Water Quality Enhancement Activity – WQL26 – Reduce the concentration of nutrients imported on farm

Enhancement Description
Grow at least 75% of feed for livestock on the farm and use manure from the livestock to supplement up to 50% of N, 90% of P and 90% K for crops grown on the farm.

Land Use Applicability
Cropland, Pastureland

Benefits
On livestock farms, when feed for livestock is imported on the farm and manure from the livestock is spread on the farm, over time this can result in a buildup of nutrients on the farm.

This problem is made worse if the nutrient value of the manure is not accounted and additional fertilizer is applied to crops. By growing the majority of feed for livestock on the farm and properly accounting for the nutrients in the manure when applying it to crop land, better nutrient cycling is achieved. Nutrients are not concentrated on the farm and a more sustainable operation is possible.

Conditions Where Enhancement Applies
This enhancement applies to all crop or pasture land use acres.

Criteria
1. At least 75% of feed for livestock must be grown on the farm.
2. For crops grown on the farm, manure from the livestock must be used to supplement up to:
   a. 50% of N
   b. 90% of P
   c. 90% of K

Adoption Requirements
This enhancement is considered adopted when both criteria above have been met.

Documentation Requirements
1. Total feed requirements for livestock,
2. Feed purchases from off farm,
3. Nutrient requirements for crops, and
4. Off farm nutrient purchases.

References

International Plant Nutrition Institute (IPNI). 2012. 4R Plant Nutrition – A Manual for Improving the Management of Plant Nutrition (North American Version). IPNI, Norcross, GA.

USDA-NRCS. 2000. National Engineering Handbook. Part 637, Chapter 2, Composting. Washington, D.C.

USDA-NRCS. 1992. National Engineering Handbook. Part 651, Agricultural Waste Management Field Handbook. Washington, D.C.

WATER QUALITY ENHANCEMENT ACTIVITY

WQL26 – OR REDUCING THE CONCENTRATION OF NUTRIENTS IMPORTED ON FARM

Oregon Criteria

In order to determine appropriate nutrient values of the manure utilized, participants can utilize a variety of sources including:

1. Laboratory analysis. For a list of laboratories serving Oregon, see EM8677 available at: http://extension.oregonstate.edu/catalog/.
2. OSU Extension Publication 8954-E, *Estimating Plant Available Nitrogen from Manure,* available at: http://extension.oregonstate.edu/catalog/results.php?cat=Agriculture
3. Values contained in the Oregon NRCs Animal Waste Management Field Handbook.

For information and values on nutrient requirements for crops, use:

1. EM8585-E, *Manure application Rates for Forage Production,* available at: http://extension.oregonstate.edu/catalog/results.php?cat=Agriculture.
2. Individual crop fertilizer guides available at the OSU Extension publications webpage at: http://extension.oregonstate.edu/catalog/results.php?cat=Agriculture.

For guidelines on using manure to meet crop nutrient needs, follow guidance contained in the NRCS Oregon Nutrient Management standard, specifically, the section titled *Additional Criteria Applicable to Manure and Organic By-Products or Biosolids Applied as a Plant Nutrient Source".*