

**Statement Before the
Senate Subcommittee on Oversight of Government,
Management, Restructuring, and the District of
Columbia**

**Hearing On
Egg Safety
July 1, 1999**

**Testimony presented on behalf of the
United Egg Producers
by
Keith Mussman
Mussman=s Back Acres
Grant Park, Illinois**

Good morning. My name is Keith Mussman and I am a farmer producing eggs in Illinois. I have been in this business all my life, having followed in the footsteps of my father who produced eggs and sold them in the Chicago area more than twenty-five years ago. I am testifying today on behalf of my industry organization, United Egg Producers (UEP), a national cooperative representing the interests of nearly 80% of all egg production nationwide. We appreciate the opportunity to present our views today on the safety of eggs and egg products in the nation=s food supply.

Food Safety is Important to the Egg Industry

The egg industry considers food safety of paramount importance and is committed to enhancing the safety of shell eggs and egg products as is evidenced by the number of voluntary programs it has undertaken. For example, the egg industry through UEP has developed a national 5-Star quality assurance program. UEP has sponsored HACCP training workshops for egg producers and processors. The American Egg Board has published egg handling and preparation guidelines for food service employees and consumers, and partnered with the White

House on President Clinton's food safety initiative with the FightBac program (the American Egg Board is a founding member). UEP has supported FDA in determining that eggs, like other protein-rich foods, should be classified as potentially hazardous.

A recent survey conducted by Dr. Kenton Kreager, Director of Technical Service, Hyline International, Dallas Center, Iowa (a leading primary breeder of Leghorn chickens) was entitled, A Egg Industry Initiatives to Control Salmonella. The report noted that data was collected from 41 egg producers with over one million or more laying hens and representing a total 125 million layers (approximately 50% of the nation's total). Of those responding, 93% reported to be participating in one of the industry's egg quality assurance programs such as UEP's A5 Star® program or comparable state programs. Biosecurity measures, rodent control, proper egg washing temperatures and pH are a part of every producer's program.

The egg industry has initiated and implemented voluntary programs in response to every concern raised about food safety, while providing a wholesome food at a price comparable to the time when my father was marketing eggs in Chicago. The nation's consumers enjoy the advantages of excellent prices for eggs along with the assurance that egg producers are working to enhance the food safety of their products.

Effectiveness of Industry Programs

In 1998 the FoodNet and PulseNet systems for surveillance reported a **44% decline** in Salmonellosis attributed to *Salmonella enterica* Serovar Enteritidis (S.E.) during the past three (3) years. Likewise, the record on outbreaks where two or more people became ill shows a decline in illness that began in 1990. The Salmonella Surveillance system shows a similar decrease in the number of people becoming ill. But even one sick person is one too many and industry efforts are continuing to enhance safety.

What is Currently In Place For Ensuring Food Safety?

Federal-State Shell Egg Grading Programs

The Egg Products Inspection Act of 1970 provides uniform standards of quality, grade, condition, weight, and labeling for shell eggs in interstate commerce. The U.S. Standards, Grades, and Weight Classes for Shell Eggs provide the basis for the Federal-State grading programs and have been incorporated into State egg laws and regulations affecting the marketing of eggs. All states in the U.S. have laws regulating the sale of eggs.

For egg products, egg further processors are operating under both a continuous inspection system and, in most cases, a HACCP system. HACCP is universally accepted in the scientific community, so the egg further processors look forward to the implementation of HACCP by regulation with the monitoring of critical control points to ensure the safe processing and handling of egg products.

Shell Egg Quality and Pathogen Control

Shell egg quality factors can be divided into those used to determine exterior quality and those factors used to determine interior quality. External quality factors include normal egg shape, texture, soundness of shell (no checks or cracks) and shell cleanliness. Interior quality is determined by candling, and some of the factors evaluated are albumen appearance/viscosity, intensity of the yolk shadow, shape of the yolk, normalcy of egg interior (no blood nor meat spots), size of air cell, and the absence or presence of any defects.

Eggs which fail to meet grading standards are either diverted to the breaking market for pasteurization, or deemed inedible for humans and processed for other uses such as pet foods.

The external quality factors of the shell play a role in the safety and wholesomeness of the product, as does the contents of the egg interior.

Pathogens can be controlled by preventing their entry into foods, by reducing the amount present, or by destroying when possible those that are present. A large part of ensuring that eggs are micro biologically safe involves preventing microbes from penetrating the egg shell. Refrigeration helps to prevent bacterial growth and thereby reduce any amount potentially present in the food. Preventing microbial contamination starts in the egg laying facility and continues through processing, grading, packing, storage, and preparation.

