



Feathered Facts

A
Baker County
Extension
Service
Newsletter

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Dear Extension Friends,

Welcome to the first issue of *Feathered Facts*, a newsletter centered on poultry information, production and management. Over the coming months, there will be many articles of interest for poultry enthusiasts and laypersons alike. There will also be additional information in a new poultry section of the Baker County Extension website (<http://baker.ifas.ufl.edu>), so be on the lookout for the announcement. As always, if we can help you in any way, please do not hesitate to contact us.

Sincerely,

Michael A. Davis, Ph.D.
Director / Agriculture Agent
UF | IFAS Baker County Extension Service



GENERAL POULTRY Q & A

Q. Is there a difference in nutrition between brown-shelled and white-shelled eggs?

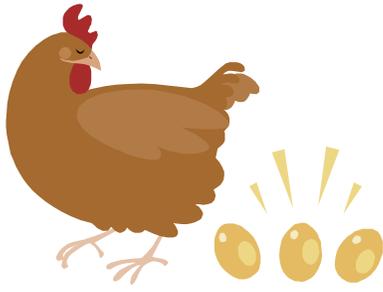
A. No, there is no difference. The color of the shell is determined by the breed of hen that lays the eggs. Hens that have white earlobes will lay white-shelled eggs, while those with red earlobes will lay brown-shelled eggs. In general, brown-shelled eggs tend to be a bit larger than white-shelled eggs because the breeds that lay brown-shelled eggs are usually larger.



Q. Do I need a rooster around for my hens to lay eggs?

A. No. Hens will naturally lay eggs whether there is a rooster present or not, given that they are the correct age and have the correct nutrition. However, if you want fertile eggs for hatching, you will need a rooster.

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New Rule for Poultry Expected in 2014



The Florida Department of Agriculture and Consumer Services (FDACS), Division of Food Safety, has proposed a new rule for small poultry and egg operations within the state. The rule is designed to provide regulatory and economic relief to small farmers. Rule 5K-4.033 is entitled *Limited Poultry and Egg Farm Operation* and is currently proposed, but expected to be adopted sometime in the Spring of 2014. Below are a few of the changes that this rule will enact. Please note that some information presented below may change upon final adoption of the rule. FDACS is expected to produce a guidance document for the rule once it is adopted.

- The rule addresses farm-based food establishments which directly produce and offer dressed poultry or whole shell eggs for sale.
- No additional processing or food preparation of the poultry or shell eggs is allowed under the permit category.
- Operations that are allowed under this permit are limited to:
 - Dressed poultry and shell eggs only.
 - Poultry is defined as chicken, turkey, duck, goose, guinea or quail.
- The proposed rule refers to guidance produced by the United States Department of Agriculture (USDA) which is produced under the title *Guidance for Determining Whether a Poultry Slaughter or Processing Operation is Exempt from the Inspection Requirements of the Poultry Products Inspection Act*. This document can be found at: http://www.caes.uga.edu/topics/sustainag/documents/USDA_Poultry_Slaughter_Exemption_0406.pdf
- The rule will allow exemption from inspection by the USDA's Poultry Product Inspections Act based on certain requirements that are met by the producer. The most common of these are:
 - Exemption from inspection if the producer/grower slaughters or minimally processes no more than 20,000 birds in a single calendar year. (Note that flocks over 20,000 birds are not covered by the permit).
 - Shell egg producers must maintain a flock of less than 1,000 birds within a calendar year.
- Products that are produced under the permit (minimally processed poultry or shell eggs) can be sold **WITHIN** the STATE OF FLORIDA ONLY.
- Products that are produced under the permit (minimally processed poultry or shell eggs) **CANNOT** be sold wholesale or by mail order.
- The permit is expected to cost \$100 annually. (Note that this amount may differ once the final rule is adopted).
- Although exemption from inspection will be granted upon fulfillment of the requirement of the rule, producers may still have to follow rules based on product labeling, proper production and sanitation techniques, etc.
- FDACS is expected to produce a Guidance Document for the rule once final adoption has taken place.

Growth Hormones in Chickens: Myth, Reality & Confusion



Merriam-Webster defines a hormone as a natural substance that is produced in the body that influences the way the body grows or develops. The general public's awareness of hormones (including the levels of these chemicals in our environment and the food that we eat) is continuously increasing. I receive numerous questions about poultry concerning growth, management, nutrition and other areas regularly, but one that continuously comes up is: "Why do poultry companies put hormones in poultry feed? Is that why they grow so fast?" This question indicates that a misunderstanding has occurred because it leads with the word 'Why'. The truth is that no hormones have been allowed in poultry production for over 50 years. The practice was banned in the United States in the 1950s.

