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Horse Pasture Management for the Spring: Part 1

Proper pasture management in the spring will increase the quality of the forage and prevent weeds throughout the growing season. Well-managed pastures provide optimal nutrition for horses and prevent adverse environmental impacts that result from overgrazing. While many of the management practices are best performed in the fall, it's not too late in the spring to improve pastures. The following tips for springtime pasture management will ensure healthy pastures and horses.

Frost Seeding

Frost seeding is simply broadcasting forage seed on to existing pastures while the ground is still frozen in the late winter and early spring. It is an easy and economical method for planting legumes and some cool-season grasses to improve pastures. The repeated freezing and thawing of the ground causes the soil surface to crack allowing seed to soil contact and incorporation of seed into the soil. Seeds can be spread with a hand held or ATV/Tractor broadcast seeder. The ideal conditions for frost seeding are when there is a "honeycomb freeze" or snow and temperatures are less than 30°F. Later in the spring when it tends to warm up too much for frost seeding, drilling seed or scratching the ground with a harrow is often necessary. Legumes like clovers are typically used for frost seeding to improve existing grass pastures (Table 1). Legumes "fix" soil nitrogen converting it to a form that can be used by grasses, thus reducing the need for applying nitrogen fertilizer. While it is possible to frost seed some grasses like prairie bromegrass and annual ryegrass in Tennessee, most grasses are not suitable for frost seeding and should be planted later in the spring (March through April 1) or fall using a no-till drill or traditional tillage for higher rates of establishment.

Table 1: Forages suitable for frost seeding.

Forage	Seeding rate
Ladino clover (large leaf) (Will)	2 lb/acre
Intermediate white clover (small leaf) (best for bermudagrass pastures)	2 lb/acre
Red clover	4 – 7 lb/ac
Prairie bromegrass	5 – 10 lb/ac
Annual ryegrass	3 lb/acre max (to avoid shading existing grass)

Soil Testing

Soil tests indicate needs for lime, nitrogen (N), phosphorous (P), Potassium (K) and additional nutrients. Soil tests should be performed on each pasture or field every 2 to 3 yrs. Soil samples are collected by walking in a zig-zag pattern and collecting samples to a depth of 6 inches from a minimum of 20 locations. Mix the samples thoroughly and submit a single composite sample (about 1 cup) for pastures that are 10 acres or less. Larger pastures may require a greater number of composite samples. Be sure to label your sample box so that the test results can be easily identified. Soil sample boxes and supplies can be obtained from your county extension office. Additional information is available at <http://soilplantandpest.utk.edu/soil/index.htm>.

Soil Fertility

Spring growth accounts for the majority of the entire years forage production. It's important to apply lime and fertilizer to pastures at rates indicated by soil tests to maintain proper soil pH and fertility. Lime (ag-grade limestone) is applied for maintaining proper pH. It is not necessary to remove horses from pastures after applying limestone as it is not toxic, but horses can be removed until it rains to avoid intake of the dusty coating. Fertilizers are applied to pastures when the forage is actively growing. It is recommended to remove horses from pastures until the fertilizer has dissolved (usually after one half inchrain fall or a few mornings of heavy dew). While fall is the best time to apply nitrogen to cool season pastures, an application in the late winter/early spring will stimulate forage growth. Nitrogen can be applied to warm season grasses in the late spring when they are actively growing.

Next month's March issue of the eQuine Report will focus on pasture management practices including: Seeding pastures, weed control and grazing management.

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