

Landowner \_\_\_\_\_



### IS TEMPORARY STORAGE NECESSARY?

Poultry litter management is an important part of all poultry feeders operation. Cleanout of poultry production buildings depends upon several factors including flock scheduling, equipment availability and custom operators' schedules. Ideally, litter should be spread at a proper rate as it is removed from the production buildings. However, cleanout activities do not always coincide with the availability of open cropland or proper climatic and soil conditions.

There will be times when growers must temporarily store or stockpile the litter between house cleanout and the time the litter is either land spread or moved off-farm. Properly planned, stockpiling can be an alternative which allows more flexibility in litter management. Improper management, however, not only results in loss of an economic resource due to reduced fertilizer value but presents the potential to reduce water quality when the leachate or litter solids from the pile are carried to surface or ground waters. Runoff and leaching from stockpiles and fields where litter has been over-applied can become an acute problem in the denser broiler and turkey producing areas of the state.

The primary purpose of a properly planned and designed litter-storage is to provide a place to temporarily store the litter until it can be spread on land operated by the poultry feeder or exported off site. State regulations require that litter be stored until it is spread, under dry conditions where runoff will not occur. So litter-storage facilities should be located on well-drained sites that will allow all-weather access for loading and unloading.

### TEMPORARY LITTER STACKS V. LONG TERM LITTER STORAGE

Any livestock waste stored in excess of six months should be contained in a roofed litter storage structure. A roofed litter storage structure is expensive to construct and the cost versus other alternatives should be considered.

Temporary litter stacks should be considered when the storage period is going to be less than six months. Temporary litter storage requires a water proof, flexible cover to prevent runoff and keep the litter dry.

### LOCATION OF STORAGE

Proper litter storage consists of providing areas which are prepared and maintained in a manner which prevents leachate or percolation through the pile and into the groundwater. In addition to

protection of the groundwater, measures shall also be used which prevent runoff from or through the pile.

Locate temporary litter stockpiles on high, well-drained ground so runoff can be controlled and directed to grass filter area. The pile should be built in a long, narrow shape to make handling easier.

Litter should not be stored on high water table soils or on shallow soils over rock outcropping without a liner to prevent nitrogen leaching and bacterial contamination of the groundwater.

The site should be graded to provide good under-drainage and to prevent frost heaving during cold weather. An improved gravel roadway will allow the stockpile to be used during bad weather. Cover the stockpile with plastic or an anchored bunker silo cover. Sharp anchors such as concrete blocks may damage the cover and should be used with care.

The following guidelines should be followed in selecting the location of the temporary storage pile:

- Do not locate the pile farther than 150 feet from the top of a slope unless overhead water is diverted away from the pile.
- Do not locate the pile closer than 1 foot vertically above the flood plain.
- Do not locate the pile within three feet of a water table without an impermeable liner.
- Do not locate the pile within 300 feet of domestic wells or springs.
- Do not locate the pile within 400 feet of a public water supply wells or surface waters.
- Do not locate the pile within 300 feet of any drainage that flows into a stream, pond, or other drainage way.
- Do not locate the pile within 300 feet of neighboring residences or public areas.

- Locate the pile as close as possible to natural windbreaks or other areas that protect the covering from blowing winds.

## FOUNDATION BENEATH THE PILE

Acceptable foundations for storage piles consist of the following when a high water table or on shallow soils over rock is **NOT** present:

- Natural soils with low permeability (< 6 "/hr). All trees, brush, and stumps shall be removed prior to litter placement. In addition, any rocks greater than 4 inches in diameter shall be removed.
- Reinforced concrete meeting the requirements in NRCS Conservation Practice Code 313, Waste Storage Facility.
- New synthetic liners at least 20 mil thickness, completely free of all tears or punctures. This liner shall be placed in an overexcavated area 6 inches deep and covered with compacted soil. Compacted soil shall be free of any material that could puncture the liner.
- One foot of compacted clay liner, constructed in two six inch lifts at optimum moisture content. Lifts must be free of trees, rocks, roots, etc. greater than 4 inches in diameter.

When the temporary storage is located on soils with a high water table or shallow soils over rock only concrete or synthetic liners are acceptable.

## COVERING

If litter is to be temporarily stockpiled, it should be covered with plastic sheeting (6 mil minimum thickness) held in place with weights, such as old tires or cinder blocks, with the edges of the sheeting buried, or by other anchoring systems. If this practice will be used often, a reinforced, ultraviolet-resistant cover will last longer and may be a good investment. A trench 12 inches deep shall be constructed around the litter pile and the edges of the sheeting buried in the trench.

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## **SIZE OF PILE**

Pile heights should be kept as small as possible. Pile heights must be kept at less than seven feet tall. High temperatures are generated in piled litter and under some conditions, spontaneous combustion can occur. If possible, piles should be kept in the five feet high range to avoid the possibility of fire.

## **OPERATION AND MAINTENANCE**

Soil pads may require reconstructing if soil is inadvertently removed during the waste removal process.

Permanent vegetation should be established on all disturbed areas.

Plastic or polyethylene coverings will deteriorate over time and need to be replaced.

The pile should be inspected after every major storm event and needed repairs completely promptly.

Practice recommended fly and rodent control measures around the production houses and in the vicinity of the litter stockpile.

Remove the litter stockpile as soon as possible and immediately renovate the site and seed to grass

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