Manure Management: Preparing for Winter Part 1

As I write this article on November 22, 2011, a quick glance at the 4-inch soil temperature map shows me soil temperatures range from the upper 40s in southeast Iowa to the upper 20s in NW Iowa and trending downward as we would expect for this time of year.

With that said, it is time to start thinking about manure management for the winter months. This article is the first in a series that will highlight some management practices to consider and rules to follow as we move into frozen soils, snow-covered soils, and other unfavorable conditions and challenges to dealing with manure in colder temperatures.

Given the warm fall temperatures and the lack of precipitation for most of Iowa this fall, manure application season is mostly complete at this time, however here are some things to consider while a few days of opportunity still exist:

1. Make sure that liquid storage pits are pumped down to maximize storage capacity going into winter when land application becomes more challenging, more risky and in some cases, is regulated. More on winter application rules in Part 2 of this series in December.

2. Make sure feedlots and outdoor pens are scraped before surfaces freeze. Have mounds in good shape for the winter. Make sure settling basins and effluent basins have been emptied to accommodate for winter manure and effluent accumulation.

3. Make sure manure transfer equipment is working correctly. Take the time now to do maintenance and repairs. There is nothing as difficult as to work with frozen pumps, pipes and barn cleaners in freezing, wet winter conditions.

4. Stockpiling manure can be a good manure management practice for winter. Stockpiling can conserve nutrients and effectively and efficiently store nutrients until land-application is more suitable. Be sure to properly locate your stockpile so precipitation and snow-melt do not cause runoff loss of nutrients and potential off-site movement of pathogens. Be sure to follow all requirements for stockpiled manure. See:

   Dry-Bedded Manure Stockpiling Regulations - For Cattle and Swine Confinements

   Confinement Dry Manure Stockpiling Regulations

   Open Feedlot Manure Stockpiling Regulations
5. If you having grazing animals on pasture, cornstalks or other locations outside of a feedlot, be sure to keep bale feeders, feedbunks and other overwintering feeding places as far from streams as possible to keep manure from accumulating near the stream or on steep slopes where run-off may happen.

6. If you must land-apply manure in the winter please take into consideration the following best management practices:
   - Apply manure on the flattest slope possible
   - Apply manure as far from water sources as possible
   - Be sure to follow all separation distance requirements for land application. See DNR 113 Land Application Separation Distances. Pay attention to Table 2 in this document. These separation distances apply to ALL livestock operations, regardless of size.
   - Avoid application on areas that drain to surface tile inlets.
   - Do not apply manure in a grassed waterway.
   - Wait until the snow melts.
   - Avoid application prior to predicted rainfall, snow of warming conditions that could cause snow to melt or runoff.

In part 2 of this series I will discuss the winter application rules for manure application on snow-covered and frozen ground.

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