

Nutrient Management Plan Special Conditions for Producers Utilizing Poultry Litter

September 2011

The following management practices should be utilized for operations utilizing poultry litter and not requiring a VPA or VPDES permit and located eastern Virginia (east of I-95):

1. Soil samples for litter application fields should be analyzed at least once every three (3) years for pH, phosphorus, potassium, calcium, and magnesium in order to maximize the efficient utilization of nutrients. A representative soil sample of each field should be comprised of at least twenty (20) cores randomly sampled throughout the field. Soil sampling core depth should be from 0-4 inches for land which has not been tilled within the past three (3) years, or 0-6 inches for land that has been tilled within the past three (3) years. Soil pH should be maintained at appropriate agronomic levels to promote optimum crop growth and nutrient utilization.
2. Soil test analysis will be performed by one of the laboratories listed below. Soil phosphorus levels must be determined using the Mehlich I or Mehlich III procedure.
 - A&L Eastern Laboratories
 - Agri-Analysis Testing Laboratory
 - AgroLab
 - Brookside Laboratories
 - Logan Labs
 - Midwest Laboratories (must request Mehlich III)
 - Spectrum Analytical Laboratories
 - Virginia Tech Soil Testing Lab
 - Waters Agricultural Laboratories (GA)
3. Soil nitrate test for litter application fields planted in corn or small grain is recommended. A representative soil sample of each field should be comprised of at least twenty (20) cores randomly sampled throughout the field at the time appropriate for that crop. Soil sampling core depth should be 12 inches for corn and 6 inches for small grain.
4. Representative litter samples should be analyzed at a minimum of once every three (3) years for the following: total nitrogen or total Kjeldahl nitrogen (TKN), ammonium nitrogen, total phosphorus, total potassium, calcium, magnesium, and percent (%) moisture. Separate samples shall be taken from all manure sources to be used for application (i.e. house, storage shed, etc.). All manure analyses shall be performed using laboratory methods consistent with *Recommended Methods of Manure Analysis*, publication A3769, University of Wisconsin, 2003 or other methods approved by the Virginia Department of Conservation and Recreation (DCR). Litter analysis results should be used to determine actual litter rates that do not exceed the nitrogen and phosphorus application rates specified in the nutrient management plan using either the most recent litter analysis results (not greater than 3 years old) or the facility's average results based on actual litter analysis.
5. All crops should be planted and harvested in a timely manner using commercially acceptable management practices.
6. Make litter applications at or near planting (within 30 days) or to existing actively growing crops to ensure that nutrients are properly utilized. Utilize the spreading schedule contained in the nutrient management plan and the spreading schedule in #21 of this document to determine appropriate litter application times and rates. Additional commercial fertilizer applications (especially nitrogen) should be made as a split application separate from the litter applications, either as a sidedress or topdress application.

7. For permanent hay or pasture, an adequate stand of hay and/or pasture crop species should be established prior to land application of litter. Commercially acceptable stands of the listed species should be maintained and other weeds and grasses controlled. All hay crops should be harvested in a timely and regular manner, removed from fields, and utilized for a suitable purpose.
8. Litter should be applied to application sites in a uniform manner.
9. Do not spread litter within the following setback areas:
 - 100 feet from wells or springs
 - 50 feet from surface waters (25 feet if injected or incorporated)
 - 50 feet from sinkholes*
 - 50 feet from limestone rock outcrops
 - 25 feet from other rock outcrops
 - 10 feet from agricultural drainage ditches (5 feet if injected)

*Waste shall not be applied in areas subject to concentrated flow generated by runoff from storm events such that it would discharge into sinkholes in the area.

