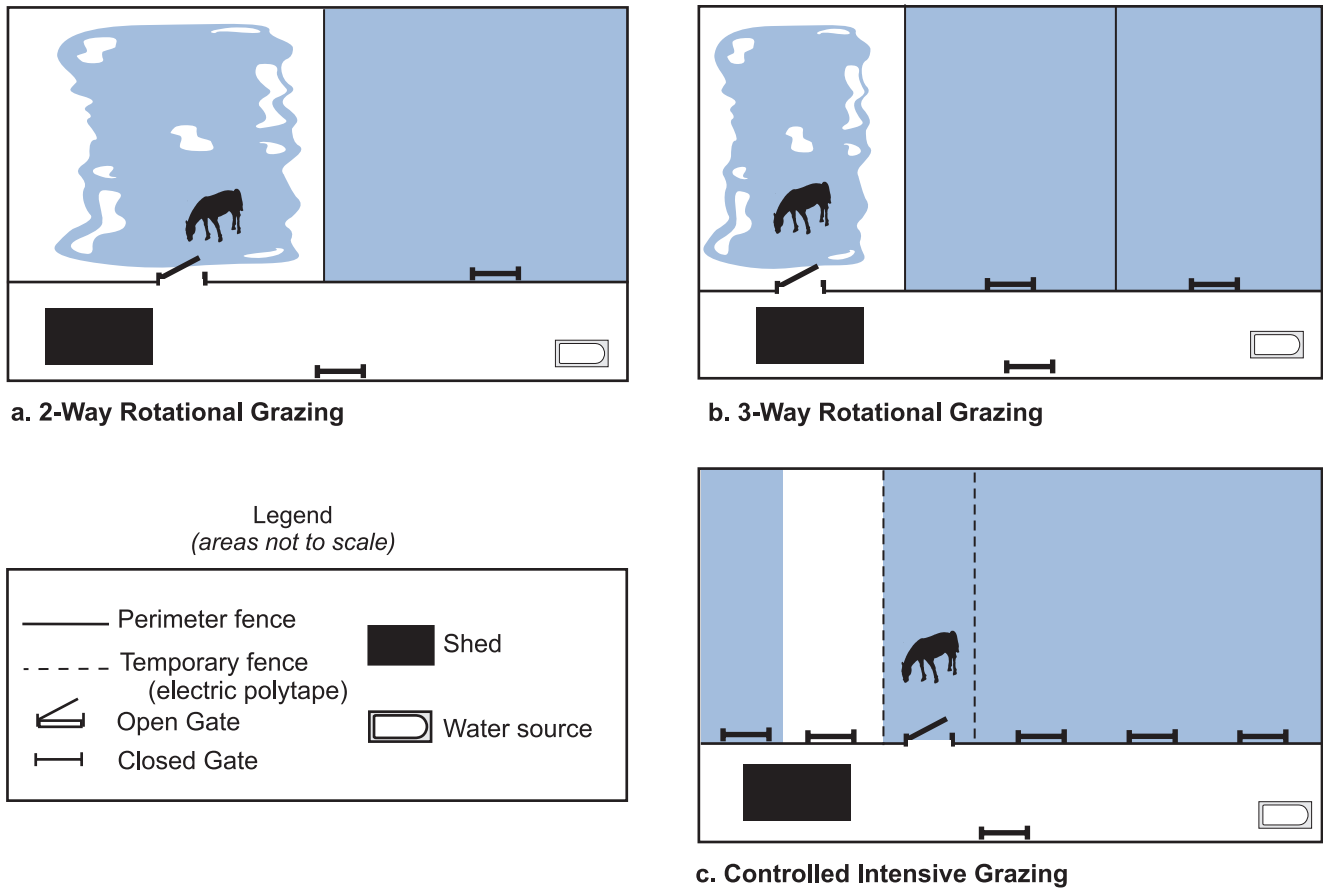
Depending on available pasture acreage and number of horses or stocking rate, horse owners could locate the drylot area adjacent to the pastures using a common gate to each pasture or paddock. A permanent perimeter fence should enclose the drylot area. Corral panels, four-board fence, and woven wire with a support board are recommended. Permanent electric fence systems, which are highly visible, provide an inexpensive option. (Figure 1.)

The drylot area should include a shed, a water source, and free-choice access to hay. Ideally, the water source and loafing shed should be at opposite ends of the drylot to encourage movement of horses and limit the soil erosion typically found in heavy traffic areas. The loafing or run-in shed can be one-, two-, or three-sided, with a sloping roofline to repel water. Typically a three-sided run-in shed is used, constructed to allow expansion and accept increased stocking rates. Twelve-by-twelve-foot run-in sheds will accommodate one or two horses. For more than two horses, run-in shed dimensions should increase by 4 feet in width for each horse, up to a maximum of 36 feet. (Table 1.)

