Temporary Field Storage of Manure In Winter

by Christine Brown, Nutrient Management Lead – Field Crops, OMAFRA

The opportunity to get bedded-pack cattle manure was too good to pass up. But now as the field in front of me is a sea of white with deep drifts, one question arises, "Where is the best location to temporarily store the manure?"

With society's negative image of field applied manure on snow covered and frozen fields, there is a greater need for temporary field storages. Temporary field storages can be a great solution to limited barn storage of manure and can also be a time saver during the busy spring season for transporting manure. However, when the snow is deep and the ideal place for a temporary storage may not be easily accessed, what are the options?

There are guidelines that help determine the best place for temporary storages. They are in place to minimize the risk of contaminating water sources and also to help prevent complaints from local residents.

1. How solid is the manure?

The more bedding in the manure, the greater the dry matter content and the less likely the manure will move.

2. Is the manure nutrient rich?

The more concentrated the nutrient content of the manure (ie from broilers), the more risk that some of the nutrients will move through leaching or volatilization. Concentrated manures would ideally be stored until field application on a concrete pad, where runoff is collected or prevented through coverage

3. Where are the field tiles located? A tiled field is not the best location for a manure pile. Temporary storages should have at least 3 meters (10 ft) between the edge of pile and the nearest tile drain. Storages should also be located away from exposed bedrock.

4. What is the soil texture? Sandy or light textured soils (Hydrologic group A soils) are risky for temporary storages. Infiltration in the spring will increase the risk of nitrogen leaching.

5. Distance to neighbours or watercourses.

No one likes a manure pile beside their property, especially if there are odours or flies associated with the temporary storage. It should take about 2 to 3 minute to walk to a temporary storage from the edge of a field (100 m from edge of field or 125 m from the nearest residence).

6. Distance to water or surface inlets.

We all know that manure needs to stay out of water, whether a river or water course, a catch basin or areas where water flows or floods during spring melts. A 3 minute walk (~150 m) to get to the water source ensures that there is adequate distance to minimize risk of nutrient contamination.

7. Should the temporary storage be covered?

Covering a storage is much easier said than done, and usually isn't very practical for short term storages. However, covering a storage with a tarp would be warranted when there is increased risk for an adverse effect. For example, tarping a temporary storage of heavily bedded broiler manure with a high concentration of nutrients, will ensure that the nutrients will still be in the pile at the time of field application.

8. How long is "temporary"?

Although it seems obvious, manure piled in the field as temporary storage should be applied to the field to meet the upcoming growing season's crop needs. In a few cases, temporary storages have been in place until grain harvest. In those situations, extra precautions should be taken to ensure that environmental risks (including odours and insects) are minimized.

Temporary field storages are regulated under the Nutrient Management Act. Farms not phased in to nutrient management regulations are encouraged to follow the guidelines. Information regarding the specifics of temporary manure storages can be found on the OMAFRA website at: <u>http://www.omafra.gov.on.ca/english/engineer/facts/10-039.htm</u>.