



CFOs

Confined Feeding Operations

Manure Rules in Indiana

Yingying Hong and Paul Ebner

Purdue Animal Sciences

Series Publications

1. A Note on Risk
2. What is a Confined Feeding Operation?
3. **Manure Rules in Indiana**
4. Antibiotics and Livestock Production
5. MRSA and Livestock Production
6. Unabsorbed Antibiotics and the Potential Contribution to Antibiotic Resistance
7. Impact of CFO Odor and Odor Setback Models
8. CFO Emissions and the National Air Emission Monitoring Study
9. Role of the Extension Educator on the Plan Commission
10. CAFOs and Community Conflict: Understanding Community Conflict
11. CFOs and Community Conflict: Understanding Conflict Between Individuals

Manure generated from livestock and poultry production contains high concentrations of what are often referred to as nutrients. These are compounds such as nitrogen, phosphorous, and potassium. Manure, like human waste, also contains large quantities of microorganisms. These microorganisms are largely reflections of the bacteria, viruses, and protozoa that inhabit the intestines of animals. As with human waste, manure can sometimes contain disease-causing microorganisms. In most cases, manure from livestock operations is stored for some time under the livestock building or in larger lagoon-type structures. This allows the manure to decompose before it is applied to land as a fertilizer. Improper manure application, over-application, or manure spills, however, can introduce excessive nutrients and disease-causing microorganisms into the environment. While not common, both CFOs and non-CFOs (follow this link for a **current definition of CFO**) have been implicated in water contamination and disease outbreaks. CFOs have traditionally been of particular concern due to the larger amount of manure they generate.

Since 2007, two new rules were established in Indiana regarding manure management at CFOs. First, effective July 28, 2010, any person that applies, sells, or transports manure from a CFO is required to be certified by the Office of Indiana State Chemist (OISC) or trained by certified personnel. For details of this rule see: Certification for Distributions and Users of Fertilizer Materials (355 IAC 7-1-1) <http://www.in.gov/legislative/iac/T03550/A00070.PDF?&iacv=iac2016>. Exceptions are made in the cases where the total amount of manure is less than 10 yrd³ or 4,000 gallons in a year. Effectively all CFOs and most AFOs, however, produce quantities of manure above this threshold. All types of manure uses, except for distribution only (fertilizer distribution business license required), require certification, the details of which can be found here: www.oisc.purdue.edu/pesticide/fert_app_cert_rule.html. In recent years, there has been increased transportation of manure into Indiana

from neighboring states, namely Ohio. The use of all CFO manure in Indiana, regardless of where it was originally generated, is regulated under this rule.

In 2013, OISC published another rule, the “Fertilizer Material Use, Distribution, and Record Keeping Rule” (355 IAC 8). The aim of this rule is to ensure manure handling is done using good manure management practices. Again, the rule is applied to farms in Indiana that use or distribute manure, with the exception to manure application of less than 10 yrd³ or 4,000 gallons a year. In contrast to the previously described rule, this rule is not limited to manure produced from CFOs. CFOs, and most AFOs — definitions of AFO, CFO, and CAFO **can be found here** — in Indiana would produce manure in quantities above these thresholds and would all be subject to this rule. The rule provides detailed requirements for setbacks, manure staging, application monitoring, and record keeping, as well as restrictions on manure application under specific conditions (e.g., highly erodible land, frozen or snow-covered land). A summarized list of requirements can be found here: www.oisc.purdue.edu/fertilizer/pdf/fert_use_rules_and_faq.pdf.

The intent of both rules is to provide state-level training and regulation of manure management and application in order to protect land from over-fertilization and prevent nearby waterways from contamination. Indirectly, through the enforcement

of good manure management practices, which prevent manure spills and runoff, these two rules may also help reduce the potential spread of manure-associated disease-causing microorganisms. Data supporting this supposition, however, are not yet available.

Both the Indiana Department of Environmental Management and the Indiana Office of the State Chemist maintain publicly available and searchable databases documenting all types of violations, regardless of the industry, and any associated penalties. These databases can be found here:

IDEM (Virtual File Cabinet/VFC):

<http://vfc.idem.in.gov/DocumentSearch.aspx>

OISC (oiscWEB Application Portal):

<https://www.oisc.purdue.edu/oiscweb/#!/publicrecords/investigations/searchreports>

References

Office of Indiana State Chemist. Rule 355 IAC Article 7. Certification for Distributors and Users of Fertilizer Material. Available at: <http://www.in.gov/legislative/iac/T03550/A00070.PDF?&iacv=iac2016>.

Office of Indiana State Chemist. Rule 355 IAC Article 8. Fertilizer Material Use, Distribution and Recordkeeping. Available at: <http://www.in.gov/legislative/iac/T03550/A00080.PDF>.