Washing, Sanitizing and Refrigeration of Eggs

Shell eggs are cleaned in wash water of approximately 110 degrees Fahrenheit, or 20 degrees higher than the egg temperature. A sanitizing solution is used in the washing process to enhance the cleaning process.

Soon after processing, eggs are packaged and stored at 45 degrees Fahrenheit. Proper cooling is of critical importance in maintaining egg quality throughout the production and processing chain, as well as at the retail and food service levels.

The Structure of Eggs and Its Effect on Bacteria

Although foods of animal origin most often are targeted as the vehicles of food borne disease outbreaks, a wide variety of foods are associated with food borne illness. Shell eggs are only rarely associated with bacteria, especially in comparison to other protein-rich foods. Even all food products of animal origin are not alike. The natural purpose of an egg was not for food, but the reproduction of the species. Every integral part of the egg has a purpose. One function is to provide the embryo a place that is relatively safe from harm, both physical and pathological.

Therefore, the egg has characteristics that provide for the protection against the growth of bacteria, unlike other animal products such as milk and meat. Because the egg's purpose was species renewal, the natural immune system built in the structure of the eggs is analogous to the same type of protections provided biologically from mothers to their newborn babies.

The protection defense is partly physical (the shell, its membranes and the albumen). Indeed, compartmentalization is an essential feature of an egg's antimicrobial defense. However, every part of the egg, physical or chemical, is assembled to maximize its particular function.

If intact, the egg shell and shell membranes protect the egg against invasion of bacteria. Most bacteria, including Salmonella, find it difficult to multiply in egg whites because of antibacterial substances present there. The white lacks the nutrients needed for bacterial growth. The thick white that surrounds the yolk and yolk membrane also prevent bacteria from entering the nutrient-rich yolk. The compartmentalized structure of the egg means that the largely defenseless yolk is located centrally in a freshly laid egg, and it is thereby protected from contamination from the shell by the albuminous sac and thin albumin, both of which are richly endowed with antimicrobial factors.

Thus, if handled properly, eggs have a natural protection against bacterial contamination.

Role of Food Handling in Egg S.e. Outbreaks and Educational Efforts

Most of the SE outbreaks associated with food have been a result of improper food handling and preparation; this has typically been at the institutional food service level. Holding raw egg batters at room temperature for extended times, using containers that go unwashed between uses, inadequate cooking, and inadequate cooling of leftovers have all contributed to foodborne outbreaks.

The egg industry has assumed responsibility for educating the public, particularly in the food service area, since it is the area most often associated with problems regarding foodborne illness.

Understanding the Uniqueness of the Egg and the Impossibility of Zero-Risk

It is a fact that a zero-risk or a sterile food supply is impossible. Federal food safety efforts and regulations must reflect this fact.

It is important that accurate information is communicated about risk and that sound food service educational information is provided to consumers, and particularly to the food service sector, so that everyone is well educated in safe food handling and understands their responsibility for ensuring food safety.

As we have pointed out in the discussions above, the egg is a unique food. All foods are not created equal. The unique properties of the egg (it's the only food we know that already comes packaged B in the shell), makes our product different from other food products. As such, those involved with regulating our product need to recognize these inherent distinctions that separate eggs from other food products and cause eggs to respond differently to pathogen control interventions from other foods.

Conclusion

Just as there is no single control method that will eliminate all pathogens and toxins from the food chain, there is no single method for providing a 100% guarantee that foods will be free of

pathogens. In order for food safety policy to be science-based, accurate and successful, the individual characteristics of all foods must be fully understood and taken into account. A one-size-fits-all regulatory approach rarely works, and it will not work for shell eggs and egg products.

In March, the Committee on Appropriations of the U.S. House of Representatives and the United States Senate received the joint status report filed by the Secretaries of Agriculture and Health and Human Services on actions taken by the respective agencies to enhance the safety of shell eggs and egg products. This report revealed the close working relationship between USDA and HHS regarding shell eggs and egg products.

Egg producers and processors do have to deal with a variety of regulatory agencies. We do not always agree with the actions taken by these agencies. When we disagree with them, we have not been shy about saying so.

However, for the most part the agencies do a difficult job well. We have not seen the General Accounting Office's report and will read it with interest. Based upon what we know now, however, we are not convinced that the structure of our food safety agencies is a problem. They have different roles and different areas of expertise. To us, the real issue is what our public policies should be, not who implements them.

Under the present system, we have already witnessed a significant decline in the number of cases of Salmonellosis since 1996. Coordination among agencies currently provides checks and balances as well as the opportunity for marshaling expertise from different disciplines and areas of expertise.

Congress, of course, should insist that this coordination be cooperative rather than competitive. Everyone's goal must be protecting food, not turf.

Thank you for providing this opportunity to present this testimony on the views of the nation's egg industry.