



United States Department of Agriculture  
Natural Resources Conservation Service

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# Commerical Poultry

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## Don't Yet Have a Vegetative Environmental Buffer? It's Not Too Late

Jim Passwaters-DPI Vegetative Environmental Buffers Coordinator

This summer it was hot enough to melt the wax in my ears! I, for one, am happy to say goodbye to the bikinis and all of the out-of-state traffic and welcome the cooler weather of autumn. Autumn is also the perfect season for planting trees and grasses.

As DPI's Vegetative Environmental Buffers Coordinator, I have been very busy working with growers on designing farm-specific buffer plans and am ready to work with you.

One of the biggest challenges in recent months has been locating enough trees to plant. With the downturn in the home building industry, some nurseries have cut back on growing trees and I have been searching up and down the east coast to find trees suitable for the program.

One of the most popular changes in the buffer program has become the planting of warm season grasses. These grasses thrive in close location to the sidewall and tunnel fans. Growers quickly are realizing the ability of these grasses to capture dust and feathers. They are drought tolerant and easy to maintain.

If you are interested in working with me on getting a buffer designed and installed, call me at 302- 236-0470. In addition to drawing the plans, I'll help identify trees sources, cost share opportunities, and companies that can help with the installation of the plants and the irrigation sources.



# Early Nutrient Intake is Vital to Bird Performance

## Jennifer Timmons - University of Maryland Eastern Shore

As most of us know, the day chicks are placed in the house is one of the most crucial days of the flock. The brooding environment in which the chicks are placed will usually dictate how the flock performs later on in life. We have all been told that air quality, heat, and free access to feed and water are three main components of the brooding phase that contribute to a “good start” for chicks. In fact, ignoring the first two components may impact chick behavior and health, and ultimately impact feed and water intake.

A newly hatched chick receives all of its nutrients from the egg yolk. The absorption of essential nutrients and hen antibodies from the yolk sac are critical for survival during the chick’s early life. The yolk sac is typically used up within three days after hatching. However, as soon as feed enters the gut the residual yolk within the chick is absorbed. Chicks that are provided access to feed promptly after hatch demonstrate faster utilization of yolk nutrients which may provide a useful boost to chick growth.

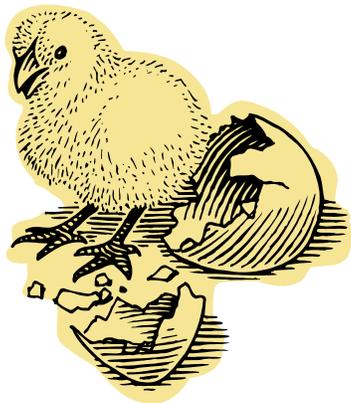
Generally, residual yolk sac absorption is quick during the first 48 hours, but by three days of age the absorption rate rapidly declines. If some of the chicks have not started to eat for one or two days after hatch, the growth rate will be uneven and the average flock weight at movement will be significantly reduced.

Today’s broilers now reach slaughter weight at a younger age and the first week represents a larger percentage of the bird’s life. Therefore, how chicks are raised during their first week of life will have a significant impact on flock performance at movement. A chick’s body weight increases significantly during the first week and substantial changes in gut and muscle weight occurs from 0-7 days of age. Limiting feed and water access in the first few days of a chick’s life can decrease final body weight and weaken the chick’s ability to respond to a disease challenge.

A chick’s weight should quadruple during the first week. This rate of growth does not occur any other time in the bird’s life. A target weight for one week old chicks is 160 grams or greater (0.35 pounds). So how do you know if your chicks are receiving enough feed in the first week? A simple way to assess the quality of “chick start” is by evaluating the fill of their crops 24 hours post placement. Collect samples of 30-40 chicks at three or four different locations in the house and examine each chick’s crop. Chicks that have found feed and water will have full, soft rounded crops. If the crop is full (and hard) but the texture of the feed is obvious, the chick has consumed mainly feed and not enough water. Drinkers should be checked to ensure adequate water is available. Ninety five to 100 percent of the chicks sampled should have crops that are full of both feed and water.

Using supplemental feed lids (about one lid per 75-100 chicks) for the first week increases the surface area of feeder space and appears to enhance early feed intake. It is important that supplementary feed never run empty, and feed is refreshed at least three times per day to stimulate feed consumption. Providing small amounts of feed several times a day is a better management practice than having too much feed out at any given time which promotes feed waste.

Proper management of feed equipment is essential to ensure feed access is not limited. I know that this sounds like a simple statement, but I have known growers to tolerate a bad switch in a control pan or cross auger, flock after flock, without repair and as a result feed lines run empty. Feeder height must also be adjusted throughout the flock to provide easy access to feed at all times. Also, remember to keep litter level under feed (and drinker) lines. Excessive hills and valleys can increase feeder (and drinker) height variability which can also influence the bird’s ability to reach feed (or water).