Most hormones that the public tends to be concerned about are growth hormones that include testosterone, progesterone and estrogen, with estrogen typically garnering the most attention since it is widely available in hormone supplements and birth control pills and because it plays a role in sexual development. Hormones can also exist in two different forms, either as a steroid hormone or as a protein hormone. The form that the hormone is in directly affects the way that it can be administered. Steroid hormones can be taken orally and still retain their effectiveness. An example of this is the estrogen in birth control pills. However, hormones that exist in the protein form cannot be taken orally as they are broken down and metabolized in the gastrointestinal (GI) tract and beyond. Because of this, they lose their efficiency to affect the body as a hormone. Most growth hormones fall into the protein category and would have to be administered via an injection. This is further complicated by the fact that to be effective, protein hormones typically have to be injected multiple times per day or be administered via an implant that slowly releases the hormone over time.

Given the information above, the question of rapid growth rate in poultry still remains. There are three main reasons why we see the rapid growth rate in commercial poultry today: 1) selective breeding, 2) nutritional research and 3) environmental conditions in poultry rearing. Primary breeders of poultry have taken advantage of the short turnaround time for poultry generations to selectively breed the biggest and best females with the biggest and best males to get the meat chickens (broilers) that we have today. Poultry have been faster than beef or pork in this regard because of this short generational time. Based on the information that is obtained from these changes in genetics, research is constantly being conducted into the nutritional requirements of the poultry. This research helps the feed companies to devise a feed formulation that addresses the optimal levels of energy, protein, vitamins and minerals that are needed to the bird to have optimal performance. Finally, commercial poultry producers strive to have the animals in the correct environment to maximize the genetic and nutritional potential.

Finally, there are two more things that warrant being mentioned about hormones. Firstly, for many years, many of the hormones that the public are concerned about were erroneously believed to only come from foods of animal origin. In fact, many plants produce compounds called phytoestrogens that can influence the body. Secondly, it is important to remember that natural production of hormones by a human typically exceeds the amount of hormones that are ingested into the body. Finally, remember that hormones that do naturally occur in meat animals tend to be in higher levels in the fat rather than the lean.

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The table below lists the daily endogenous (natural) estrogen production of humans as related to birth control pills and other foods. The information in the table was adapted from *Chickens Do Not Receive Growth Hormones: So Why All the Confusion?* (T. Tabler, J. Wells and W. Zhai, Mississippi State University, 2013)

Estrogen Source	Amount (in nanograms)	Estrogen Source	Amount (in nanograms)
Pre-pubertal girl (daily)	54,000	3 oz. soybean oil	168,000
Pre-pubertal boy (daily)	41,500	3.5 oz. soy protein concentrate	102,000
Adolescent girl (daily)	93,000	1 cup soy milk	30,000
Pregnant woman (daily)	3,415,000	3 oz. wheat germ	3,400
Non-pregnant woman (daily)	480,000	3 oz. eggs	2,625
Normal adult man (daily)	136,000	3 oz. cabbage	2,016
Low-dose birth control pill	20,000	3 oz. ice cream	520
Regular-dose birth control pill	30,000—35,000	3 oz. peas	3240
High-dose birth control pill	50,000	3 oz. potatoes	225
		3 oz. steak (implanted)	1.9
		3 oz. USA chicken fat	1.8

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Q. How much poultry is produced in the United States each year and what is it worth?

A. Data reported to the USDA in 2011 indicate that there were over 8.5 billion broilers produced for meat in the United States, resulting in over 50 billion pounds of meat. The value of this product was over \$23 billion. There were almost 250 million turkeys produced, resulting in over 7.3 billion pounds of meat worth almost \$5 billion. Finally, there were almost 92 billion eggs produced in the US worth almost \$7.5 billion.

Q. Will incubation of double-yolk eggs result in “twin chickens”?

A. No. Double yolk eggs almost never hatch if they are incubated. Even though they are larger, the space inside the shell is not enough for two chicks to develop. If one does hatch, only one chick will have developed.



Baker County Extension Service

1025 W. Macclenny Ave., Macclenny, FL 32063
Phone: (904) 259-3520
Email: baker@ifas.ufl.edu
Website: <http://baker.ifas.ufl.edu>



Hours: M—F 8:30am to 5:00pm (Closed Noon to 1:00pm for Lunch)