

Michigan Supplemental Enhancement Activity

Water Quality Enhancement Activity - WQL19- Transition to organic grazing systems

The National Organic Standard defines pasture as land used for livestock grazing that is managed to provide feed value and maintain or improve soil, water, and vegetative resources (section 205.2). Land is not considered pasture if it is overgrazed, bare soil or a dry lot. Ruminants, such as cattle, goats, and sheep must have access to pasture (section 205.239(a)(2)), and managers have the responsibility to maintain the ecological integrity of the pasture resource with proper grazing management. For more information, see the National Organic Standard at www.arms.usda.gov/nop/indexNet.htm. Pasture is a crop whether it is harvested by animals through grazing or made into hay, silage, baleage, etc. All the standards for organic crop production apply to pasture. **Grazing Technical Note #5 Planning for Organic Pastures** assists planners in developing conservation plan alternatives by identifying key aspects for consideration in organic grazing systems.

Organic management aims to build healthy soils and provide natural nourishment to pasture plants. Conventional fertilization with commercial products may not meet the manager's objectives. A well managed organic pasture benefits from the functioning of an undisturbed soil ecosystem with regular inputs of organic matter. Plant residue from roots and surface are important inputs to the soil ecosystem. Grazing management creates cycles of growth and die back contributing to building soil organic matter and feeding soil organisms. Root exudates also feed soil organisms. Grazing livestock also contribute nutrients through the recycling of manure. Therefore, maintaining or improving plant health and vigor is essential in an organic system.

The most economical and environmentally safe source of nitrogen in organic systems is from legumes. Legumes may be introduced to the pasture stand, overseeding, no-till interseeding, or frost seeding, are methods to add legume seed. Pasture management, soil fertility and grazing, must change to favor legume growth. Legumes become the key species to monitor. Lime may be required to raise the soil pH to a level acceptable for the growth of legumes. The target pH value for legumes is 6.5. Soil testing is an essential management tool.

Optimize the recycling of manure nitrogen. When animals congregate in areas around feeders, water tanks and mineral boxes, manure nutrients become concentrated there. To better distribute manure nutrients around the pasture, move water tanks, feeders and shade structures as frequently as possible.

Organic materials, including manure, may contain prohibited substances. Other natural fertilizer materials, for example fish emulsion, may be prohibited due to the manufacturing process. The certifier makes the determination on any material or activity

related to certifying an organic pasture. Managers should work closely with certifiers and inspectors when selecting nutrient amendments.

Healthy pasture forages are able to out-compete weedy species. Mowing, brush-hogging, hoeing and hand pulling weeds may be used alone or in complement to the grazing management. Weed identification is important with mechanical weed control when selecting the time and method. Weed species that produce rhizomes or stolons may be spread through actions that attempt to cut out the weed. Deep rooted weeds are not easily hand pulled, and may require removal of a portion of the roots for successful elimination. Mechanical weed control can take several years before results are seen.

Multispecies grazing may provide weed management as livestock species differ in preferred forages. Goats prefer to browse brushy weeds. Sheep prefer broadleaf forage to grass. When considering utilizing small ruminants to enhance weed management, the stocking density may need to be adjusted. Often, two to five small ruminants may be added without changing the regular livestock herd size. Adjustments to the number of small ruminants to large stock will be necessary if eradication of weedy species is the goal.

Monitoring forage height and grazed residue height is essential in organic pasture systems to promote forage health, provide a healthy grazing environment for the livestock, and control soil erosion. Riparian areas should be stabilized and protected under flash grazing. All waterways should be protected from livestock wastes by limiting access, flash grazing, and providing alternate water sources.

Organic pasture systems may require multiple levels of management. Ensuring that the pasture remains organic may require field borders or buffer strips. Neighboring field runoff should be diverted from crossing the organic pasture or have the grassed waterway excluded from grazing.

Grazing management must be the primary method for sustainable control of internal parasites. Dewormers are severely restricted or prohibited for use in organic systems. Grazing livestock are exposed to parasites on pasture and in bedding or manure areas. Parasites are the major health concern for grazing animals in organic pasture systems. Sheep and goats are more susceptible to internal parasites than other livestock.

If pastures are not overstocked, there may be little difficulty with internal parasites. When livestock are forced to graze close to the ground tends to increase the occurrence of ingesting the infective larval stage of the parasites. The amount of acres available for pasture may be increased compared to a non-organic management system. The increased acres are a result of taller grazing heights and/or longer rest periods.

Safe and/or Clean pastures should be part of the grazing acres. Safe pastures are ones that have been used for hay, silage or small grains. Safe pastures carry some parasite load but if managed properly provide a good way of controlling infection. Clean pasture can be a new seeding grazed for the first time or a pasture grazed the previous year by

only a different livestock species that does not have common parasites, for example cattle grazed the year before sheep.