

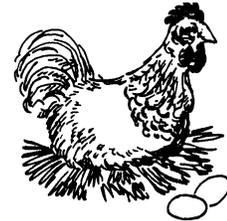


The University of Georgia

Cooperative Extension Service

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

NOVEMBER 2005



COMMERCIAL EGG TIP . . .

SOME GOOD NEWS ABOUT NON-FEED WITHDRAWAL MOLTING

Induced molting is an important practice for many egg companies in the United States because it minimizes costs associated with the growing of replacement pullets and disposal of spent flocks. Feed withdrawal for a specified time or until a certain body weight loss is reached has been the traditional method because it is simple to implement and consistently produces the best results in terms of second cycle egg production and egg quality. However, the feed deprivation required to produce an effective induced molt raises animal welfare concerns. The initiative by the United Egg Producers (UEP) to encourage U.S. egg producers cease molting flocks by feed withdrawal has led to the development of practical non-feed withdrawal molting programs which allow hens to eat during the stage when egg production must be stopped. Information about these programs may be obtained by contacting UEP (www.unitedegg.org).

In 1995, the United States Department of Agriculture Animal and Plant Health Inspection Service (USDA APHIS) SE Pilot project reported that the percentage of eggs contaminated with *Salmonella enteritidis* (SE) increased when flocks were molted by feed withdrawal. Subsequently, the USDA APHIS National Animal Health Monitoring System Layers 99 study published in 2000 confirmed that isolation rates of SE were higher in feed withdrawal molted hens versus non-molted hens in commercial flocks. Laboratory research showed that feed withdrawal makes hens much more susceptible to colonization by Salmonella bacteria (Holt and Porter, 1992; Holt 1995). It can be concluded from these studies that, in SE positive flocks, molting hens by feed withdrawal can increase SE contamination of the house environment, increase the number of hens infected with SE, and increase the percentage of eggs contaminated with SE, at least for some time. Thus it is possible for induced molting by feed withdrawal to increase risk of SE contaminated eggs entering the human food supply.

Non-feed withdrawal molting does not appear to entail the same risk. There is laboratory evidence that giving hens feed throughout an induced molt protects them from susceptibility to SE

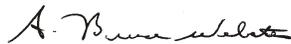
PUTTING KNOWLEDGE TO WORK

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infection (Holt et al. 1994; Woodward et al. 2005). Furthermore, a recent study on a commercial farm has affirmed the protective effect of non-feed withdrawal molting against *Salmonella* colonization of hens (Murase et al. 2004). This news is reason for producers to be encouraged as they convert to non-feed withdrawal molting. Although the transition may involve some problem solving and learning, not only will the egg industry offer greater animal welfare assurance by moving away from induced molting by feed withdrawal, it also should be able to offer its customers a greater assurance of food safety.

References:

- Holt, P.S. 1995. Horizontal transmission of *Salmonella enteritidis* in molted and unmolted laying chickens. *Avian Diseases* 37:412-417.
- Holt, P.S., and R.E. Porter, Jr. 1992. Microbiological and histopathological effects of an induced molt fasting procedure on a *Salmonella enteritidis* infection in chickens. *Avian Diseases* 36:610-618.
- Holt, P.S., R.J. Buhr, D.L. Cunningham, and R.E. Porter, Jr. 1994. Effect of two different molting procedures on a *Salmonella enteritidis* infection. *Poultry Science* 73:1267-1275.
- Murase, T., S. Miyahara, T. Sato, K. Otsuki, and P.S. Holt. 2004. Feeding of wheat middlings to commercial layers as an alternative method to feed withdrawal that can be used to molt birds. *Abstracts 2004 International Poultry Scientific Forum*, pp. 1782.
- Woodward, C.L., Y.M. Kwon, L.F. Kubena, J.A. Byrd, R.W. Moore, D.J. Nisbet, and S.C. Ricke. 2005. Reduction of *Salmonella enterica* serovar Enteritidis colonization and invasion by an alfalfa diet during molt in Leghorn hens. *Poultry Science* 84:185-193.



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Consult with your poultry company representative before making management changes.

“Your local County Extension Agent is a source of more information on this subject”