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## **ARE THERE PROFIT ROBBERS IN YOUR PASTURE PRODUCTION ENTERPRISE?**

Keith D. Johnson  
Forage Crops Specialist, Agronomy Department,  
Purdue University  
West Lafayette, IN 47907-1150  
Phone: (765) 494-4800  
Fax: (765) 496-2926  
E-mail: johnsonk@purdue.edu

My objective through this paper is to convey to graziers some of the fundamental understandings that I've learned about managing forages in pastures.

My observation of those that have succeeded in utilizing improved grazing systems is that they have as much appreciation, and maybe more, for the forage as they do the livestock.

**My model of the forage portion of a perennial pasture system is an occupied three-legged stool.** The individual legs of the stool are named "Yield", "Quality" and "Persistence". Sitting on the seat of the stool is the pasture manager that has some control over "Yield", "Quality" and "Persistence".

**Components of the stool legs** "Soil Type", "Soil Fertility", "Forage Species", "Variety", "Pest Control", "Environment", "Stocking Rate", "Grazing Duration", "Grazing Frequency", "Grazing Height", and "Season of Grazing", etc. interact to have influence upon the size and durability of each leg. Strength and size can be added to one of the three stool legs, but rest assured, as positive influences for one leg occurs, negative things can happen to the other stool legs.

Consider the following:

- A poor soil fertility program has major negative impact on "Yield" with usually less negative impact on "Quality" and "Persistence".
- Improper selection of forage species for the pasture can have differing effects on the size and durability of "Yield", "Quality", and "Persistence".
- Selection of variety within a species can have effects on all three legs of the stool, some being positive and some being negative.
- Type of pest (insects, disease, and/or weeds) will have different impacts upon "Yield", "Quality" and "Persistence".
- Low moisture results in lower "Yield", but may or may not have a major impact on "Quality" or "Persistence".
- High temperature results in less digestible cell wall (lower "Quality"), and dependent upon the interaction with the other leg components, will lead to differing impacts on "Yield" and "Persistence".

- The addition of livestock to the plant community (the pasture) adds complexity to the management of the perennial pasture system. Stocking rate, duration of grazing, frequency of grazing, residual forage left after grazing (grazing height) and when grazing occurs interact to influence "Yield", "Quality" and "Persistence".

### **Why consider rotational stocking?**

- 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 maintain better balance among "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.

Producers owning pasture-consuming livestock are being robbed of some potential dollars if a properly designed rotational stocking system is not being utilized.

### **Know the needs of the pasture-consuming livestock and use resources to best advantage.**

- Summer-annual grasses and brassica crops are excellent candidates to use in a doublecrop system when seeded following a winter wheat or spring oats harvest, or after a spring harvest which is the last ever of a perennial hay crop. The season is too valuable not to have a crop growing in the latter half of the growing season when livestock are a part of the farming business.
- Grazing corn residues in the autumn by livestock with lower nutrition needs should be strongly considered, as this practice is a cost-reducing strategy. If soil conditions are excessively wet, then livestock should be removed from the corn residue field to eliminate concern about soil physical property damage.

Informed managers are in better position to weigh the consequences of the many choices where they have control (i.e. fertility, forage species selection, variety selection, pest management, and grazing pressure) as compared to the uninformed or ignorant manager. They are also more apt to draw better conclusions about what to do with pasture management decisions when areas of lesser control (e.g. weather, insect pest invasion) are causes of concern. I've often thought that champion chess game players would make successful graziers; successful graziers know how to manage Mother Nature to best use or least damage, much like champion chess players do as they battle the wits of their opponents.

To further your knowledge about pastures and their use, I encourage you to visit the Purdue University web site [www.agry.purdue.edu/ext/forages/](http://www.agry.purdue.edu/ext/forages/).