

Good Neighbor Guidelines for On-farm and Offsite Application of Livestock Waste



GOOD NEIGHBOR GUIDELINES FOR ON-FARM AND OFFSITE ANIMAL WASTE MANAGEMENT

PURPOSE

- Protect Florida's environment.
- Increase public understanding of the animal and agriculture industry.
- Improve community relations by implementing best management practices to address unwanted conditions associated with on-farm and offsite application of animal waste.

FLORIDA WATERS

GROUND WATER PROTECTION

Ground water is one of Florida's most vital resources supplying most ecosystems and providing drinking water for 90% of the state's population. Since the state's geology makes ground water vulnerable to contamination, its protection is crucial. The agricultural industry can take steps towards effectively protecting Florida's ground water:

Stockpiling

Apply animal waste at agronomic rates to prevent the leaching of nutrients past the root zone. Dairies typically use liquid manure management systems where the solids have considerably fewer nutrients than effluent from wastewater storage lagoons. Be aware that agronomic rates may be exceeded by multiple applications and/or staging large piles of solids or sludge for an extended period of time in the fields.

Poultry operations and horse farms typically use dry manure management systems where the solids contain higher amounts of nutrients. Care should be taken to prevent over application of nutrients (See the Contacts and References section on page 7 for contact information related to managing agronomic rates.)

Composting

Poultry operations and horse farms often use composting to convert bedding and manure into a rich and odor-free soil amendment for use on the farm or for sale. Composting is a method whereby the organic component of the solid waste is biologically decomposed under controlled conditions to a state in which it can be handled, stored, and applied to the land without adversely affecting the environment. A key phrase in the above definition is "under controlled conditions." This distinguishes composting from the biological decomposition processes that occur naturally, and it also differentiates composting from some objectionable

practices such as open dumps, piles of rotting manure, and other accumulations of waste materials. The Department of Environmental Protection issues permits for solid waste composting operations, but not for routine farm activities. Check with DEP about options you are considering and whether a permit would be needed.

Waste Analysis

Use available laboratories for waste analysis to ensure agronomic rates are not exceeded. The Livestock Waste Testing Lab in Live Oak provides free analysis of livestock waste and can be contacted at (386) 362-1725. The Florida Rural Water Association at 1-800-872-8207 provides free assistance for collecting and transporting waste samples to the Live Oak laboratory. (See the back of this booklet for additional contact information for waste analysis and transportation.)

Manure Spreader Calibration

Spread waste evenly on fields or pastures to prevent high nutrient concentration areas. Use a calibrated manure spreader to spread waste; front-end loaders are not appropriate for waste application.

Planting Crops

To contain and use nutrients effectively, plant crops as soon as possible following the application of animal waste. If there is concern about ammonia toxicity effects on seed germination, contact a crop consultant.

Cover Crops

To recover and retain residual nutrients, use cover crops between cropping periods where possible.

Sinkholes

Maintain a sufficient non-application buffer zone and/or berm to prevent applied waste and rainwater in contact with waste from entering sinkholes. The recommended buffer zone width on level ground with good vegetative cover is 50'. If poor vegetative cover is present or anticipated, or if the soil surface slopes towards the sinkhole, then buffer zones up to 100' should be considered. (Contact the NRCS representative listed in the back for additional information regarding sinkhole buffers.)

Buffer Zone Vegetation

For optimal nutrient uptake in the buffer zone, use the recommended grass species for the soil series present and geographic location. On moderately drained soils establish a regionally appropriate improved Bermuda grass, and on slightly poor to poorly drained soils establish bahia grass. (Contact the NRCS or IFAS representatives listed in the back for additional information regarding appropriate buffer widths and grass species.)

Well Protection

Maintain a sufficient non-application buffer zone and/or berm to prevent applied waste and rainwater in contact with waste from entering wells or other potable water sources. Maintain a 200' non-application buffer zone around a private potable water source and a 300' buffer zone when the private potable water source is located down slope of the waste application site. A 500' buffer zone is required for potable community wells and water sources.

