Pastures for Horses

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Introduction

Well-managed pastures can meet the needs of many classes of horses for both nutrition and exercise for 6-8 months of the year in Illinois. The well-known therapeutic benefits to performance horses from pasture rest and recreation are commonly referred to as "Dr. Green", and there is no better way to start new foals than allowing them to roam ample, high quality pasture with their dams. These benefits will only be realized, however, if pasture growth is optimized through grazing management, selection of productive, well-adapted forage species, and maintenance of soil fertility. If carefully managed, a pasture can be a healthy place for horses to live and exercise, and a cost effective source of nutrition, requiring minimal supplemental feed.

It should also be realized, however, that lactating mares, growing foals, and horses being concurrently trained while on pasture will usually require additional nutrients in the form of grain and mineral supplements, even while grazing most productive pastures. Neglected, non-productive pastures can result in poor health and body condition of horses, and may also be a major source of exposure to internal parasites such as large and small strongyles and ascarids. Horses on pasture must be maintained on a parasite control program and checked frequently for injuries from unexpected encounters with fences, other horses, and miscellaneous environmental hazards.

Pastures should be frequently inspected for dangerous objects and possible toxic plants. Pastures located near wooded areas may contain white snake root, or bracken fern, while horses in pastures bordering residential areas may occasionally be exposed to poisonous ornamental plants such as Japanese Yew or cherry trees. Undesirable broadleaf weeds can be controlled with a herbicide such as 2,4-D, but horses should not graze treated pasture for at least 7 days after application.

How Do Horses Graze?

Horses are selective grazers, which affects the productivity of a pasture. Horses prefer to eat young, immature plants and will graze some areas of a pasture down to the bare ground. In other parts of the pasture, they will allow the plants to grow to maturity, which lessens palatability and nutrient availability. This grazing pattern is often called spot or pattern grazing. Horses will not graze in areas where they defecate. The resulting areas of short and long pasture forage are called "lawns" and "roughs".
Establishing the Pasture

Soil testing is the first step. Whether you plan to improve an existing pasture or seed a new pasture, you should first test soil pH (acidity) and fertility. If the pasture soil is not optimum fertility and pH, any seeding has a low chance of success. The soil test recommendations will tell you how much lime and fertilizer your pasture needs. Recommended levels of nitrogen, phosphorus and potassium will depend upon both the soil test and the soil type in the pasture.

Selecting the Pasture Species

Ideal pasture plants should be productive over a long growing season, highly palatable, aggressive, and adapted to climate characteristics of the area. No single forage plant meets all these criteria, so it is best to select several species to provide a dependable feed supply.

Permanent pastures are usually preferred by horse owners for providing forage and exercise. Horses prefer grasses to legumes under most grazing conditions, although legumes often have superior nutrient quality (Legumes are plants that can convert nitrogen from the air into plant proteins; i.e., alfalfa, clovers and birdsfoot trefoil). Pennsylvania studies showed horses preferred Kentucky bluegrass to taller grasses such as timothy and bromegrass. They also preferred clovers to alfalfa and birdsfoot trefoil. However, horses made satisfactory progress on all pasture mixtures. Generally, permanent pasture containing both legumes and grasses provides the highest yields of forage and greatest variety in the diet.

Grasses and Legumes

Kentucky bluegrass has earned its reputation among horsemen for producing high quality turf. It produces a smooth, tight, resilient turf that heals readily. Kentucky bluegrass is very palatable to horses under most conditions. The grass is high in protein and mineral content when properly fertilized. It can be grazed closely or clipped to maintain high quality pasture. However, bluegrass produces less forage per acre than do other grasses, and its growth slows down during the hot summer months.

Tall-growing, cool-season grasses such as orchardgrass and bromegrass are more productive during hot weather. Horses do not discriminate against these grasses unless the grasses become too mature. Stock your pasture with enough horses and if necessary clip to prevent excess accumulation of plant growth in May and June. This will help prevent the forage from becoming too mature and the sod from becoming clumpy. Orchardgrass and bromegrass will not tolerate close grazing. Always leave 3 to 4 inches of height.

Many types of legumes that are adapted to the soil and moisture conditions of an area can be successfully used in horse pasture. Horses don't bloat, so there is no fear of using alfalfa, ladino, or white clover. However, red clover is known to occasionally cause excessive slobbering, and certain varieties of crimson clover and white clover (Alsike) have been reported to cause "photosensitization" in horses, or sunburn in areas of white markings, especially around the face.

