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Improving Kentucky Horse Pastures

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Pasture Management

For many horses, quality pasture can provide almost all nutrients needed for maintenance or light work for much of the year. Pasture reduces the cost of keeping horses while providing safe footing and minimizing impacts on the environment (Figure 1). Below are guidelines for pasture improvement.

Plan to utilize spring and fall pasture growth. Kentucky pastures are dominated by cool season species such as tall fescue, Kentucky bluegrass, orchardgrass, and white clover (Figure 2). These species grow rapidly in the spring and fall. Design grazing plans to utilize this natural flush of growth.

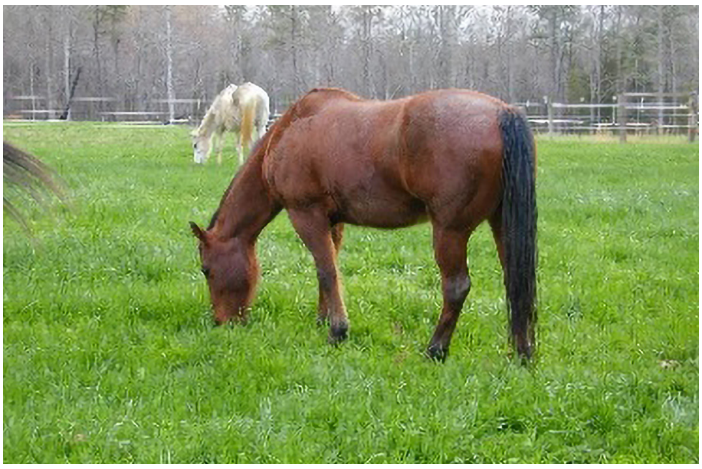

Figure 1. Well managed pastures can provide a nutritious and inexpensive feed source.

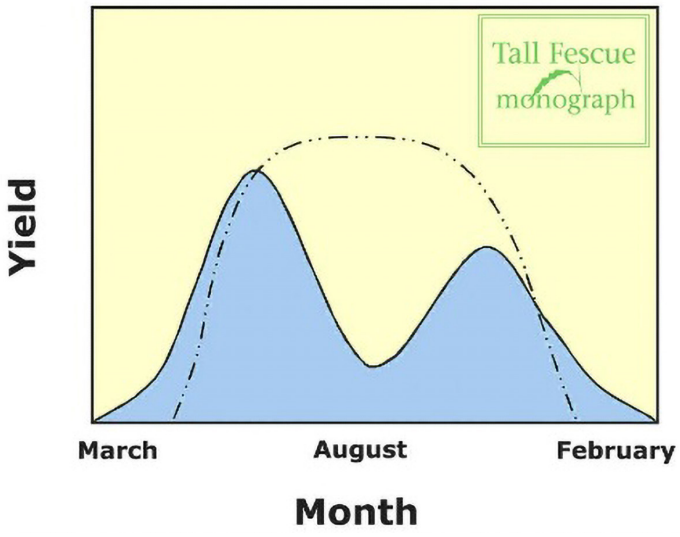

Figure 2. Cool season grasses grow best in the spring and fall, summer growth is limited by high temperatures. The dashed line shows warm season grass growth in comparison.

Sample soil every two to three years. Soil nutrients play a key role in pasture productivity and persistence. Soil tests recommend additions of phosphorus (P), potassium (K), and lime (adjusts pH) based on what is needed (Figure 3).

Apply nitrogen in the fall. Unlike hay fields that should be fertilized in the spring to boost yield, most horse pastures should be fertilized in the fall. One to two applications of nitrogen (40-60 lbs/acre) in the fall will boost fall production, root development, and winter survival (Figure 4).

Figure 3. Pastures should be soil sampled to a depth of 3-4 inches using a soil probe.

Figure 4. Fall nitrogen extends fall grazing, boosts winter survival and encourages early spring green up.

Control weeds that limit pasture productivity. Successful weed control includes identifying major weeds, selecting herbicides that are proven to control those weeds, and applying at the correct time of year for the targeted species (Figure 5a-c). A thick stand of desirable forages improves long term weed control. Always follow herbicide label.

Overseed thin stands to increase available forage. Fall overseeding of pastures can fill in bare areas left by heavy grazing or aggressive weed-control programs. Mow pastures close before drilling seed into the sod. Seed should be placed ¼- to ½-inch deep and should be well established (usually 4-6 inch in height) before grazing. Certified seed of an improved variety adapted for the area is well worth the investment.

Re-establish poor pastures. When desirable forages make up less than 50% of a pasture, complete re-establishment may be needed. Two killing sprays with glyphosate four to six weeks apart in the summer are required to remove all undesirable species followed by seeding in the fall (Figure 6). Pastures can be grazed late the following spring once grasses are well established.

RECOMMENDED PASTURE SEEDING MIXTURE:

30% Novel Tall Fescue
30% Orchardgrass
25% KY Bluegrass
10% Perennial Ryegrass
5% White Clover

Drill a total of 30 –40 lbs. of seed in two directions late August to early September.