In addition to feed intake, constant access to water is also important to chick health and performance. Water is the most essential nutrient of the bird’s diet, but its significance is often overlooked. Sometimes with nipple drinkers, constant water availability to birds is taken for granted and water availability may not be checked as often as feedlines are checked for feed. Especially at chick placement, it is important that water pressure and drinker height are managed to provide chicks easy access to water. Occasionally during layout, nipples can stick making it difficult for chicks to trigger the nipple for water. Triggering nipple drinkers at placement will stimulate chicks to approach the drinker line and take a drink of water.

Reports show that delayed feeding of newly hatched chicks slows the development of body systems that begin growing in the chick only after the addition of nutrients.

**Early Nutrient... continued**

Gut and immune system development play an essential role in the early stages of chick growth and survival. At hatch these systems are growing at rapid rates and any reduction in growth or damage incurred to these systems early in a chick's life may impact bird performance later on in the flock.

Several studies have reported lower weight gains in birds that were delayed feeding at placement. One study evaluated the effect of delayed feeding at placement on the body weight gain of 39 day old broilers. One group of chicks were delayed feeding for 34 hours while a second group of chicks was provided free access to feed immediately upon arrival to their facilities. Upon completion of the study, the average final body weight of birds fed immediately at chick placement was about 10% higher (0.5 lbs) compared to the body weight of birds that were delayed feed. Applying the bird weight differences observed in this study to commercial broiler production numbers translates to an increase of 12,500 lbs/25,000 birds when feed is provided promptly to chicks upon placement. Results of this study may seem extreme and bird weight differences observed in other studies may be less; however, this example clearly illustrates how early feed intake at placement can influence the weight of the flock at movement.

## MDA & MDE Nutrient Management Record Keeping Requirements

This document summarizes the required records that farm operators must keep to satisfy requirements of Maryland Department of Agriculture (MDA) Nutrient Management Regulations and requirements set forth by the Maryland Department of the Environment (MDE) Animal Feeding Operation CAFO/MAFO General Discharge Permit (if applicable).

*Table 1. Required records for Animal Feeding Operations.*

Record	Description	Agency Requiring	Notes
Animal Mortality & Disposal	Date and number of dead animals collected and disposal method.	MDE	Daily record
Documentation of Manure Storage Conditions	Design volume and days of capacity; any deficiencies in the manure handling system and actions taken to correct (for example: damage due to fire or storm, date occurred, how damage was fixed and date of repair)	MDE	Weekly inspections of manure storage facility conditions are being enforced on poultry operations.
Documentation of Discharges	Date, time, and estimated quantity of any discharges and steps taken to correct	MDE	
Manure Available for Use/Removal	Estimate of removal of manure from poultry house (crust-out, total cleanout, center cut, etc) and destination (manure shed or export)	MDA; MDE	Forms available from University of Maryland and MDA
Manure Analysis*	Copy of laboratory nutrient analysis of sample of manure produced on-farm (taken annually)	MDA; MDE	If the operator also farms cropland, a manure sample is also required by MDA and should be in your certified NMP.
Animal Information	Type and number of animals kept on-farm and any changes in animal numbers	MDA; MDE	
Manure Export/Transfer	Record of manure that leaves the farm – date, quantity (tons/gallons), and destination (Name/Address)	MDA; MDE	Forms available from University of Maryland and MDA
Comprehensive Nutrient Management Plan (CNMP)	Retain approved CNMP and documentation related to updates or changes to your CNMP	MDA; MDE	CNMP includes NMP for that period, retain for MDA also

\* Contact University of Maryland Cooperative Extension for assistance with getting manure analysis.

Sources: Maryland Department of the Environment (MDE) General Discharge Permit for Animal Feeding Operations, No. 09AF. Maryland Department of Agriculture (MDA) Nutrient Management Regulations COMAR 15.20.07.

# **Working with Maryland's CAFO Regulations**

## **Assistance Available to Maryland Poultry Growers**

### **Toni Riggi -CAFO/MAFO Coordinator**

Maryland Poultry Farmers have enough to worry about. Environmental regulations add tremendously to these worries. Is my production area free of all potentials for a discharge of nutrients? Are my Best Management Practices working to their maximum ability to prevent such discharges? Do I have any maintenance issues? Is my paper work current and organized? Is there more I can do? Who can I contact to assist me with these concerns? Well, the Maryland Department of Agriculture is here to help answer these questions and more.

