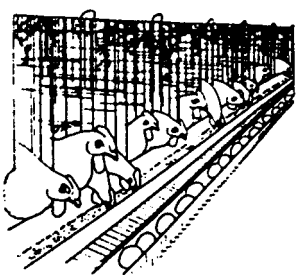
COOPERATIVE EXTENSION UNIVERSITY OF CALIFORNIA



California Poultry Letter

August 1996

Egg Industry Meeting*

September 25, 1996
Stanislaus County Farm Advisors Office
Oakdale Road and Scenic Blvd.
Modesto, California

Sponsored by: U.C. Cooperative Extension, Department of Avian Sciences
California Department of Food and Agriculture, Animal Health
California Veterinary Diagnostic Laboratory System

Agenda

Chairperson: Dr. Francine Bradley, Extension Poultry Specialist, U.C. Davis

9:30 California Egg .Oualitv Assurance Program (CEQAP) Agency/Industry Team Meeting in Irvine. CA., David Goldenberg, CEQAP, Folsom, CA

9:50 Survev of *Salmonella enteritidis* Prevalence in Southern California Surface Water, Dr. Hailu Kinde, D.V.M., California State Veterinary Diagnostic Laboratory, San Bernardino, CA

10:30 Whv We Need the California Egg Oualitv Assurance Program, Dr. Ralph Ernst, Extension Poultry Specialist, University of California, Davis, CA

10:45 Egg Sweating. and *Salmonella* Contamination Studv, Dr. Ralph Ernst, Extension Poultry Specialist, University of California, Davis, CA

11:15 California Commercial Egg Flock Field Studies, Dr. George West, D.V.M., California Department of Food and Agriculture, Animal Health Branch, Sacramento, CA

*Approved for continuing education credit with the CEQAP

WATER SANITATION

This article was condensedfrom the proceedings of the 44th New England Poultry Health Conference.

During routine use, material build up and contamination of a watering system will occur. As lime and scale deposits, rust, algae and dirt collect in the water lines, the functioning of the system will be affected. The build up of these materials on the inner surface of the system will provide a place for microorganisms to take hold. Organic material will supply nutrients for growth and multiplication of microbes. Every time the birds consume water they will be exposed to an increased microbial load through the drinking water. The effects of high microbial load in the drinking water include poor feed conversion, down grading of carcasses, increased mortality and increased condemnation. The build up of material will also have a negative effect on medication and vaccines delivered through the drinking water. Furthermore, sanitizers used to control the microbial load will be neutralized and bound by the debris in the drinking system decreasing their effectiveness. To keep the watering system in proper working order, a routine cleaning and sanitizing program should be developed.

Cleaning between flocks begins with flushing the lines with high pressure water. Next, fill the lines with the cleaning solution and allow to remain in the lines for at least an hour. If you are using a proportioner, thoroughly clean it after using cleaners. Finally, flush the lines with clean water again. Cups, plassons and other items should be thoroughly cleaned. The following cleaners and concentrations are recommended., Always consult with manufacturers of watering systems to make . sure the proper cleaners are used to avoid damage. The proportionate rate for the concentrate is 1 oz. per gallon.

Cleaning Between Flocks*

CLEANER	PROPORTIONER	BULK TANK
Citric Acid	4-5 packs (205 gram/pack) per gal water	4-5 packs in 128 gal water
Vinegar	no dilution needed	1 gal in 128 gal water
Ammonia	12-16 oz per gal water	12-16 oz in 128 gal water
Chlorine	12 oz per gal water	12 oz in 128 gal water

*Use these concentrations to clean between flocks. Do not use when birds are present.

To help keep the lines clean while birds are in the house, the following concentration of cleaners can be used for one day every two weeks. Regular cleaning during the life of the flock will help remove build up as it occurs. It will also increase the efficacy of between flock cleaning. Cleaning should be scheduled prior to water vaccinating and after water medicating.

(continued on page 3)

Cleaning With Birds Present*

CLEANER	PROPORTIONER	BULK TANK
Citric Acid	1 pack (205 gram/pack) per gal water	1 pack in 128 gal water
Vinegar	0.5 gal in 0.5 gal water	0.5 gal in 128 gal water
Ammonia	4-6 oz per gal water	4-6 oz in 128 gal water

*These concentrations are safe for birds to consume.

-Eric James Lovell
Maine Biological Laboratories

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THE U.S. POULTRY INDUSTRY - PRODUCTION AND VALUES - 1995

The U.S. poultry industry sold products worth $18.6 billion in 1995. This was up $691 million (+3.9%) from 1994. Broiler prices were down while egg and turkey prices were both up. All three segments had increased production over 1994 levels. Total broiler income was up 3.4%, turkey income was up 4.9% and egg income was up 4.7%. Broiler production increased by 1.7 billion pounds, turkey production increased by 297 million pounds and egg production increased by 30 million dozen eggs. The corresponding increases in production and prices in the egg and turkey industries illustrate a strong consumer demand for these products:

Table 1. Changes in Product Value by Commodity - 1994 to 1995

	U.S.			California		
Commodity	1994	1995	% change	1994	1995	% change
	(Million $)	(Million $)		(Million $)	(Million $)	
Broilers	11372	11763	+3.4	373	383	+2.7
Turkeys	2664	2774	+4.9	193	213	+10.4
Eggs	3780	3958	+4.7	255	288	+12.9
Other Chicken	77	68	-11.7	1	1	nc
Total	17873	18564	+3.9	822	885	+7.7

-Donald Bell, Poultry Specialist
University of California, Riverside

RESEARCH DIGEST

Feedstuff From Spent Hens

In this study four feedstuffs were prepared from spent hens, tested for their feeding value and cultured for microorganisms. One feedstuff was from spent hens alone while the other three had wheat middlings added on a one-to-one basis but were processed differently. Two products were ground, formed, dried and steeped 30 minutes at 230°F; one was ground, formed and dried, and one was ground, formed, partially dried, extruded and air dried. The feedstuffs were all high in protein and energy.