SURFACE WATER PROTECTION

With over 50,000 miles of rivers and streams, 7800 lakes, and 4000 square miles of estuaries, Florida has an abundance of surface waters that are used for a variety of purposes. Protection of surface waters is crucial towards safeguarding aquatic life and human health. Agriculture can take steps towards effectively protecting Florida's surface waters:

Agronomic Rates

Prevent any unnecessary discharge of nutrients to surface waters of the state by spreading animal waste and other fertilizers on crops or pastures at agronomic rates.

Timing of Waste Application

To prevent surface runoff of the waste to surface waters, do not apply animal waste before or during storm events or when the ground is saturated.

Non-Application Zones

Do not apply animal waste in or in close proximity of surface waters of the state, wetlands, stormwater ditches or any conveyance system that is connected with bodies of water.

Surface Water Buffer Zones

Maintain a sufficient non-application buffer zone and/or berm to prevent applied waste and rainwater in contact with waste from entering water bodies, streams, ponds, or wetlands. The recommended buffer zone width on level ground with good vegetative cover is 50'. If poor vegetative cover is present or anticipated, or if the soil surface slopes towards the water body, then buffer zones up to 100' should be considered. (Contact the NRCS representative listed in the back for additional information regarding buffer zones.)

REDUCING UNWANTED CONDITIONS

Improper application of animal waste can lead to unpleasant living circumstances for surrounding communities. Minimizing odors and managing waste appropriately illustrates a willingness to be a good neighbor.

ODORS

Staging Solids in Fields

Manage offsite waste application areas to minimize odors and prevent the occurrence of nuisance conditions for surrounding neighbors. Avoid staging manure or spoiled feed in fields for longer than necessary. Staging times for manure or waste feed prior to land application should be kept to a minimum.

Meteorological Considerations

When possible, avoid spreading waste materials when conditions are present that would increase odors being carried offsite. Those conditions include stagnant periods, when there is minimal mixing (no odor dilution), and when residences are located downwind.

Incorporating Solids

To reduce odors, evenly spread and, where applicable, incorporate the solids into the ground. Use a calibrated manure spreader; front-end loaders are not appropriate for waste distribution. When possible, avoid spreading waste near residences on weekends.

FLIES

Food Sources

Manage offsite waste application areas so flies are not presented with a highly concentrated food source. Fly food sources include spoiled silage, sand bedding, and manure solids; avoid staging piles in the fields for longer than necessary prior to land application.

Technical Assistance

If flies substantially increase in numbers following animal or silage waste application, immediately till waste into the soil or utilize a drag harrow. Contact University of Florida Entomologist Dr. Jerry Butler at (352) 392-1901, extension 152 for additional information. (Additional contact information listed in the back.)

Pesticides

If pesticide applications are necessary, follow all product application and safe handling guidelines provided by the manufacturer.

OTHER

RECORD KEEPING

Importing & Exporting Animal Waste

Whether you are the provider or receiver of animal waste material, maintain a record of the day, amount, and source of waste removed from or brought to the site.

Field Application Records

Maintain records on nutrient application rates on a field-by-field basis. Use recent waste analysis or an estimated nutrient content of the applied waste to calculate application rates. (Contacts listed under the agronomic rate section of the contacts and references section can provide information related to nutrient application record keeping.)

COMMUNITY RELATIONS

Public Perception

The public may assume that standing piles of material from dairy farms, horse farms, chicken farms or any animal feeding operation consist wholly of manure. If piles of muck or bedding material, with low nutrient content, are to be staged for any length of time, notify neighbors that the piles are not manure and do not present a threat to ground water or the environment. Routinely spread piles with low nutrient content to avoid public misperception.

Public Education

If presented with the opportunity, inform surrounding neighbors that the application of animal waste is a beneficial reuse of a waste product, improves soil conditions and reduces the need for commercial fertilizer.

Contact Number

Provide surrounding neighbors with a business contact number to relay concerns.

Distribution of Guidelines

Regardless of who is responsible for management of the waste, improper handling will reflect badly on the source of the waste. If you distribute animal waste to other farmers or property owners, provide them with a copy of these guidelines.

Agency Contacts

If you receive complaints or concerns from the public regarding your application activities, contact the appropriate state agencies and local elected officials, and inform them of the situation.