The Maryland Department of Agriculture (MDA) has created a position to assist poultry operations on the Eastern Shore with the current Confined Animal Feeding Operations (CAFO) and Maryland Animal Feeding Operations (MAFO) regulations and inspections. Called on by the Legislators of the Eastern Shore Delegation, MDA formed the position now known as the CAFO/MAFO Coordinator. To fill this need, MDA turned to Tony Riggi, a thirteen year veteran of the Department's Office of Resource Conservation. Mr. Riggi is a 1998 graduate of Delaware State University with a Bachelor of Science Degree in Soil and Water Management. Starting in the Caroline Soil Conservation District, Mr. Riggi worked as a Technician. From there he went on to be the Agricultural Assessment Planner for the nine Eastern Shore Counties. Following that, he served as the District Manager for the Queen Anne's Soil Conservation District.

Mr. Riggi's duties as CAFO/MAFO Coordinator are to provide education and outreach to Maryland poultry operations, prepare poultry operations for site inspections conducted by the Maryland Department of the Environment (MDE), provide assistance to growers following MDE site inspections, and conduct site investigations for water quality complaints dealing with agriculture for the entire Eastern Shore.

Tony will be speaking at different agricultural meetings across the Eastern Shore to inform growers of what is expected of them in regards to the CAFO regulations and water quality. He will be providing literature to operators dealing with composting, preventing fires in waste storage structures, and natural disaster preparedness. He will also be able to assist growers with the composting of catastrophic mortality events not caused by disease.

Mr. Riggi is conducting "Mock" CAFO inspections for Maryland poultry farmers to prepare them for MDE inspections. During these inspections, he will walk the production area to assure that Best Management Practices (BMPs) are in place and are working correctly to eliminate the discharge of nutrients into open waters. He will also be checking the Comprehensive Nutrient Management Plan (CNMP), the Nutrient Management Plan (NMP), and Soil Conservation and Water Quality Plan (SCWQP) to assure that the information is current and consistent through all three plans. The third part of the "Mock" inspection is to look at the grower's records to make sure the correct records are being maintained and organized to fulfill the CAFO permit. If any issues arise from these "Mock" inspections, he will try to assist the operator with measures to correct the issues or put them in contact with the specific agency to assist with correcting any issues which may be present.

For growers who have been inspected by MDE, Tony can assist them with correcting any issues reported from MDE on the site. This may be as simple as putting the grower in contact with the correct agency to assist them or advising them of different BMPs available and possible cost sharing assistance.

Also, Mr. Riggi will be handling all water quality complaints with regard to agriculture on the Eastern Shore. Through a Memorandum of Understanding between MDA and MDE, MDA will conduct site investigations of any water quality issues with regards to agriculture. If a water quality problem exists, Mr. Riggi will work with the land user to help correct the problem. If the problem is not addressed or reoccurs, the complaint will be turned over to MDE.

Tony has conducted several "Mock" inspections over the past few months. Some of the issues he has seen have included

inconsistencies in the CNMP, NMP, and SCWQP, lack of maintenance of BMPs, poor housekeeping in regards to manure exposed to weather, and disorganized or missing records. To poultry growers in Maryland Tony offers this advice, “Manage your operation everyday like MDE is coming tomorrow, because replacing a couple of broken boards today can save a headache tomorrow.”

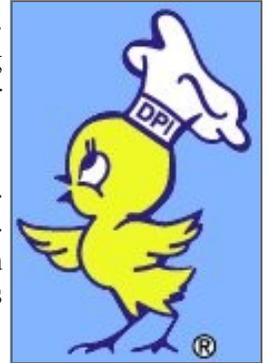
Jenny Rhodes is not only the Ag Agent for the University of Maryland in Queen Anne’s County, she is also a poultry farmer. Mr. Riggi has conducted a Mock inspection of her operation. “Tony conducted a Mock inspection of my farm which prepared me for the actual CAFO inspection by MDE. He made me aware of things that MDE was looking for which made my inspection much easier”.

If you would like Mr. Riggi to conduct a “Mock” inspection of your Maryland poultry operation or have any general questions concerning the CAFO/MAFO Coordinator and his role, please contact him at 410-677-0802 ext.6 or by email at [anthony.riggi@maryland.gov](mailto:anthony.riggi@maryland.gov) .

EXTRA  
SPACE

# Planning Underway for Next DPI Electric Buying Group Delmarva Poultry Industry

In November, work will be underway to reach out to Delmarva Poultry Industry, Inc. (DPI) members served by Delmarva Power to form another DPI Electric Buying Group, our 6th since starting the program in 2007. The present DPI Electric Buying Group includes more than 500 DPI member accounts and is the largest electric buying group on the Delmarva Peninsula.