Selecting a Pasture Mixture

Keep the seeding mixture simple. For best results use one or two grasses and one legume. Some suggested seed mixtures for different regions and soil types in Illinois are shown below:
For Horse Pastures in Illinois

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<tr>
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<th>Northern Illinois</th>
<th>Southern Illinois</th>
<th>Central Illinois</th>
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<tr>
<td></td>
<td>Moderately to well-drained soils</td>
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<tr>
<td>Alfalfa</td>
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<td>Alfalfa</td>
<td>8</td>
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<tr>
<td>Smooth brome grass</td>
<td>6</td>
<td>Orchardgrass</td>
<td>3</td>
</tr>
<tr>
<td>Kentucky bluegrass</td>
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<td>Kentucky bluegrass</td>
<td>5</td>
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<table>
<thead>
<tr>
<th>Poorly drained soils</th>
<th>Ladino clover</th>
<th>Smooth brome grass</th>
<th>Orchardgrass</th>
<th>Kentucky bluegrass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ladino clover</td>
<td>½</td>
<td>Ladino clover</td>
<td>½</td>
<td>Ladino clover</td>
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<tr>
<td>Smooth brome grass</td>
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<td>Orchardgrass</td>
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<tr>
<td>Kentucky bluegrass</td>
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<td>Kentucky bluegrass</td>
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A mixture containing 5 lbs/Kentucky bluegrass, 8 to 10 lbs/smooth brome grass, and 2 to 4 lbs Orchardgrass per acre will form a dense, productive grass sod when properly fertilized. Nitrogen fertilization of grasses provides earlier grazing in spring and supplies forage in fall when legumes should be rested.

Pasture Management

Begin grazing pure stands of bluegrass when 4 to 6 inches tall and graze back to 2 to 3 inches. Begin grazing tall grasses (orchardgrass, smooth brome grass, etc.) when 6 to 8 inches tall and graze back to 3 to 4 inches.

If a legume is included in the mixture, start grazing when the legume is about 8 to 10 inches in height. This will maintain growth and help to establish the legume in the stand. Horses can graze pure stands of alfalfa, though with possible laxative effects. Usually alfalfa is mixed with brome grass or orchard grass to provide productive pasture for horses. Do not put horses into the pasture for the first time when they are hungry. Horses accustomed to grazing pasture should be gradually introduced to pasture over a period of several days.

Use a pasture system containing a pure grass pasture for early spring and for fall grazing after September 15th. Use another legume grass pasture for mid-season grazing to provide productive high quality forage during the full grazing season. Grazing alfalfa past mid-September may greatly decrease its winter survival rate.

Grazing Management

Manage grazing to benefit both horses and pasture. Pasture plants have high energy and protein contents until they begin to flower, or heat out. Therefore, grazing management should be designed to prevent or reduce heading. Pasture plants that are grazed too short will have reduced leaf area and recover more slowly to produce less yield for the season.

Controlled grazing contributes to pasture productivity. The most common problems in managing horse pastures are over-grazing and under-grazing. This is because horse farms usually have a small number of large pastures. Large pastures become over-grazed in some areas and under-grazed in the remaining areas.

In addition, horses bite off grass cleanly and leave short stubble in contrast to cattle that tear and pull grass and leave longer stubble. Lower growing species such as bluegrass and white clover are well suited to horse pasture since they are better able to withstand close, continuous grazing. However, birdfoot trefoil, alfalfa, orchard grass and brome grass, are also well suited for horse pasture if rotational grazing is used. Removing excess growth as hay during periods of peak growth is recommended.
To improve forage quality, remove uneaten clumps, unpalatable growth, and weeds by clipping. Scatter the droppings by chain-harrowing to improve utilization. However, chain-harrowing of manure piles should only be done during hot, dry weather to minimize the likelihood of spreading parasites throughout the pasture. The ideal time to drag a pasture is during the period it is being rested in a rotational grazing program. Frequent shifting of the salt, shade, and watering devices may also help maintain pasture stands.

**Stocking Rates**

Make sure the stocking rate (body weight of horses per acre) is in the appropriate range. The stocking rate for permanent horse pasture should be approximately one 1000-lb horse per 2 to 3 acres. Horses eat in proportion to their weight; i.e., two 500-lb horses eat about as much as one 1000-lb horse if all other factors (age, sex, and activity level) are equal.

**Grazing Horses with Cattle**

Cattle and horses will eat around each other's droppings, but not around their own, so pasturing horses and cattle on the same land simultaneously or in rotation assures more uniform use of the pasture. This system also reduces parasitic infestation. Horses are not harmed by the intestinal parasites of cattle ingested while eating forage around cattle droppings. Each eliminates parasites which otherwise might be ingested by their natural host.

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