What is "Waste" Worth?

Mary Berg and Emily Kline

According to the 2012 North Dakota Agricultural Statistics bulletin (1), there were 1.69 million head of cattle and calves, 151,000 head of hogs, and 73,000 head of sheep in the state as of January 1. It is estimated that a growing beef calf in confinement will produce approximately 50 lbs of manure per day which will contain 0.29 lb of nitrogen (N), while a finishing beef animal will produce a total of 64 lbs of manure per day which contains 0.36 lb of N (2). In March 2012, the average price of urea fertilizer was $0.27 per lb. (3). This means that in 2012, one finishing beef animal produced approximately $14.85 of N per 153-day feeding period.

Breaking down the statistics even further, of the 1.69 million head of cattle and calves in North Dakota, 225,000 of them were finishing beef animals. Using the above calculations, there was over $3.3 million of N available to North Dakota crop producers from the manure produced by these beef animals. That is a significant amount of nutrients and fertilizer dollars that can be used as a full replacement for commercial fertilizer when managed properly.

Nutrient management affects all producers in North Dakota and the livestock environmental management specialists at the Carrington Research Extension Center strive to improve knowledge and understanding in this subject area. Educational efforts focus on manure utilization and livestock facility management. On-farm consultations with individual producers from across the state occupy a large portion of time in the spring and fall when manure needs to be sampled, spreaders need to be calibrated, and fertilizer recommendations occur. The remaining portion of time is spent educating producers, NDSU Extension County Agents, Natural Resource Conservation Service personnel, and Watershed Coordinators about the value of manure, composting manure and animal mortalities, and the day to day management of manure in livestock facilities.

Manure sampling, the economic importance of manure, and facility management are a few areas that will be given priority in the coming year. We invite you to visit our website where you will find useful information about nutrient management for livestock producers in the form of news, events, and publications: www.ag.ndsu.edu/nm.

Literature Cited

1. United States Department of Agriculture. 2012. National Agricultural Statistics Service, North Dakota Field Office. Livestock Summary: 76-84.
2. American Society of Agricultural Engineers. 2005. Manure production and characteristics. ASAE Standard D384.2. Agric. Eng. Yearbook. ASAE, St. Joseph, MI.
3. United States Department of Agriculture. 2012. Economic Research Service. Table 7 – Average U.S. farm prices of selected fertilizers, 1960-2012. <http://www.ers.usda.gov/data-products/fertilizer-use-and-price.aspx#26727>.