Figure 5a. Buttercup -prolific reseeding annual or perennial. Control in late winter, before flowers are visible.

Figure 5b. Horsenettle - warm season perennial. Controlled in late summer.

Figure 5c. Common Ragweed - warm season annual. Controlled in summer with herbicides or aggressive mowing.

Figure 6. Inexpensive sprayers can be attached to ATVs or golf carts to apply herbicides on small pastures.

Grazing Management

While improving pastures can significantly improve forage production, changes in grazing management are often needed to maintain improvements long term (Figure 7).

Consider the stocking rate. On average, one mature horse will require 2-3 acres of managed pasture. Less may result in overgrazing of desirable grasses, high weed populations, and bare areas (Figure 8). If adequate land per horse cannot be provided, consider confining horses to stalls or sacrifice areas to limiting grazing.

Figure 7. Healthy pasture sods provide a safe exercise surface for both growing and mature pleasure horses.

Figure 8. Close and frequent grazing weakens sods, resulting in a pasture that is less productive and more susceptible to erosion and weed encroachment.

Implement rotational grazing. Rotating horses from one pasture to another gives pastures time to rest (Figure 9). Rotations can be as simple as two pastures rested two to four weeks or as complicated as weekly rotations dictated by plant growth.

Designate sacrifice areas. Even well managed pastures do not grow during the winter months. During such times, keeping horses in designated sacrifice areas will protect pastures from overgrazing and traffic damage. In some cases, these areas can be improved by installing heavy-use pads (Figure 10).

Figure 9. Electric fence is an effective and inexpensive way to begin rotational grazing.

Figure 10. Heavy-use pads provide a safe, dry place for hay feeding or loafing during wet weather or when pasture productivity is limited.

Install heavy-use pads. Cover is hard to maintain in high traffic areas such as around water, shade, and feeding areas. Installation of geotextile fabric with crushed stone and dense grade aggregate (Figure 11) provides a permeable, dry footing for horses and caregivers year-round with minimal upkeep.

Manage toxic tall fescue. Naturally occurring tall fescue is often infected with a toxic endophyte that can be dangerous to late-term pregnant mares (Figure 12). Remove tall fescue from mare pastures, maintain other desirable forages, or provide high quality hay. Consider testing and move mares to less-toxic pastures. No negative effects have been documented in non-pregnant horses.

Scout for nimblewill. Nimblewill is a native, warm-season, perennial grass not grazed by any livestock or controlled by pasture herbicides (Figure 13). Pastures containing nimblewill should be managed to prevent spread including limiting broadleaf weed control and no summer nitrogen applications. If spread is unchecked, complete re-establishment may be necessary.

Monitor all horses. Closely monitor horses to ensure they are maintaining appropriate body weight and body condition. For horses that do not maintain the desired body condition, consider how best to manage them on pasture.

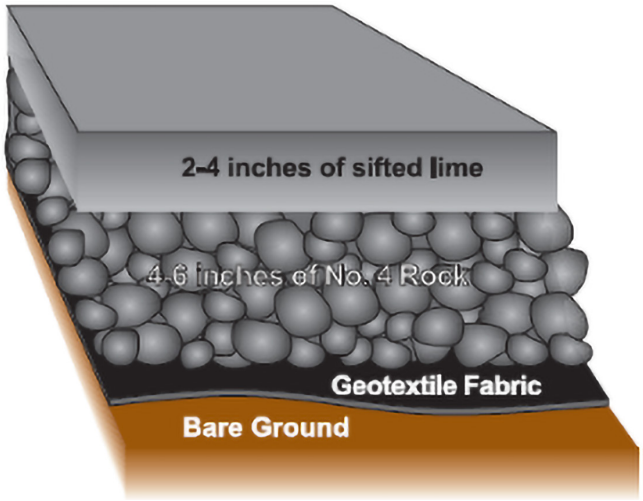

Figure 11. Rock pads are constructed by placing geotextile fabric under crushed stone and dense grade.

Figure 12. Endophyte infected tall fescue can cause prolonged gestation, dystocia and agalactia when grazed by late term mares.

Figure 13. Nimblewill - warm season perennial grass. Appears like bermudagrass, but shallow rooted and pulls up easily. stems.

Additional Resources

UK Cooperative Extension Service. Extension offices can be found in every county of the Commonwealth. Visit http://extension.ca.uky.edu/county to find your county office or call (859) 257-4302.

UK Forage Extension. Information and educational events on pastures and forage production can be found at https://forages.ca.uky.edu/.

UK Weed Science. Publication and resources on weed control can be found at http://weedscience.ca.uky.edu/forages.

UK Equine Programs. Equine management information and educational events can be found at https://equine.ca.uky.edu/outreach.

Equine Science Review. The Equine Science Review is a free, award- winning, newsletter highlighting equine research and outreach efforts at the University of Kentucky. Sign-up under News and Pubs at the UK Equine Programs website https://equine.ca.uky.edu/outreach or simply use any search engine to view the latest issue.

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