

Crop Production

Spread manure carefully on frozen land

By NATALIE RECTOR



CAN farmers still winter-apply manure? Should they be careful? Can their actions impact the entire industry? Can they find help to better plan and reduce risk? Yes — to all of the above.

Many farmers and others are under the perception that manure cannot be applied in the winter. It is legal in Michigan to apply manure to what is technically referred to as "frozen and snow covered" fields. But don't think that your actions have little impact on the future of this practice.

If you have a large concentrated animal feeding operation, there are requirements for developing comprehensive nutrient management plans, or CNMPs, which will include a field-by-field assessment of the appropriateness of applying manure during winter. The trend for large CAFOs is to have a minimum of six months of manure storage so that their farm operations do not necessitate winter applications, but they may still apply in the winter if they are following their CNMP.

Follow Right to Farm guidelines
Regardless of the livestock operations' size, all farms in Michigan should un-

Key Points

- You can apply manure in the winter if you're following a CNMP.
- Solid manure should only be applied where slopes are 6% or less.
- Liquid manure should be applied on slopes that are 3% or less.

derstand and conform to the Right to Farm guidelines for manure utilization. Specifically, it says, "Application of manure to frozen or snow-covered soils should be avoided, but where necessary, (a) solid manures should only be applied to areas where slopes are 6% or less and (b) liquid manures should only be applied to soils where slopes are 3% or less. In either situation, provisions must be made to control runoff and erosion with soil and water conservation practices such as vegetative buffer strips between surface waters and soils where manure is applied."

The bottom line is that when you apply manure to a field it should stay where it was put, not only the day of application, but after a future snow melt.

Know your fields

The No. 1 criteria for assessing a field's risk for runoff during the winter is the producer's past knowledge of each

field. If a field has a history of rain and snow running off, especially if erosion is common, then it is not a candidate for surface applications of manure.

If the field slopes toward surface water, the chance of surface-applied manure reaching the water increases dramatically under poor management. Alternative fields should be selected or management practices utilized that decrease the runoff risk. Depending on where you live in Michigan, days occur during the winter that manure could be injected or incorporated.

The Right to Farm guidelines for manure also state, "Manures should not be applied to soils within 150 feet of surface waters or to areas subject to flooding unless (a) manures are injected or surface-applied with immediate incorporation (i.e., within 48 hours) and/or (b) conservation practices are used to protect against runoff and erosion losses to surface waters."

Planning ahead will provide the chance to plant cover crops, leave fields rough-tilled, run over the field with an aeration tillage tool in the fall or plant a permanent vegetative buffer.

Assess risk

By prioritizing fields based on the level of risk associated with runoff from frozen and snow-covered soil, winter

spreading can be directed to fields with the least risk.

Fall is an ideal time to drive the perimeter of fields and assess the risks each field has for wintertime spreading. First, know where any surface waters are and what they connect to. This can be done by drawing on your own knowledge and using soil survey or aerial maps. As you drive each field, ask yourself, "What would happen if manure were applied to this field and there was a rapid spring snow melt?" Then ask, "What could be done ahead of time to prevent or minimize risk in this situation?"

A computer spreadsheet called the Manure Application Risk Index lets producers evaluate fields, assess the risks and determine a relative risk ranking for all fields.

Many private consultants in the state are trained on this spreadsheet as are Natural Resources Conservation Service and conservation district employees. More information on MARI can be found at www.maeap.org; use MARI for a key-word search.

For additional information on land application of manure, recordkeeping forms and calibration suggestions, visit www.rootzone.msu.edu.

Rector is a Michigan State University Extension nutrient/manure management agent.

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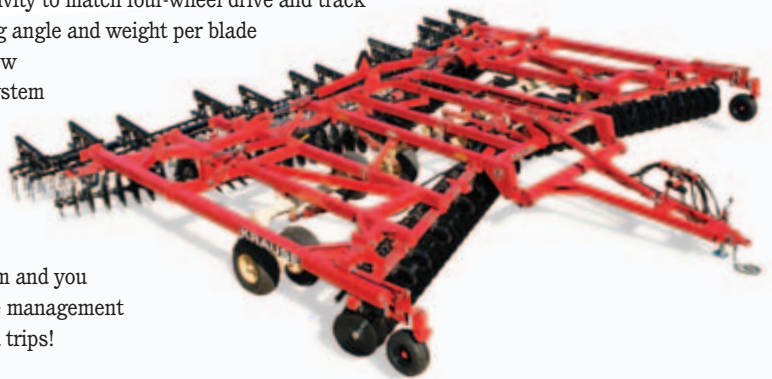
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