

Jon Carson John Schwartz

Forest Muir Morris Mast

Penn State  
**Poultry Pointers**



Herbert Siegel Donald Singletary Owen Keene

**David Kradel  
FOOD SAFETY  
AND BACTERIA—  
THE OTHER PART  
OF THE STORY**

Americans have the most abundant, reasonably priced, high quality and safe food in the world. Nonetheless, one of the important issues facing the poultry industry, as well as other food production industries, is a concern about food safety. In this article I will outline one aspect of bacterial (microbiologic) food safety that is usually not discussed or understood.

Bacteria are invisible but they are everywhere. The bacteria of most concern in food safety include salmonella, campylobacter, listeria, staph, E. coli and clostridia. Many of these are normally present in the intestinal tracts and feces of animals and man and their environments, such as soil, dust, and housing. They are an integral and very stable part of our ecosystem, or a part of nature. With the possible exception of rare specific types, most of these bacteria would

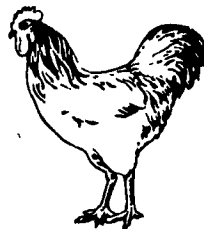
be for all practical purposes, impossible to eliminate from the animal production environment or from the environment with which people come in contact on a daily basis. We need to begin to think of these bacteria as neighbors. They are always going to be there, we need to respect but not fear their presence. We need to know when, how, and why they could cause us trouble.

Food-associated illness caused by bacteria most often results from mishandling of the new product between the time it is produced and the time it is eaten. This mishandling gives the relatively few bacteria, that are normally present in raw food or that get there from an infected food handler or contaminated equipment, the opportunity to rapidly multiply. Within hours under warm conditions, a few bacteria in the right kind of food can become billions of bacteria. Thus, all raw food is going to contain some bacteria, but whether they become potentially large in number or dangerous depends to a large

extent on how that raw food is handled and prepared. Most cases of food-associated illness should not be blamed primarily on the producer. He normally has little control over the presence of these normal bacteria in his animals or their environment.

As previously indicated, there may be rare situations where a specific type of bacteria could be greatly reduced or eliminated from the animal production environment. At the present time, the poultry industry is making a massive effort to try and reduce or eliminate Salmonella enteritidis (SE) from egg production flocks. Because as with most of the other more than 1,600 types of Salmonella, SE is found in many species of domestic and wild animals and in an uncertain number of human carriers, it is uncertain whether this effort will be successful. As in most food-associated illnesses, those caused by SE are most often associated with the use of raw or partially raw product or gross mishandling of the food.

In a future article, I will explore two other factors related to bacteria in the production environment that may be critical in understanding and developing rational food safety control programs.



**Adams Co. DHIA**

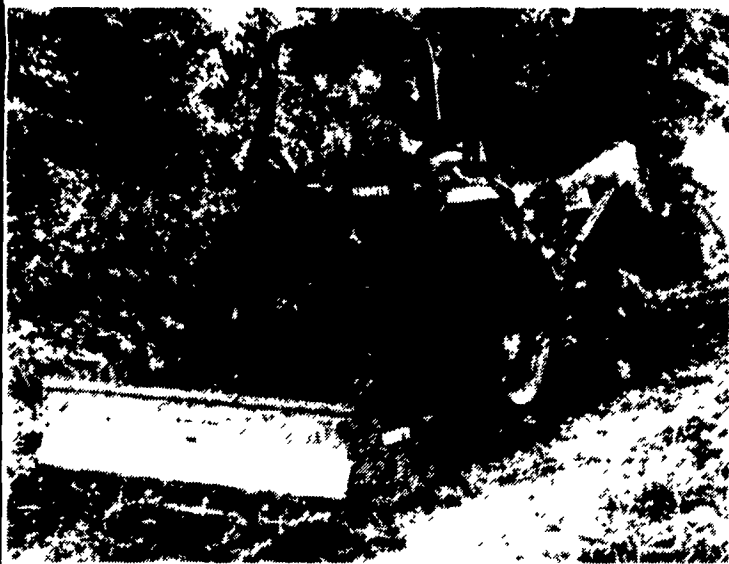
(Continued from Page D32)

Roy A Weaner Jr	95	3	7-0	305	27,498	3.6	1015
	4	3	4-6	305	25,274	3.8	979
	12	3	3-1	301	19,366	4.4	855
Yellow Buttercup Farm	158	3	4-10	305	20,310	4.2	853
	34	3	5-2	290	17,603	4.9	862
Wayne H Rodgers	69Lacy	3	6-11	305	23,375	3.8	910
	81	3	6-6	305	25,979	3.7	985
R&K Cunningham	Paige	3	3-4	305	24,040	4.0	973
Way Brite Farms	116	3	10-2	305	28,182	3.0	867
Leroy Deputy	Lacey	3	9-3	290	23,965	3.6	871
	Misfit	3	5-9	295	17,943	4.9	883
	Hartley	3	4-6	301	26,913	3.7	1019
	Keisha	3	4-0	305	22,466	4.4	995
	Crisco	3	4-1	300	21,492	4.4	945
Getty Acres	640	9	5-0	305	22,746	3.9	895
	655	3	4-11	305	23,477	4.0	938
Fred-Chris McGillvray	53	3	5-5	305	25,540	3.4	892
Michael Danner	31	3	5-4	305	23,568	3.7	876



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