



Pasture Improvement

By Kitty O'Neil, Ph.D., kitty.oneil@cornell.edu

New York's North Country climate is well-suited to growing grass pasture for livestock production. The land used for pasture, however, tends to be poorly drained, too steep or too rocky to be suitable for row crop production. Additionally, pastures may be on land recently returned to production after having been left idle or forested for many years.

Generally, pastures are perennial sods consisting of grasses (bluegrass, orchardgrass, quackgrass, brome grass and timothy) and legumes (red and white clovers, alfalfa, birdsfoot trefoil). Without purposeful management, most pastures and hayfields naturally progress toward native, brushy plant species mixtures and acidic soil conditions which typically do not make productive pastures. Woody plant species such as alders, birches and poplars begin to appear. Bluegrass begins to dominate the grass-legume mixture. Weeds such as milkweed, bedstraw, dandelions and thistles can become more prevalent. Without applications of lime, pasture soils often become acidic. Acidic soils encourage weed plants and discourage some of the grass and legume species we desire most. Neglected pastures need some specific management to improve their condition and increase forage yields to meet livestock production needs. Fortunately, many of these improvements may be made without destroying the existing sod and reseeding, and without using herbicides.



A well-managed Northern New York pasture.
(Photo: K. O'Neil, August 2013)

When establishing a new pasture, or choosing a pasture to improve, the first steps are to carefully plan what type of changes you'd like to make. Do you see unproductive or undesirable species you'd like to discourage or remove? Do you see desirable species, but the pasture just doesn't yield as well as you'd like? A methodical and logical approach will help improve pasture and livestock performance in either case. Both situations will also require the simultaneous consideration of soil condition, plant species and livestock pressures and the understanding that change will take time.

Often, the best place to start is with a soil test. Soil analyses are relatively inexpensive and are essential for understanding the pasture condition. Results of a soil test are typically accompanied by lime and fertilizer recommendations and following this guidance should be the first step toward pasture rehabilitation. If soil pH and fertility are not within acceptable ranges, attempts

at manipulating or replanting plant species will probably fail. In many pastures that are not closely managed, pH can be too low to support many desirable species. Increasing the pH to 6.0 to 7.0 will allow more desirable species to flourish and will permit better use of soil nutrients. Highly acidic pasture soils can require more than one application lime to reach the target pH and lime can require a long time to react. Lime applied to an existing sod should not exceed 3 tons per application and, because lime is not tilled into the soil, it can take up to 2 years to be effective. If reseeding is planned, be sure to apply lime at least 1 year before seeding.

Once soil pH is improved, soil fertility may be addressed and your attentions can turn to reducing weeds and improving forage species. These topics and more pasture improvement strategies will be discussed at the North Country Grazers Pasture Meeting in North Bangor on March 1st. Contact the St. Lawrence Cornell Cooperative Extension office to register.

Additional resources:

1. Kersbergen, R. 2004. Bulletin #2491, This Old Hayfield: A Fact Sheet on Hayfield Renovation. U Maine Extension.
2. Emmick, D. Managing Pasture as a Crop: A Guide to Good Grazing.
3. Stockin, Cherney and Ketterings. 2006. Fact Sheet 17: Nutrient Management for Pastures. Cornell Cooperative Extension.

For more information about field crop and soil management, contact your local Cornell Cooperative Extension office or NNY Cornell University Cooperative Extension Regional Field Crops and Soils Specialists, Mike Hunter and Kitty O'Neil.

Kitty O'Neil
St. Lawrence County CCE Office, Canton
(315) 854-1218
kitty.oneil@cornell.edu

Mike Hunter
Jefferson County CCE Office, Watertown
(315) 788-8450
meh27@cornell.edu

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