United States Department of Agriculture
Natural Resources Conservation Service

2013 Ranking Period 1

Water Quality Enhancement Activity – WQL19 – Transition to ORGANIC grazing systems

Enhancement Description
"Transition to Organic Grazing Systems" supports the conversion of a conventional to an organic livestock grazing system. Key to the enhancement activity is following ecological and pasture-based grazing requirements, applying materials according to the National List of Allowed Synthetic and Prohibited Natural Substances, and managing livestock according to National Organic Program (NOP) rules (Subpart C – Organic Production and Handling Requirements) for organic certification. This enhancement activity facilitates compliance with NOP rules for organic certification.

Land Use Applicability
Pastureland, Rangeland, Forestland

Benefits
Environmental benefits will be operation specific. Benefits may include, but are not limited to improved forage, soil, and animal health, and improved water quality.

Managing for recommended time and timing of grazing, minimum and maximum grazing heights, pasture/paddock rotation, and rest periods improve plant health, diversity, and productivity. Sufficient pasture/paddock rest or pasture/paddock avoidance that minimizes livestock contact with viable internal parasite populations can break parasite cycles, reduce ingestion of parasites and the need for treatment, and improve animal health. Soil organisms and soil quality are benefitted by the reduction or elimination of natural or synthetic pesticides typically used on forage and/or livestock. Rotating livestock through several pastures/paddocks minimizes the development of loafing areas and improves the distribution of manure nutrients for plant uptake. Nutrients are more uniformly available to forage crops and the potential for polluted runoff from high traffic areas is reduced.

Conditions Where Enhancement Applies
This enhancement applies to only pasture, range or forest land use acres in the process of transitioning to an organic production system.

Criteria
1. Manage pasture grazing and rest periods to follow NRCS Prescribed Grazing practice standard (528) criteria for recommended maximum (begin) and minimum (end) grazing

heights by forage species or Ecological Site Description interpretations. Beginning and ending grazing heights are followed to maximize forage quality and palatability and to promote rapid recovery and forage regrowth.

a. Maintain a livestock watering system that accommodates a high frequency of livestock rotation through several different pastures or paddocks during the grazing season. Follow NRCS practice standard criteria for Prescribed Grazing (528), Watering Facility (614), Pipeline (516), or other related standards for appropriate supply and travel distance to water.
b. Use fencing that is permanent, semi-permanent, and/or temporary to facilitate pasture rotation. Follow the NRCS Fence practice standard (382). Additionally, follow NOP rules for allowable fence materials.

Note: Contact your local conservationist for assistance with Conservation Practice Standards.

2. Apply all materials, including plant nutrients and pesticides for forage production and animal health, in accordance with the National List of Allowed Synthetic and Prohibited Natural Substances.
3. Comply with all NOP rules for livestock management (NOP § 205.236 - .239 for livestock origin, feed, healthcare, living conditions)
4. Complete organic transition within three (3) years as verified by obtaining an approved Organic System Plan from a valid certifying agency.
5. Follow a written grazing plan that meets the CSP eligibility requirements.

Adoption Requirements

This enhancement is considered adopted when the land use acre is certified via an Organic System Plan.

Documentation Requirements

1. Provide a written grazing plan following the 'Plans and Specifications' guidelines in the Prescribed Grazing standard. Include time and timing of grazing, minimum and maximum grazing heights, and date rotated in and date off of pastures/paddocks in the grazing plan, as appropriate for the land use.
2. Provide a record of the application of inputs according to the NOP rules, e.g., type, date, rate, and amount of allowed nutrients and pesticides for forage and livestock.
3. Provide a copy of the Organic System Plan when approved by the certifying agent.

NRCS Pasture Notes, grazer's notebook, or other record keeping systems for pasture livestock operations can be used to facilitate record-keeping.

References

Murphy, Bill. 1995. Pasture Management to Sustain Agriculture. Agroecology: The Science of Sustainable Agriculture, 2nd ed, edited by Miguel A. Altieri. Westview Press. Boulder, CO. pp. 321-347.

Bezdicek, David. 1984. Organic Farming: Current Technology and Its Role in a Sustainable Agriculture. ASA Special Publication No. 46. ASA, CSSA, and SSSA, Madison, WI. 192 P.

USDA-AMS. 2012. National Organic Program Final Rule – Access to Pasture
www.ams.usda.gov/NOP

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References:

- ***528 Prescribed Grazing***
- **National Organic Program**
  http://www.ams.usda.gov/AMSv1.0/nop
- **Midwest Organic and Sustainable Education Service (MOSES)**
  http://www.mosesorganic.org/

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 (section205.239 (a) (2)), and managers have the responsibility to maintain the ecological integrity of the pasture resource with proper grazing management.

The most economical source of nitrogen in organic systems is from legumes. Pasture management, soil fertility and grazing, must 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 may require removal of a portion of the roots for successful elimination.

Multispecies grazing may provide weed management. 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.

Monitoring forage height and grazed residue height is essential 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 livestock are exposed to parasites on pasture and in bedding or manure areas. Grazing management must be the primary method for sustainable control of internal parasites. If pastures are not overstocked, there may be little difficulty with internal parasites. Dewormers are severely restricted or prohibited for use in organic systems.

Forcing livestock to graze close to the ground tends to increase the occurrence of ingesting the infective larval stage of the parasites. Pasture acreage can be increased to accommodate 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.

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