

Dry lots Preserve Pastures

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Introduction

Pastures should provide space to maintain a dense stand of forage adequate to meet the horse's nutrient requirements. Experts generally recommend 2 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, adequate to meet feed requirements for one to two mature horses in most situations. Perennial forage stands in pasture can provide nutrients for more than 15 years if properly managed. Routine fertilization, use of herbicides to control weeds and mowing as needed are critical factors in protecting pastures. Overgrazing, resulting from stocking more horses per acre than the forage availability in the pasture can support, seriously limits the persistency of a pasture stand. Grazing pastures during periods of high pasture stress, such as drought or prolonged wet periods, will further challenge pasture longevity and forage availability.

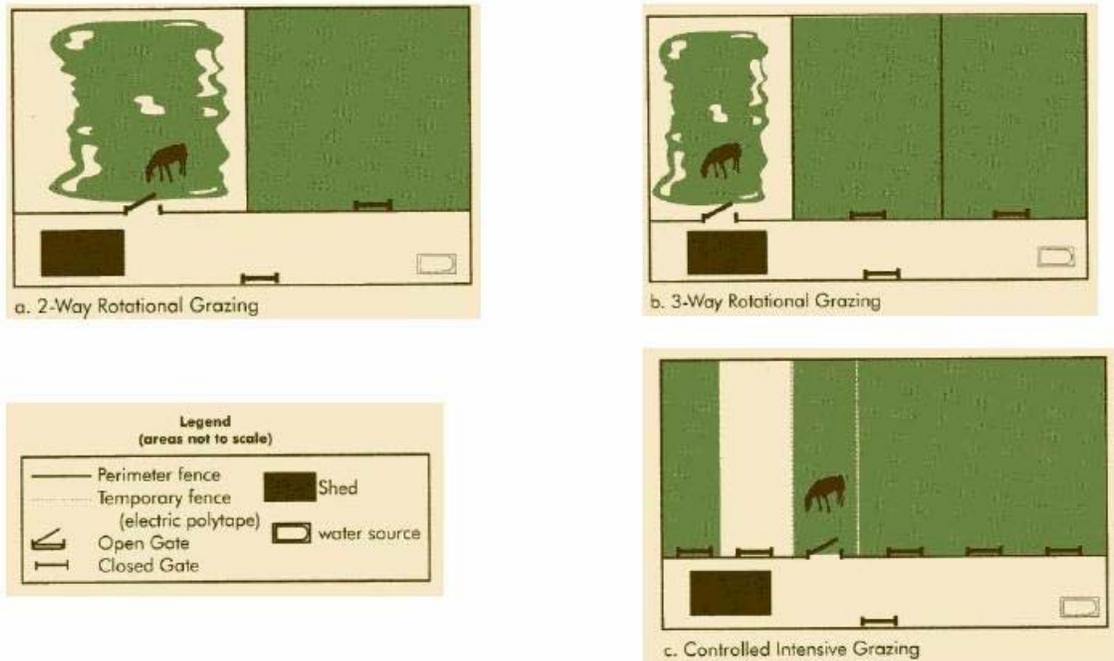
Drylots, (sacrifice paddocks or exercise paddocks), provide an opportunity to move horses off the pasture during high stress periods to protect pastures from being overgrazed. Drylots can vary in size but should provide a minimum of 400 to 500 square feet per one horse. As herd size increases, an additional 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 also serve as holding areas during periods of heavy rainfall and drought until pasture conditions improve. Extremely wet pasture can be damaged by the tearing action of horse's hooves while cantering. Forage growth is reduced during drought conditions. Continued grazing during droughts will destroy the plant growth reserves which will reduce future forage available in the pasture. The resulting reduced plant re-growth will limit the longevity of the pasture stand.

Drylots should be located adjacent to pasture areas with a common gate opening into each pasture. A permanent perimeter fence should be used to enclose the drylot area. Corral panels, four board fence, woven wire with a support board, etc. are recommended. Permanent electric fence systems, that are highly visible, provide an inexpensive option. (Figure 1.)