When the three feedstuffs containing wheat middlings were used in broiler diets at levels of 6, 12 or 18%, excellent growth was obtained. Similarly, use of the pure spent hen product at 3, 6 or 9% of the diet also resulted in excellent broiler growth.

The raw material was positive for *Salmonella* but all of the processed products were *Salmonella* negative. The products all had dramatically reduced microbial counts after processing. A final extrusion step resulted in a product with the lowest microbial count.

J.J. Lyons and J.M. Vandepopulaire
University of Missouri
J. Appl. Poultry Res. 5:18-25.

Comment: Processing spent hens into a feed ingredient may prove to be an economical disposal method in the future as a result of low fowl prices and closure of many fowl plants.

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Darkling Beetles Harbor Pathogens

Darkling beetle samples obtained from broiler houses on seven farms contained coccidia, bacteria, fungi, yeasts and viruses. Previous studies have shown that these beetles can transmit *Salmonella, E. coli, Aspergillus* and viruses such as infectious bursal disease virus, Newcastle disease virus, fowl pox virus and Marek's virus.

In this study the frequency with which beetle samples carried detectable pathogens was unexpectedly high. They concluded that there is substantial risk that beetles will act as disease vectors. They recommend that beetle control should be incorporated into disease control programs.

M.A. Goodwin and W.D. Waltman
Georgia Poultry Laboratory and
University of Georgia
J. Appl. Poultry Res. 5:51-55

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Midnight Feeding of Hens Tested

Three field experiments were conducted with laying hens to evaluate the utility of turning on lights and running feeders for 45 minutes at midnight. The authors hypothesized that providing feed at midnight might improve shells by providing more calcium during shell formation. In most (not all) comparisons egg shell weight or specific gravity was improved in a 9 a.m. sample of eggs taken after the midnight feeding had continued for 4 days.

R. H. Harms, C.R. Douglas and D. R. Sloan
University of Florida
J. Appl. Poultry Res. 5: 1-5

Comment: There are many factors which affect shell formation. One is the availability of calcium in the blood during shell formation. Blood calcium comes from bone resorption and calcium absorption from the gut. If calcium absorption from the gut decreases (e.g. as the gut empties during the night) egg shell deposition may decline in some birds which are unable to resorb bone calcium at a rate sufficient to maintain blood calcium levels. Therefore, an interruption of the dark period (night) may not affect shell quality in all management situations and would need to be evaluated in relation to current bird management programs.

Midnight feeding and lighting as described here will also influence the lighting regimen. Ideally the light period should be given closer to evening "lights off' than to morning "lights. on." At this time it will not affect egg laying time.

COMING EVENTS

September 24, 1996 - Annual Fall Turkey Conference, Kearney Agricultural Center, 9240 South Riverbend Ave., Parlier. For more information contact John Voris, Turkey Specialist209/891-2500.

September 24, 1996 - CPMQAP Training Session 3 "Flock Health Management", Keamey Agricultural Center, 9240 South Riverbend Ave., Parlier, 1:30 p.m. to 4:30 p.m. Registration $15 (includes refreshments and course materials). This session will follow the UC Fall Turkey Conference. For more information contact Bill Mattos, CPIF President, 209/576-6355, FAX 209/576-6119.

October 10, 1996 - CPMQAP Training Session 4 "Cleaning, Disinfection and Biosecurity", Red Lion Hotel, Modesto, 9 a.m. to noon. Registration $25 (includes refreshments, lunch and materials). For more information contact Bill Mattos, CPIF President, 209/576-6355, FAX 209/576-6119.

October 21-23, 1996 - National Poultry Waste Management Symposium, Marriott-Harrisburg Hotel, Harrisburg, PA. For more information contact Ralph Ernst 9 16/752-3 5 13.

December 10, 1996 - Egg Processing, Packaging and Marketing Workshop, Riverside, CA. For more information contact Gideon Zeidler 909/787-5038.

December 11, 1996 - Egg Processing, Packaging and Marketing Workshop, Modesto, CA. For more information contact Gideon Zeidler 909/787-5038.

March l-4, 1997, 46th Western Poultry Disease Conference, Capitol Plaza Holiday Inn, Sacramento, CA. For additional information contact Lina Caparas, Conference and Event Services, UC Davis 916/757-333 1.

April 8-11, 1997, PePa Convention, Palm Springs, CA. For additional information contact Anne Downs at (9 16) 44 l-080 1.

MIDWEST POULTRY EDUCATIONAL CENTER O P E N E D

With financial assistance from the Midwest Poultry Consortium, a 6-week learning program in Poultry Science was initiated this summer at the University of Wisconsin. Twenty-three students from ten states enrolled in courses that included: Incubation and Hatchery Management, Avian Physiology, and Poultry Enterprise Management. On average there was five hours of classroom instruction per day for 6 weeks.

Most students will continue their learning experience by participating in internships in the poultry industry. Next summer courses are planned in Poultry Nutrition, Poultry Products Technology and Avian Health.

This effort is an attempt to interest more students in careers in the poultry industry and to provide poultry courses and internships which do not conflict with the fall, winter and spring terms or semesters at most universities.

EXTENSION WEB PAGE

The poultry extension group in California have opened a Web Page. You can visit us at (http://pubweb.ucdavis.edu/Documents/AVS/avs.ext.html). Several Poultry Fact Sheets and recent issues of the California Poultry Letter are available.

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