Waste management: the poultry industry

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The US poultry industry continues to effectively recycle waste from its production facilities, contrary to perceptions of the public and regulators. Minimizing any detrimental effects on the environment is also a major goal.

Manure Recycling

Manure is a valuable resource that, when effectively recycled, has substantial value as a fertilizer. If not applied correctly, however, issues of water pollution can sometimes develop. Rules for concentrated animal feeding operations recently published by the US Environmental Protection Agency in December 2002 are being studied by poultry growers and state regulators to determine how they will comply with these regulations. Most operations have plans for manure management and runoff prevention already in place and will need only to ensure that they comply with the regulations. Some operations, however, will need substantial changes in their waste management plans, particularly if excess phosphorus is found in the soil. Large outlays of capital to comply with the new regulations and ensure that water pollution does not occur may be required by some producers. Pathogens in raw manure are seen as a possible problem for the future, potentially requiring processing prior to soil application.

Innovative uses of manure are beginning to appear, such as use of broiler litter for generation of electricity and production of methane gas. Heating and pelleting of broiler litter by newly started companies (many using federal grant money to stay competitive) in large broiler-producing areas is adding value to this commodity because of improved consistency, ease of handling, and lower transportation costs of the product. Many egg producers continue to dry and pelletize layer manure for use as fertilizer. Some state governments are assisting poultry producers by setting up manure brokerage services to locate buyers for this valuable resource and giving cost assistance for moving manure out of areas of high poultry concentrations.

Feeding strategies to reduce the nutrient content of manure, specifically nitrogen and phosphorus, are increasing in use. Changes in diet formulation caused by increased use of synthetic amino acids are resulting in lower protein concentrations and therefore reduced manure nitrogen content. The use of the enzyme phytase, which increases the availability of phytate phos-