10. Do not spread litter on soils that are saturated or ice or snow-covered in order to avoid manure runoff from application fields. Dry poultry waste may be applied to frozen ground within the times indicated by the spreading schedule only under the following conditions:
 - Slopes are not greater than 6%
 - A minimum of a 200 foot vegetative or adequate crop residue buffer is maintained between the application area and all surface water courses
 - Only those soils characterized by USDA as “well drained” with good infiltration are used, **AND**
 - At least 60% uniform cover by vegetation or crop residue is present.
11. For odor control and to reduce drift, avoid spreading on windy days.
12. If poultry litter is stackable and contains less than 40% moisture, storage may be utilized for up to 14 days on sites meeting the following criteria:
 - Slope is not greater than 7%
 - Site must be at least 100 feet from any surface water, intermittent drainage, wells, sinkholes, rock outcrops and springs
13. Storage sites used for greater than 14 days should be identified in this plan. These sites which are not covered by a roof must meet the following criteria:
 - The litter can not be stored for greater than 180 days, **and**
 - The waste is covered with a waterproof reinforced tarp (ultraviolet resistant is preferable) or impermeable sheeting of 6 mil thickness or greater that is anchored against wind on the perimeter and weighted on top, **and**
 - The waste stockpile is protected from stormwater running onto or under it.
14. Spreader calibration is extremely critical to ensure proper application rates. Calibration of equipment or verification of actual equipment application rates should occur at a minimum of once per year or when litter consistency is obviously different.
15. New waste storage facilities should be designed, constructed and operated in accordance with the USDA-NRCS *Field Office Technical Guide* and other appropriate NRCS design criteria.
16. Loading areas around manure storage facilities and poultry houses that are exposed to rainfall should be maintained so that manure residue is minimal

17. Composting of animal mortalities should be conducted in accordance with the latest guidance developed by Virginia Cooperative Extension.
18. Nutrient management plans that contain fields in which row crops will be grown will be revised at least once every three (3) years. Nutrient management plans that contain only hay or pasture fields will be revised at least once every five (5) years. Any such plan revisions will be submitted to DCR for review and approval.
19. This nutrient management plan should be amended or modified if animal numbers increase above the level specified in the plan; animal types including intended market weights are changed; additional imported manure, biosolids, or industrial waste that was not identified in the existing plan is applied to fields under the control of the operator; available land area for the utilization of litter decreases below the level necessary to utilize litter in the plan; and/or litter application fields have Mehlich I soil phosphorus levels at or above 55ppm (110 lbs/acre) where either cropping systems, rotations, or fields are changed.
20. These conditions do not override any more restrictive plan requirements if required by other specific legislative, regulatory or incentive programs which apply to a specific operator.

21. Litter spreading schedule:

POULTRY LITTER SPREADING SCHEDULE (East of I95)*

CROP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Alfalfa	[Solid Black]		[White]			[Solid Black]		[White]				
Bermudagrass	[Solid Black]			[White]				[Solid Black]				
Corn	[Solid Black]	[Vertical Stripes]	[White]				[Solid Black]		[White]			
Hay**	[Diagonal Stripes]		[White]								[Diagonal Stripes]	
Pasture**	[Diagonal Stripes]		[White]								[Diagonal Stripes]	
Sorghum/Millet	[Solid Black]		[Vertical Stripes]		[White]				[Solid Black]			
Soybeans	[Solid Black]		[Vertical Stripes]		[White]			[Solid Black]				
Small Grain	[Diagonal Stripes]		[White]			[Solid Black]		[White]			[Diagonal Stripes]	

* Do not spread poultry litter on soils that are saturated.

* Application of dry poultry litter should be avoided on frozen, ice or snow-covered ground. If necessary, applications may be made to fields that have:

- (i) slopes not greater than 6.0%, (ii) 60% uniform ground cover from crop residue or an existing actively growing crop such as a small grain or tall fescue with an exposed plant height of ≥ 3 inches, (iii) a minimum 200 foot vegetated or adequate crop residue buffer between the application area and all surface water courses, AND (iv) soils characterized by USDA as "well drained."

** Cool season grasses only: Fescue and/or Orchardgrass

[White Box] Spread poultry litter at the rates and times specified in the nutrient management plan.

[Solid Black Box] Do not spread poultry litter during these shaded months.

[Vertical Stripes Box] Poultry litter applications will not be made earlier than 30 days prior to planting on environmentally sensitive sites. On fields not listed as environmentally sensitive, poultry litter applications will not occur more than 60 days prior to spring planting.

[Diagonal Stripes Box] Poultry litter applications are not recommended during this period, but may occur if applied as follows: Do not exceed 40 lbs of plant available nitrogen during this entire period. Fields must have greater than 60% uniform live cover with plant height greater than three (3) inches and slope classification of C or less as identified in the county *Soil Survey*. Operator must account for litter nutrients toward crop nutrient needs, balancing all litter and/or nutrient requirements for that crop so as not to exceed crop nitrogen needs. The operator must account for nitrogen residuals toward subsequent crops, balancing all litter and/or nutrient requirements for that crop so as not to exceed crop nitrogen needs. to exceed crop nitrogen needs.