

# Tracking raindrops on farm, field

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WHEN it rains, it pours. But what does that rain hit and where does it go? Those are the important questions related to manure management on small- and medium-sized farms.



There are two distinct areas to consider: what happens on the farmstead and what happens in the field.

## On the farmstead

When considering how to address precipitation on the farmstead, ask yourself: If rain or runoff hits this area, where will it go?

You'll need to ask that question over and over again to ensure that you take all areas of the farmstead into consideration, including outside lots, feeding areas, compost sites, manure stacking areas, manure loading areas, feed storage, travel lanes and any other area that has livestock — and, therefore, manure. And remember that direct or indirect discharge of contaminated waters to waters of the state is illegal for any size farm.

Eavetroughs or gutters on barns can be a problem during the winter, but provide the opportunity to catch roof water and redirect it away from contact with feed or manure and onto grass areas. A gutter installed over a barn door helps keep workers and animals dry, but it doesn't collect all of the possible water from the roof. Adding industrial-sized eavetroughs all the way around the barn and then ensuring that the water is directed properly is the first step in keeping clean water clean.

Scraping manure regularly from outside feeding areas and cleaning ahead of rain or snow melt also minimize the amount of manure in runoff. Take a close look at your outside lots. Are they bigger than they need to be? Smaller outside lots mean less water will come in contact with them. Again, follow the water.

Silage bunker areas that are maintained and cleaned regularly provide good feed quality and reduce the potential for polluted runoff. Silage leachate occurs not only after harvest, but also each time precipitation comes in contact with the feed. Gallon for gallon, silage leachate is a much greater risk to surface waters than manure because of its high biological oxygen demand.

## Field considerations

Anytime manure is surface-applied on cropland, there can be a risk of runoff during the next rainfall or snowmelt. That brings up two concerns: If contaminated water runs off, it could, in some cases, reach surface waters or neighboring property; and valuable crop nutrients are lost.

Even seemingly flat fields have known runoff patterns. Nearly every field has had a significant precipitation event when the field was vulnerable — after spring or fall tillage, for example. Take these instances into consideration to

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determine if the risk of runoff is so great that the field should not be utilized for manure at all, or if manure should be applied only with injection or immediate incorporation. If the field has only a moderate risk of runoff, management practices could still be implemented to

reduce runoff to surface waters, such as leaving crop residue, cover crops, buffer strips or manure application setbacks.

Whenever possible, inject or immediately incorporate manure. This will reduce runoff risk, abate odor complaints and retain nitrogen for the next crop.

Any form of engineered surface drainage, such as tile risers or surface ditching, is specifically designed to

encourage drainage and will take any manure with the water. In these areas, observe spreading setbacks and buffers, and observe the drainage pattern to be certain manure is not reaching the ditch or tile risers.

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