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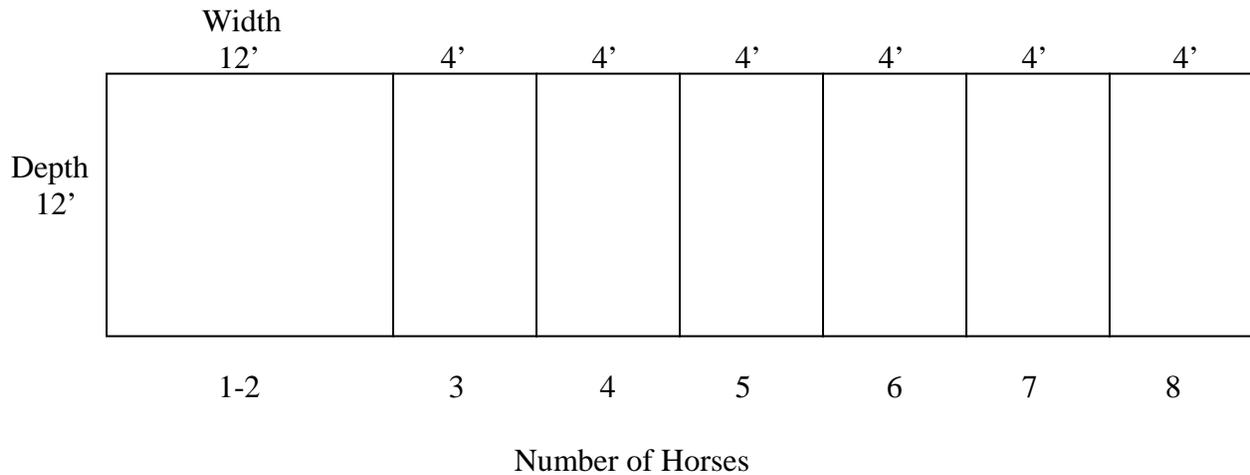
Figure 1. Drylots & Rotational Grazing Systems¹



¹ 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.

The drylot area should include a holding shed, an alternative water source, and ample area to feed hay free choice. Ideally the water source and loafing shed should be at opposite ends of the drylot to encourage movement of the 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, constructed to allow expansion to accept increased stocking rates is used. Run-in sheds, 12 by 12 foot accommodate one to two horses. As horse numbers increase above, run-in shed dimensions should increase by 4 feet in width for each horse number up to a maximum of 36 feet. (Figure 2)

Figure 2



Ideally the dry lot should be located in high, well drained areas to minimized standing water, mud and erosion. There are numerous footing options possible for dry lot areas including the use of:

- Persistent forages that withstand overgrazing
- Stone
- Geotech absorptive fiber

The use of forage is the least preferred method to minimize wet, muddy conditions in dry lots. The forage must be extremely persistent being able to withstand close overgrazed conditions and trampling. Cool season grass, Kentucky 31 tall fescue and warm season grasses, 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 a moisture absorptive geotech covered by a stone product, in low areas and heavily traveled areas near waterers, gates or the entrance to a shelter is recommended. The geotech fabric absorbs moisture and minimizes stone loss. In effect, the additional cost of the fabric is recovered over time through the maintenance of stone in the dry lot area. Wet areas without the geotech fabric permit stone to settle, which requires additional applications of stone.

Figure 3 illustrates a properly designed footing for a dry lot pad. The geotech fabric is applied first, covered by 6-8 inches of a larger coarser drainage stone, number 4. The top and final layer of 4 to 6 inches of stone, should be smaller in size. A number 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 or too small, with diameter less than 3/8 inch that will not hold a firm footing.

Figure 3

Regardless of paddock size, forages planted in the drylot must be persistent and withstand close, overgrazed conditions. The following forages provide options for different areas of the state:

Cool season grasses:

Kentucky 31 Fescue*
Annual Ryegrass

Warm season grasses:

Common Bermudagrass*
Bahagrass

*Could be mixed together.

Heavy traffic areas, such as the entrance to run-in sheds and around water tubs, may require stone or gravel to reduce mud and erosion. Crush and run covered by screenings, ground limestone or number 78 gravel provides footing and eliminates mud without risking injury to the horse's hooves. The crush and run should be used to elevate low areas. The screenings, limestone or number 78 gravel provides a protective footing over the crush and run.

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 Extension Horse Husbandry website: http://www.cals.ncsu.edu/an_sci/extension/horse/hhmain.html

Horse Forage Management Publications

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