The grazing behavior of horses encourages "spot grazing." A horse grazes

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Figure 1. Drylots and Rotational Grazing Systems



Pastures can be divided with permanent fencing into two (a), three (b) or more sections (c). Horses would be rotated from one pasture to another to maintain sufficient forage availability. Spot grazing is reduced by more frequent rotation. For example, “a” would be more prone to spot grazing than “c.” Note the sequence of open and closed gates; horses should have constant access to water and shelter in the drylot.

from the top of the forage canopy downward, selecting the choicest, most immature plants with its sensitive lips. As soon as a plant develops young, tender growth, the horse bites it off, weakening the plant until it dies. Constantly grazing the choicest immature plants leaves less desirable, more mature forage species and weeds to set seed and proliferate.

Drylot Location and Footing

Ideally, the drylot should be located in high, well-drained areas to minimize standing water, mud, and erosion. Numerous footing options are possible for drylot areas, including the use of:

- Persistent forages that withstand overgrazing
- Stone and geotech fabric

Using forage is the least-preferred method to minimize wet, muddy conditions in dry lots. The forage must be extremely persistent and able to withstand close, overgrazed conditions and trampling. Cool-season grasses, such as Kentucky 31 tall fescue, and warm-season grasses, including common bermudagrass and bahiagrass, are persistent forage species that could be used. Consult your county Extension agent for additional recommendations in your area.

The use of geotech fabric covered by a stone product, in low ar-

reas and heavily traveled areas near waterers, gates, or the area around the shelter, is recommended. The geotech fabric allows water to flow through and reduces stone loss. The cost of the fabric is recovered over time by the maintenance of stone in the drylot area. Wet areas without the geotech fabric allow stone to settle, which requires additional applications of stone.

Figure 2 illustrates a properly designed footing for a drylot pad. The geotech fabric is applied first, covered by 6 to 8 inches of a larger, coarser drainage stone, such as numbers 2 and 4. Stones in the top and final layer of 4 to 6 inches of stone should be smaller. A number

Table 1. Drylot Run-In Shed Dimensions

# Horses	Dimensions of Run-in Shed (ft)	Square Footage
1-2	12 X 12	144
3	12 X 16	192
4	12 X 20	240
5	12 X 24	288
6	12 X 28	336
7	12 X 32	384
8	12 X 36	432

5 to 7 stone mixed with screenings and limestone dust or class "I" sand is recommended for the top layer. The description of stone products, including the numbering system, varies considerably in relation to stone size throughout the United States. Consult the quarry in your area to determine stone size and use. Avoid selecting stone for the top layer that is too large and will bruise feet. Stone less than $\frac{3}{8}$ of an inch in diameter is too small and will not hold a firm footing. The mixture of limestone dust will provide a stable surface that lets water pass through the rock.

Manure Management

Pastures should be managed to use manure as a nitrogen source for grasses. When horses are rotated off a pasture, any remaining ungrazed,

mature forages should be mowed to stimulate regrowth of new forage. A bush hog, with a drag attached to the rear, will clip the forage, as well as break up and spread the piles of manure evenly throughout the paddock. Parasites located in the disbursed manure piles are exposed to sunlight and destroyed. The even distribution of nitrogen from the spread manure encourages more uniform forage regrowth. Manure should be regularly removed from run-in sheds or spread on drylots.

Summary

The use of a drylot helps preserve forage quality in a pasture by reducing or eliminating grazing time during droughts and periods of heavy rainfall. Horses should be fed hay and concentrate mixes while in drylots for prolonged periods.

The elimination of overgrazing protects the growth reserves of pasture plants, which ensures rapid regrowth following a drought or heavy rainfall.

For Additional Information

Other publications related to forage management are available from your North Carolina County Cooperative Extension Service. Additional information is available on the N.C. State University Extension Horse Husbandry Web site: http://www.cals.ncsu.edu/ani_sci/extension/horse/hhmain.html, on the National Extension Web site: <http://www.extension.org>, and from the University of Kentucky Cooperative Extension Service: <http://ces.ca.uky.edu/ces/>

NC Horse Forage Management Publications

(available through your county Extension agent)

- ANS 04-403H, *Selecting, Storing and Feeding Round Hay Bales to Horses*
- AG-524, *Managing Pastures to Feed Your Horse*
- AG-683, *Forage Economics*
- Forage Memo #13, *Crop Science. Hay for Horses*
- Crop Science Fact Sheet, *Horse Pastures*

Figure 2. Drylot Pad Footing



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