Public Outreach Suggestions

Make available small quantities of manure for the neighbors to use in their gardens, flowerbeds, or newly established lawn. Sponsor local programs, organizations or youth leagues.

CONTACTS AND REFERENCES FOR ANIMAL WASTE MANAGEMENT

ARGONOMIC RATES

- ➔ Natural Resources Conservation Services (NRCS)
Steve Boetger, State Agronomist
(352) 338-9548
Website: <http://www.fl.nrcs.usda.gov>
- ➔ University of Florida Agricultural & Biological Engineering Dept.
Dr. Roger A. Norstedt
(352) 392-1864 ext. 103 Email: roger@agen.ufl.edu
Website: <http://www.agen.ufl.edu>
- ➔ Florida Rural Water Association
Jack Hodges, Agricultural Wastewater Technician
1-800-872-8207 or (850) 668-2746 Email: frwa@ix.netcom.com
Website: <http://frwa.net>
- ➔ Florida Department of Environmental Protection (DEP)
Tallahassee Division of Water Resource Management (850) 487-1855 or
contact the Industrial Wastewater Section of the nearest DEP district office.
Website: <http://dep.state.fl.us>

BUFFER ZONES

- ➔ Natural Resources Conservation Services (NRCS)
Greg Hendricks, State Resource Conservationist
(352) 338-9543
Website: <http://www.fl.nrcs.usda.gov>

COMPOSTING

- ➔ University of Florida Agricultural & Biological Engineering Dept.
Dr. Roger A. Norstedt
(352) 392-1864 ext. 103 Email: roger@agen.ufl.edu
Website: <http://www.agen.ufl.edu>
- ➔ Florida Backyard Composting Tutorial and Information
Website: <http://compost.ifas.ufl.edu/>
- ➔ Composting Horse Manure
SS-ANS-001E. A. Ott, E. L. Johnson, R. A. Nordstedt
http://edis.ifas.ufl.edu/BODY_AN040
- ➔ On-Farm Composting of Poultry Litter
P&SS Info # 319, Walker, F
<http://www.agriculture.utk.edu/ansci/poultry/PSS319.htm>
- ➔ A Practical Guide for Composting Poultry Litter
MAFES Bulletin 981 published June, 1992. Brake, J. D.
<http://www.msstate.edu/dept/poultry/complit.htm>

- ➡ Florida Department of Environmental Protection (DEP)
Tallahassee Solid Waste section (850) 488-0300 or contact the Solid Waste Section of the nearest DEP district office. Website:
http://www.dep.state.fl.us/waste/categories/solid_waste/pages/composting.htm

FLY CONTROL

- ➡ University of Florida Entomology and Nematology Dept.
Dr. Jerry Butler
(352) 392-1901 ext. 152 Email: jfb@gnv.ifas.ufl.edu
Website: <http://entnemdept.ifas.ufl.edu>

LABORATORIES (FREE ASSISTANCE)

- ➡ Livestock Waste Testing Lab (analysis free of charge - except for grant-funded research)
Justin Jones, Research Coordinator
7580 CR 136
Live Oak, Florida 32060
(386) 362-1725 Email: JTJones@mail.ifas.ufl.edu
Website: <http://nfrec-sv.ifas.ufl.edu>
- ➡ Florida Rural Water Association (FRWA) (transporting samples - free of charge)
Jack Hodges, Agricultural Wastewater Technician
1-800-872-8207 or (850) 668-2746 Email: frwa@ix.netcom.com
Website: <http://frwa.net>

OTHER CONTACTS

- ➡ Florida Department of Agriculture & Consumer Services (FDACS)
Website: <http://doacs.state.fl.us>
- ➡ Local Water Management District
Website: http://www.dep.state.fl.us/secretary/watman/wmd_map.htm
- ➡ Florida Cooperative Extension
Website: <http://edis.ifas.ufl.edu/>

- * This document was produced with the cooperation of the Florida Dairy Industry, dairy consultants, various state agencies listed above, and other livestock industry stakeholders.
- * Please distribute these Good Neighbor Guidelines to applicable businesses, farms, dairies, and homeowners.
- * These guidelines may be subject to revision based on new information or improved management practices.

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