

David Kradel Herbert Jordan Milton Madison John Schwartz

Penn State
Poultry Pointers

Tom Dimick Ag Engineering

Herbert Siegel Donald Singletary Andrew Yersin



CONTROL OF POULTRY PATHOGENS DURING PROCESSING

**Carol Clouser
Senior Research Aide
Thomas S. Dimick
Senior Extension Aide
Department of
Food Science**

In the quest to reduce or eliminate pathogens from fresh poultry and meat products, scientists agree that the presence of microorganisms on such items is unavoidable.

General conclusions are:

- The number of microorganisms found on poultry and other meat products vary from processor to processor.
- Different methods used to detect specific pathogens, such as Salmonella, can produce very different results.
- Most pathogen work can only give qualitative (presence or absence), rather than quantitative (how many bacteria) results.
- Each poultry and meat species tends to have specific types of bacteria that are more prevalent than others.
- If not properly refrigerated, all poultry and meat will support microbial growth. The best way to control the levels of microorganisms during processing is to minimize the initial number of organisms entering the processing plant.

Decreasing the number of organisms present on incoming flocks will aid in reducing the chances of cross-contamination occurring during the first stages of processing.

Current research has indicated that the effects of cross-contamination throughout processing and subsequent growth of organisms remaining on the carcass following processing can be further minimized or even reduced through the modification and consistent proper use of existing processing equipment. Additionally, education of all persons involved in the hatching, raising, transport, processing, distribution, and consumption of poultry products is necessary to assure the highest quality product possible.

Spray-rinsing the carcasses with weak solutions of organic acids or chlorinated water, the proper use of counterflow chillers, and good sanitation practices have shown promise in reducing numbers of microorganisms and the rate of cross-contamination.

Minimizing further growth of bacteria remaining on the surface of poultry can be accomplished through proper temperature control in packaging and storage areas.

The beef industry has recently received approval to use organic acid rinses. The most promising to date is a 2 percent lactic acid rinse.

Some work on poultry has been accomplished using organic acids, but approved procedures are, as yet, not available.

Research conducted in this area demonstrated that inside/outside bird washers in use in the industry are an effective means of applying these sprays. Organic acid sprays should be applied before chilling to reduce the number of bacteria entering the chiller and to allow the acid to be rinsed off before packaging.

Spraying chlorinated water on equipment that is in constant contact with carcasses can also help in minimizing bird-to-bird cross-contamination. Contact points, which are either visual or microbiological sources of cross-contamination, should be continuously rinsed during operation to ensure that equipment is not further contributing to any cross-contamination problem.

Most new water chillers are of a counterflow design. This means that the cleanest water in the chill tanks should be where the product is leaving the system. When properly operated, counterflow chillers can actually help to improve the microbiological profile of the carcasses. However, in order to be effective, the chillers must be properly and continuously chlorinated. Birds should also be rinsed thoroughly before entering the chill system because the accumu-

lation of organic matter within the chill system can affect the ability of the chlorine to reduce or control microorganisms.

Proper employee sanitation and handling practices can also reduce cross-contamination at the processing level. In packaging rooms, especially, proper handling practices and temperature control will help to minimize further contamination and control microbial growth on the products in the room and on contact surfaces. Once the packages are cased, temperature

control and proper inventory rotation are essential to providing microbial protection.

At the distribution stage, most processors lose the ability to control the destiny of their products. At this point, the distributor, retailer, and consumer must be relied on to use the educational materials, toll-free numbers, and handling guidelines printed on packages to help assure the safety and quality of this perishable food product. Source: "Broiler Industry," February 1988

Wool Support Payments

LANCASTER (Lancaster Co.) — The Lancaster County Agricultural Stabilization and Conservation Service (ASCS) recently issued payments in the amount of \$10,454 to wool producers in Lancaster County, said Ray Brubaker, county executive director. These price support payments are for the 1990 marketing of shorn wool.

The 1990 support price for shorn wool is \$1.82 per pound, determined by the National Wool Act of 1958 as amended. The 1990 national average market price for shorn wool, \$.80 per pound, was \$1.02 less than the support price.

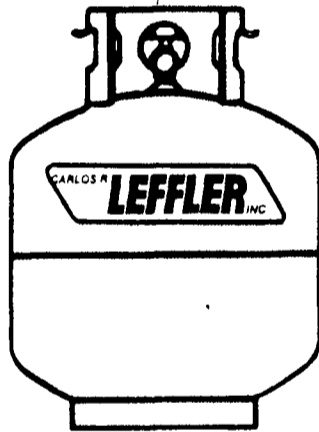
Brubaker said that the 1990 shorn wool payment rate of 127.5 percent is the percentage which brings the average price received by all producers up to the support

price. The payment rate will be applied to the net proceeds received by producers for shorn wool marketed during the marketing year.

The Wool Act provides that pulled wool shall be supported at a level comparable to the shorn wool support rate in order to maintain normal pulled wool marketing practices. Accordingly, producers will receive \$4.08 per hundred-weight in price support payments for unshorn lambs that were sold or slaughtered during the 1990 marketing year.

Wool producers in the country are expected to receive about \$105 million in price support payments on shorn and pulled wool. Mohair producers will receive about \$60 million.

"Tanks for the Business"



FREE 20# tank with sign up!
(Great to use as a spare!)

For the past 50 years, Carlos R. Leffler, Inc., has built a strong reputation of treating each and every customer honestly, giving them a quality product at a fair price. Celebrate with us, sign up for propane service and receive a special gift!

NEW CUSTOMERS:

As a new propane customer you will receive a FREE 20# cylinder when you sign up!

FOR EXISTING CUSTOMERS:

Sign up a friend, both of you will receive a 20# cylinder tank to use as a spare!

For faster service, call:

1-717-768-8248 (Intercourse)
1-717-561-8806 (Harrisburg)

Rise with the energy leader



Offices throughout Central Pennsylvania

Mail coupon to: Carlos R. Leffler, P.O. Box 278, Richland, PA 17087

I am interested in Propane Service with Carlos R. Leffler, Inc. and the Free 20# cylinder tank

Yes, I am already a dedicated Carlos R. Leffler, Inc. customer and am interested in the Free 20# cylinder tank

My referral is

NAME _____ NAME _____

ADDRESS _____ ADDRESS _____

PHONE DURING DAY (____) _____ HOME PHONE (____) _____



- Eliminates bridging, won't rust or corrode
- Cuts heat buildup and condensation
- Feed stays fresh in any weather

Why settle for 2nd best when Fiberdome now manufactures the most advanced fiberglass bulk bin available!

- Precision engineered for long, long life
- Unique 5-year warranty
- Adaptable to any auger or feeding system

Capacities from 2 1/2 ton to 30 ton (tonnage based upon 40 lb. density) Industrial Bins Available



(2 1/2-10 1/2 Ton)



(11-30 Ton)

Write for a full color brochure and a free sample of fiberglass - The modern material used for high-performing bins



Cedar Crest Equipment
608 Evergreen Rd., Lebanon, PA 17042
(717) 270-6600

WE CUSTOM DESIGN SYSTEMS FOR YOU