Since our first group, hundreds of DPI members cumulatively have saved more than \$1 million. This is due to electric deregulation in Delaware and Maryland and the group purchasing power through DPI. It's really quite simple. DPI members who are customers of Delmarva Power can switch electric suppliers and save money. Customers of our three Delmarva electric cooperatives and the municipal electric providers are not eligible to participate.

The savings are on the generation supply portion of the monthly electric bill. Participants in the DPI Electric Buying Group still will be served by Delmarva Power. The electric delivery will be provided by Delmarva Power and any problems with service and power outages will continue to be handled by Delmarva Power. The new electric generation company will provide the electric supply and Delmarva Power will continue to be responsible for delivering it to participants. Group participants will still continue to receive just one monthly electric bill; from Delmarva Power. Members in the buying group will see no changes in their electric service other than a lower electric bill. The switch to the new electric provider will occur on each customer's February 2013 meter reading date.

Businesses and individuals with an average monthly bill of \$400 or more over the course of a year are eligible to join the DPI group if they become 2012-2013 DPI members by December 31, 2012. The minimum 2012-2013 DPI dues payment to qualify you for participation in next year's Electric Buying Group is \$150. Additionally, to remain in the group, if a multi-year contract is signed, participating DPI members must make a minimum \$150 dues payment in each year of the contract.

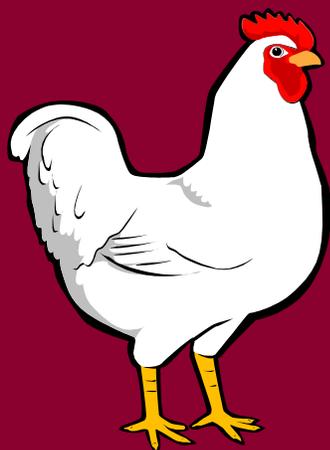
Many DPI members have saved thousands of dollars annually in the earlier Electric Buying Groups. Members' savings will vary depending upon their specific electric use, the tariff rates they have paid to Delmarva Power, and the negotiated price with the new electric supplier in January. However, it is safe to say that the amount of savings is multiples of what these members pay annually in DPI dues.

This money saving program is not limited to persons and businesses in the chicken industry. Any business, regardless of its products and services, is eligible to join DPI to be part of this program. Farmers who do not grow chickens can join DPI to save money on their Delmarva Power bills. Any individuals or businesses served by Delmarva Power who have a minimum Delmarva Power bill of \$400 per month can join to save money.

We expect to lock-in a flat, fixed price electric rate/kwh for one or two years, 10% to 20% below Delmarva Power's current default tariff supply rates. DPI will be soliciting licensed electric suppliers through a competitive bidding process in December and plans to execute contracts in early January that would become effective in February.

All current DPI members' electric supply contracts expire in February 2013 and each existing member will be required to provide an updated Power of Attorney (POA) form to be included in this next contract. There is no charge for existing members in the Electric Buying Group to be included in the next buying group as long as their DPI dues are current and they provide an updated POA form. Participants in the current DPI electric buying group will be sent details and a new POA form in the coming weeks. Additional information and application forms for those not in this DPI money saving program will be provided on the DPI website [www.dpichicken.org](http://www.dpichicken.org). Questions about DPI membership can be directed to Lori Morrow in the DPI office at 800-878-2449 while questions about the Electric Buying Group itself can be directed to Ed Jackson at Affinity Energy Management at [edjacksonenergy@aol.com](mailto:edjacksonenergy@aol.com) or 302-218-8920.

## 2012 Delmarva Poultry Conference



The 2012 Delmarva Poultry Conference was held on September 26, 2012 at the Ocean City Conference Center. Speakers at the conference discussed many topics: managing water for bird performance, better paw quality, vegetative buffers, ILT disease information, solar energy, and LED lighting. The proceedings from the conference are available at [www.mdchick.umd.edu](http://www.mdchick.umd.edu)

### LED Bulbs Save Energy

The Delaware Electric Cooperative program to help its chicken grower-members reduce energy consumption by installing LED bulbs was successful as 60 growers took advantage of the program. Perhaps equally as important was that it showed that LED bulbs can save money.

As part of the program, data were collected at a test chicken house in Sussex County. There was an 83% drop in energy consumption after the new lights were installed. According to data compiled by the University of Arkansas, growers will be able to save \$983 per year per house for a six-flock year. According to the Delaware Electric Cooperative, LED bulbs normally cost about \$35 each. Growers in this program were able to buy them at \$7 each.



The original 2012 October edition of the Korean Poultry Newsletter contained several typos and grammatical mistakes. Those typos and mistakes have been corrected. We apologize for any inconvenience this may have created.