"Snap-Shot Assessments of Nutrient Use on Dairy Farms"

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The webcast is archived at: http://www.extension.org/pages/Snap-Shot_Assessments_of_Nutrient_Use_on_Dairy_Farms_Webcast

How do WI grazing systems vary from the types of grazing systems in Australia?
Presenter's response: I find remarkable similarities among grazing systems. The basic practice of grazing to maximize forage intake, manure distribution in paddocks, resting areas and laneways, and land spreading manure washed from parlors are common features. I've seen diversity in the feeding of concentrates to supplement pasture intake. This practice is much more prevalent in Wisconsin than in Australia. The grazing season is much longer in Australia and more silage is conserved than in Wisconsin. Also in Australia, there is greater prevalence of once daily milking and older lactating cows (most cows are kept for 5 years or more).

Have you looked at grid sampling to see how well manure is distributed within fields?
Presenter's response: I have not looked at this in my research, but my colleagues have. For example, see: Gourley, C.J.P., Powell, J.M., Dougherty, W.J. and Weaver, D.M. Nutrient budgeting as an approach for improving nutrient management on Australian dairy farms. Aust. J. Exper. Agric. Vol 47 (9): 1064-1074. 2007. There are various studies on this topic in the literature.

How were the Wisconsin farms selected?
Presenter's response: We used a stratified random sampling procedure. First we used a state-wide data base of WI dairy farms to stratify all farms into size classes for each of the three major dairy regions. Within each region, we randomly selected farms in proportion to class size. We then phoned these farms until we obtained the desired number of farms (18/region). This selection procedure is described in: Powell, J.M., McCrory, D.F., Jackson-Smith, D.B., and Saam, H. Manure collection and distribution on Wisconsin dairy farms. J. Environ. Qual. 34:2036-2044. 2005

What effect does collection of manure have on nitrification and air quality?
Presenter's response: We've studied this more in the context of how the non-collection of manure causes manure N and P buildup in soils, and also in-barn and in-field ammonia emissions. I'd like to point you to two of our publications on this subject:

1) Powell, J.M., McCrory, D.F., Jackson-Smith, D.B., and Saam, H. Manure collection and distribution on Wisconsin dairy farms. J. Environ. Qual. 34:2036-2044. 2005
2) Powell, J.M. and M.P. Russelle. Dairy heifer management impacts manure N collection and cycling through crops in Wisconsin, USA. Agric., Ecosyst. Environ. 131: 170-177. 2009.