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FORAGE PRINCIPLES FOR HORSES AND THEIR OWNERS - CROP PERSPECTIVES

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The facts. The number of horses in Indiana in the year 2001 exceeds the number in the early 20th Century. Horses were the source of power to farm the land and a means of transportation. Today, horses are primarily used for recreational purposes. Quite a change! Along with the major change of intended purpose, comes a major change in the career track of the owners. Today, it is not unusual for the owner to have acreage that supports both the pasture and hay needs of the horses they own, yet they begin horse ownership with no training, formal or informal, in forage production. Three generations ago, one learned about forage production at an early age because "farming father" taught crop care on a daily basis.

Determine reasonable production capacity. If pasture and hay production occurs on a small acreage, one must have an idea of the number of horses that can be supported by the land. It is best to be conservative with stocking rate and hay production values, as I think it best to error on the side of too few rather than too many horses. For starters, consider that it takes 1.5 to 2 acres to provide pasture as the major nutrient source over the course of the growing season. Hay yield will vary tremendously with soil type, soil nutrient level, weather concerns, forage species, etc.; consider a hay that is predominantly alfalfa to yield 5 tons per acre and a hay that is predominantly a nitrogen-fertilized cool-season grass to yield 4 tons per acre. Calculations based upon total amount of hay fed per day and number of days fed will help project the number of acres needed to be sown and/or tons of hay to be purchased.

Get a soil test. Prior to seeding the first seed, seek help on proper soil sampling technique and send the soil samples to a laboratory for analysis. The first amendment to apply, if needed to increase soil pH, should be high quality agricultural limestone. It is best that the lime be applied more than six months in advance of seeding the desirable forage species.

While a pH shift from 5 to 7 may not seem like a big difference, recall back to chemistry class days that pH is a logarithmic base 10 scale. In this case, a pH shift of 5 to 7 is a reduction in hydrogen ion concentration of 100 fold.

Do not blindly apply someone's gut reaction fertilizer recommendation. Based upon the soil test, it will be possible to begin a fertilization program. One of my profession-related pet peeves is hearing the recommendation of applying a set amount of fertilizer per acre without benefit of a soil test.

Select forage species that are adapted and meet the needs of the horse.

Learn the advantages and disadvantages of the adapted forage species in the region. Differences among forage species are major (i.e. grasses vs. legumes, cool-season grasses vs. warm-season grasses, jointing vs. non-jointing, sod former vs. bunch, annual vs. perennial, etc.).

Avoid the temptation of making your life easy, in regards to forage species selection, by purchasing a horse pasture and/or hay mix. If a mixture is desirable, make the decision with the help of trained professionals as to what the custom blended mixture should be. Do not include alsike clover in a seed mixture, as it can be a source of photosensitivity. Realize that the percentages listed on a seed tag are on a weight basis and that seed size per pound varies considerably. These percentages **are not** the expectations of percentage contribution to the forage mixture in the field.

Develop a rotational stocking pasture program. Rotational stocking, as compared to continuous stocking, provides an opportunity for forages to rest. This rest period enhances the ability of the plants to retain vigor and to be of high yield, quality and persistence. Rotational stocking returns value to the farm enterprise through the stockpiling of forages in the late summer and early autumn. This growth can then be used to extend the grazing season into the fall and even the winter. Rotational stocking, as compared to continuous stocking, allows the harvest of a portion of the paddocks as stored feed in May.

Make hay when the sun shines. Harvesting hay in Indiana can be a challenge, but several technologies can reduce the risk of rain-damaged hay. These technologies include use of a properly set mower-conditioner, seeding an adapted grass species with the legume of choice, tedders, inverters, drying agents, making chopped silage or wrapped bale silage, and/or organic acid preservatives. Do not become a weekend only haymaking warriors or, overall, you will be less than satisfied with the hay quality harvested. Non-preservative treated hay should be packaged in small bales when moisture content is less than 20 percent. Large bales should not exceed 18 percent moisture. If moisture is too high, molds may develop and, in the worst-case scenario, spontaneous combustion can occur in storage.

For many horse producers with small acreage, it makes little sense to totally invest in the equipment necessary to make hay. Several horse owners with small acreage may want to pool dollar resources for the purchase of good used or new hay harvest equipment. To avoid conflict, a written plan should be developed so every co-owner knows the agreed upon strategy for equipment use and upkeep. Smaller acreage owners may find it advantageous to seek out custom hay harvest personnel. With advanced planning among many small acreage owners, a custom hay operator will be in better position to harvest more acres in a day if the neighborhood can accumulate significant acreage so travel time is reduced.

Learn forage quality terms. Whereas, crude protein is an important quality trait, buyers and sellers must learn that high quality hay has fiber levels that are not too high so as to depress forage intake and digestibility. Both buyers and sellers must learn the importance of forage quality traits so better communication can occur. Horse owners must also understand that horses in different stages of life have different nutritional needs.

Buy and sell hay by the ton. Horse owners need to recognize that hay can be packaged similarly, but may differ substantially in weight. A heavy bale as compared to a light bale, with like forage type and quality, will be worth more per bale.