

North Carolina Poultry Industry Joint Area Newsletter

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North Carolina 15 NCAC 2T .1300 Regulations *Anne Coan, NC Farm Bureau Public Policy*

Environmental rules that regulate the way we manage our litter are a reality that we must face. New rules called the 2T regulations went into effect on September 1, 2006. The growers that are most effected by these rules are those that utilize a 3rd party applicator now known as a “manure hauler.” Now more than ever, it is important for each of you to keep your waste management plan current and up to date and to follow the rules set forth by the 2T regulations. The poultry area agents are always available to help you accomplish this task.

Below is a summary written by Anne Coan, N.C. Farm Bureau Public Policy Team Member, on the 2T regulations.

North Carolina 15 NCAC 2T .1300 regulations – summarized – see rule for details
(Note: term “rule” and “regulation” are used interchangeably.)

New regulations on animal waste management and manure haulers (2T .1300 and .1400) were adopted by the state Environmental Management Commission in May 2006. **The state 2T rules are effective September 1, 2006.** The rules can be accessed at: <http://h2o.enr.state.nc.us/lau/main.html>
On the page look under: 15A NCAC 2T Regulations Passed by Rules Review Commission for a link to the rules. The .1300 and .1400 sections are located on pages 170 – 180.

The .1300 rules retain the permitting by regulation (“deemed permitted”) concept, and a dry litter operation can remain deemed permitted as long as the operation does certain things.

Poultry operations that use a dry litter system with more than 30,000 birds and do not have a discharge are deemed permitted:

- A. if records are maintained for 3 years (see rule for what records);
- B. if the waste is applied at no greater than agronomic rates;
- C. if litter is stockpiled not closer than 100 ft from a perennial stream or perennial water body;
- D. if litter is not stockpiled uncovered for greater than 15 days; and
- E. if a manure hauler is used, records must be maintained (see rule for what records).

Land application sites under separate ownership from the waste generator are deemed permitted if they are receiving animal waste from animal waste management systems that themselves are deemed permitted, when all of the following conditions are met:

- A. the waste is applied at no greater than agronomic rates; and
- B. a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial water body.

Note: The Director of the Division of Water Quality may determine at any time that an animal waste management system should not be deemed permitted and require the system operator to obtain a permit to operate the system.

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NC 15 NCAC 2T .1300 Regulations

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Federal Rules Proposed – Comments Due August 29, 2006

NPDES permits will be required of those operations that have a discharge, or that propose to discharge, under the language proposed in the newly proposed federal CAFO rule. The NC requirement for an NPDES permit is stated under 2T .1305. It states that those operations required to obtain an NPDES permit under state law or under 40 CFR Sec. 122.23 must have an NPDES permit. 40 CFR Sec. 122.23 is what is proposed for amendment in the new federal rule. Unfortunately, it is unclear what is meant by “propose to discharge” in the proposed federal rule and that is one of the areas where EPA is seeking comment in order to better write this federal rule. Comments on this federal rule are due to the EPA by August 29, 2006. Material on this proposed rule is located at:

<http://cfpub.epa.gov/npdes/afo/aforule.cfm>

Manure Haulers 15 A NCAC 2T .1400

(summarized – see rule for details)

(Note: term “rule” and “regulation” are used interchangeably.)

A Manure Hauler means any person who accepts or purchases animal waste and land applies the animal waste on land not covered by the animal waste generator’s permit.

A manure hauler is deemed permitted if he/she land applies a total of 100 tons of animal waste per calendar year and:

- A. applies at no greater than agronomic rates; and
- B. a setback of at least 25 feet is maintained from a perennial stream or perennial water body during land application.

A manure hauler is deemed permitted if he/she land applies a total of more than 100 tons of animal waste or less per calendar year and:

- A. applies at no greater than agronomic rates;
- B. animal waste is not stockpiled uncovered for greater than 15 days;
- C. animal waste is not stockpiled within 100 feet of a perennial stream or perennial water body;
- D. a setback of at least 25 feet is maintained from a perennial stream or perennial water body during land application;

- E. registers with the Division of Water Quality;
- F. submits an annual report; and
- G. the field on which animal waste is applied has had a soil test within the last 3 years.

The section (.1404) on Annual Reports describes what information must be reported by those manure haulers that apply between 100 and 750 tons per year and by those that haul more than 750 tons per year.

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Conserve Feed Pellet Quality at the Farm to Improve Feed Conversion and Flock Uniformity

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Feed conversion and flock uniformity are affected by several different management factors. Physical form of feed is essential to maintain optimum feed intake and broiler performance. The pelleting process increases feed intake and reduces the time and energy that

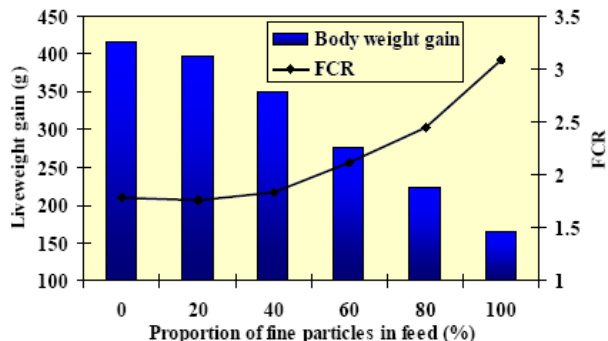


Fig.1: Effects of fine particles in the feed on Broiler performance. (Quentin *et al.*, 2004)

broilers need to ingest feed compared to mash feed, leaving them more energy available for growth. Less time spent eating indicates more feeder space available for other birds to eat and consequently better flock uniformity.

