

Temporary Manure Piles. John A. Lory, University of Missouri.

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High fertilizer prices have more farmers interested in using manure as a fertilizer. Animal operations schedule barn cleanouts around animal production needs, not when you need manure. When manure arrives at a time when it cannot immediately be applied to the field there may be a need to have a temporary manure pile until conditions are favorable for manure application. These temporary piles are frequently built on the edges of fields where the manure will ultimately be spread.

The most important advice to farmers using temporary manure piles is to make sure that no manure or runoff from the manure pile flows into streams, lakes or other waters of the state. Missouri Department of Natural Resources (MDNR) has developed a list of “best management practices” for temporary manure piles to help farmers protect water quality.

Any temporary pile should be placed to insure runoff from the pile will not reach any water resources. Suggested distances are at least 300 feet from wells, public water supplies, losing streams and sinkholes and at least 100 feet from streams and lakes. Piles also should be placed at least 300 feet from neighboring residences and public areas and at least 50 feet from property boundaries.

Care should be taken to minimize the potential for stormwater runoff to pass through the pile or be retained by the pile. If runoff flows down hill through the pile a one-foot berm should be constructed above the pile to divert runoff around the pile. Such berms are required when the pile is on land with a slope of 2% or greater.

The pile should have a shape that facilitates shedding water. Avoid creating pockets or depression that could collect water within the pile. Multiple piles should be placed to prevent damming of water between the two piles. There are no requirements to tarp a temporary manure pile.

Temporary manure piles are only appropriate for solid manure sources typically defined as having more than 25% solids content. Solid manure piles should not have seepage or require depressions in the soil grade to contain them.

Temporary manure piles may be maintained for no more than six months and a temporary manure pile cannot be in the same location two years in a row. The area of a temporary manure pile must be cropped in the subsequent crop year.

Typically there is some composting action in the manure pile. This will have the beneficial effect of killing weed seed and pathogens and concentrating phosphorus and potassium in the pile. Nitrogen is lost during composting but the nitrogen concentration in the pile will typically stay constant because loss of mass in the pile offsets the nitrogen lost.

Is it better to stack manure in the fall or apply it to fields? If you apply the manure into warm soils in the fall there is likely to be a lot of nitrate formation that has the potential to be lost over-winter. It would be less risky to temporarily stack the manure and apply it when soil temperature is cold (below 40 °F) or in the spring.

Permitted animal feeding operations have stricter requirements for temporary manure stacks. On land they control they can only stack manure in temporary piles for two weeks during the manure application season. Otherwise manure must be stored in approved permanent storages.