Nutrient Flows in Dairy Manure Treatment Systems. (A05-wright083006-Oral)

Authors:

- P.E.Wright - *Cornell University*
- S.F.Inglis - *Cornell University*

Abstract:

No single manure treatment system will meet the varied needs of every dairy farm. Farms vary in their resources and their environmental concerns. Each farm location and watershed may have unique environmental problems from nitrogen, phosphorous, organic loading, pathogens and or odors. Different manure treatment and handling methods will be needed to match the resources and needs of different farms. Treatment for odor control will become much more common as farms are forced to convert to storing their manure. This paper will explore the variety of treatment systems in use and soon to be in use on dairy farms and the impact these treatment systems have on the nutrient concentrations in the manure. Concentration and nutrient mass in various forms will be shown for each system so a nutrient manager can evaluate the impact the treatment system will have on the crops where the manure is applied. Farms using composting, biodrying, various anaerobic treatments, and lagoon systems for odor control will be compared. Water quality issues will be evaluated based on the mass and nutrient flows. This paper will help farmers and farm advisors evaluate different treatment systems.

Corresponding Author Information:

Peter Wright
Cornell University
328 Riley - Robb Hall
Ithaca, NY 14853

phone: 607-255-2803
fax: 607-255-4080
e-mail: pew2@cornell.edu

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