Conversely, pellet breakage and accumulation of fine particles in the feed can be very detrimental for broiler performance as illustrated in **Figure 1**. Feed mills make considerable efforts to offer good pellet quality since integrator companies are conscious about the importance of this factor to their profitability.

Transportation, storage in feed bins and automatic feeders normally degrade pellet quality to some extent. Nevertheless, it is expected that around 70% of the pellets should arrive intact to the feed pans to guarantee the best possible feed conversion. Unfortunately, at some farms it is commonly observed that broilers receive the pelletized feed in a mash form. This leads to flock unevenness and lower broiler performance compared to other flocks fed the same type of feed but in a true pellet form.

Growers can help maintain pellet quality at the farm by periodically inspecting their automatic feed conveyor equipment. It is important to guarantee a smooth transfer of feed throughout the system. Check feed equipment for loose hardware after every flock

and make sure that maintenance and/or repairs are routinely done by skilful personnel.

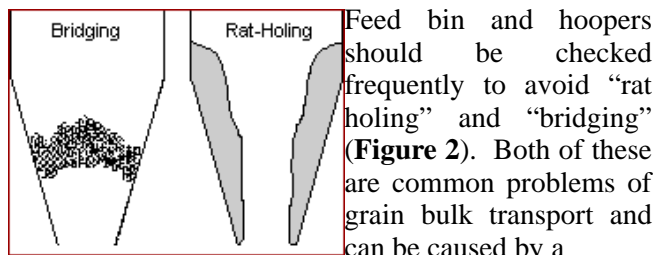


Fig. 2: Feed bin and hooper problems reduction in the cross sectional area when feed accumulates along the sides. This leads to the feed becoming compacted and forming stresses within the center that leads to a breakage of feed pellets that are able to still flow to the feeder line. Some common causes of these problems are the accumulation of feed fines from previous batches, elevated humidity that causes clogging in the boot of the feed bin or hoopers, or too much feed brought from the feed bin to hooper and not delivered to the feeder line and pans at the same velocity.

To prevent “over packing” in the hooper and auger, assess the rates of unloading feed from the feed bin to hooper and then to the line. Allow the feed hopper to empty for 30 seconds. Agitator arms in the hopper and adequate calibration of the control pans can also help to reduce pellet breakdown at this stage. When the feed reaches the control pan, the feeder line should shut-off. It is important that the feed setting at the end control pan be the same as the other feeder pans so that the birds activate the feeder.

Keep the feed line level and check for uniform delivery of feed. Uniformly adjust the feed line height to bird size across the house. The telescoping drop tubes, available in some feed systems, should be used to compensate for uneven floor conditions. However, do not make these adjustments by bending feed lines. Repair broken cables in the suspension system as soon as possible and keep hangers centered. Grease the winch every 6 months with 1 to 2 shots of common industrial or automotive grease. Do not over grease the winch. The oil in the gear heads should be replaced every 12 months.

Avoid kinking the feed lines and augers. Kinks create stresses, friction and wear in the auger that will act as a grinder increasing feed breakdown and separation. Small kinks may be straightened. Large kinks must be removed and the auger brazed back together. Use extreme caution when working with the auger. The auger is under tension and may spring back causing personal injury. Wear protective clothing, gloves, and

Conserve Feed Pellet Quality at the Farm to Improve Feed Conversion and Flock Uniformity

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safety glasses when working with the auger. Initial selection of feed equipment is very important to facilitate these management practices. Coreless (centerless) augers in the feeder line are more effective at maintaining pellet quality than solid core screw augers.

Paying attention to these small details along with your periodic observations and creativity can help in maintaining the necessary pellet quality to assure the best flock uniformity and feed conversion possible under your farm conditions.

Phosphorus in North Carolina Soils

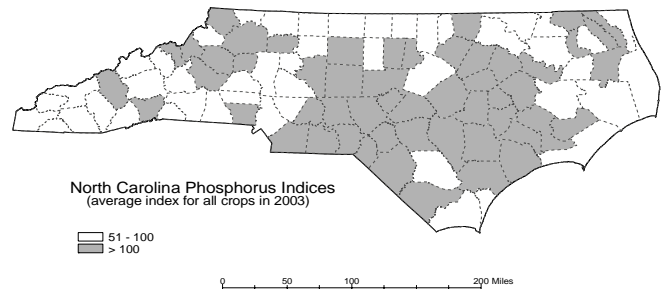
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Originally, soils in North Carolina contained little phosphorus. Over the years, as more nutrients were added to the soil – both as commercial fertilizers and animal and poultry waste – phosphorus levels in our soils have increased dramatically. North Carolina is currently ranked 3rd highest in soil test phosphorus within the United States. Approximately 70% of our soils need very little or no phosphorus to successfully grow our crops and forages since current levels are sufficient. Today, it is well known that some soils have a limited capacity to hold phosphorus. Excessive phosphorus can leach into groundwater as well as move across fields attached to soil or with unincorporated waste residue into surface waters.

The map below shows the average soil test phosphorus levels in each county within North Carolina. An index between 51 and 100 represents a soil testing high in phosphorus and needing no additional phosphorus, except sometimes as a starter. A phosphorus index above 100 is considered very high. Recent research indicates that soils with a very high phosphorus index do not even need starter phosphorus.

Over 50% of N.C. counties have an average soil test phosphorus index greater than 100. Some of these very high soil test values are due to commercial fertilizer use on row crops, particularly tobacco. Wilkes County has the highest average soil test value of 255, followed by Duplin County at 195. Both counties have large amounts of animal and poultry production. Since animal and poultry waste are generally applied to soils at nitrogen rates, excess phosphorus from waste builds up over time to dramatically increase soil test levels.

Average Soil Test Phosphorus Index Values for Counties in North Carolina



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