



*The University of Georgia*

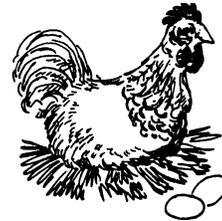
**Cooperative Extension Service**

*College of Agricultural and Environmental Sciences / Athens, Georgia 30602-4356*

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## *COMMERCIAL EGG TIP . . .*

### **A “NEW” INGREDIENT FOR LAYERS**

Most poultry feeds in North America are based on corn and soybean meal. In addition, nutritionists frequently make use of animal protein supplements or blended animal proteins, canola, wheat midds, and locally available ingredients such as peanut meal. While distiller’s dried grains with solubles (DDGS) is routinely listed in tables of nutrient composition, only rarely is this ingredient used in commercial poultry feeds. In large measure, this has been because of limited availability of the ingredient. This situation is about to change radically.

Recent government incentives to produce ethanol for motor fuel use by fermenting corn has stimulated the construction of dozens of fermentation facilities in the mid-west. It is projected that in the near future 7 million tons of DDGS will be available to the feed industry on an annual basis. This enormous volume will likely have a major impact on poultry feeds throughout North America.

When corn is fermented, microbes turn the starch component into alcohol, with carbon dioxide being released as a by-product. What remains (about 1/3 of the original corn) is the protein, fat, fiber, and ash not fermented by the microbes. Thus, the fat content of the original corn (about 3.5%) is concentrated by a factor of 3 during fermentation with DDGS having 10% oil. This concentration of nutrients, resulting from the removal of starch by fermentation, gives an ingredient with a nutrient profile mid-way between that of corn and soybean meal. Thus, it deserves serious consideration for inclusion in poultry feeds.

### **PUTTING KNOWLEDGE TO WORK**

The University of Georgia and Ft. Valley State College, the U.S. Department of Agriculture and counties of the state cooperating.  
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In past decades, much of the DDGS produced in North America was derived from the beverage industry. This fermentation was based not only on corn, but also varying percentages of barley, rye, and perhaps other grains. By contrast, the new ethanol plants constructed in the past decade rely on corn almost exclusively as the starch source for fermentation. Thus, today's products are much more uniform in composition. A typical nutrient analysis of this "new generation" DDGS is as follows:

protein	27.5%
fat	10%
fiber	5.5%
ash	4.25%
moisture	12%
ME (kcal/lb)	1275
sodium	0.10%

Initial studies with DDGS in laying hen formulas at The University of Georgia have been very successful at inclusion levels up to 15%. While under commercial conditions it is inadvisable to make sudden drastic changes in formulas, if pricing conditions prove favorable, there seems to be no reason why initial levels of inclusion of 5% cannot be employed with higher levels being possible based on field observations.

A final point - be sure and check the sodium level of the DDGS from each supplier being considered.



Nicholas M. Dale  
Extension Poultry Scientist

Extension County Coordinator/Agent

**\*\*Consult with your poultry company representative before making management changes.\*\***