What are the sources of the antibiotics of concern? (3) What levels of inoculation involving (1) With which antibiotics are we concerned? (2) What are the sources of the antibiotics of concern? (3) What levels of the antibiotics of concern influence the bacteria of concern? Chemical methods may detect antibiotics at levels much lower than those to which bacteria may respond - what does detecting those levels mean in terms of antibiotic resistance development? (4) Where should such testing be conducted? From a usage standpoint, downstream of hospitals would be most appropriate. From evaluation of USDA FSIS residue violation data, it would be most appropriate to target dairy/veal operations. After a discussion of these questions, it is appropriate to address what steps can be taken to reduce the presence of antibiotics in watersheds, including (1) Proper disposal of unused antibiotics. They should not be flushed into the sewer or storm sewage systems. (2) Judicious use of antibiotics. Is there a good reason? (3) Proper control of application of animal and human waste within watersheds. Application systems adequately controlling nitrogen/phosphorus runoffs are an excellent starting point until more is known. (4) Consideration of various factors influencing environmental degradation of antibiotics of concern, if widely known. Some are quite labile to heat and light - others are quite stable. Composting results in significant degradation of some. Filtration through simple carbon filters reduces the presence of antibiotics as well as other classes of pharmaceuticals.

Key Words: antibiotics, watersheds, residue

Antibiotic residue avoidance in watersheds. E. C. Gonder*, Butterball LLC, Goldsboro, NC.

This is a multi-faceted issue with scientific, human, veterinary, production and political overtones. Consequently, it raises issues of prioritization involving (1) With which antibiotics are we concerned? (2) What are the sources of the antibiotics of concern? (3) What levels of the antibiotics of concern influence the bacteria of concern? Chemical methods may detect antibiotics at levels much lower than those to which bacteria may respond - what does detecting those levels mean in terms of antibiotic resistance development? (4) Where should such testing be conducted? From a usage standpoint, downstream of hospitals would be most appropriate. From evaluation of USDA FSIS residue violation data, it would be most appropriate to target dairy/veal operations. After a discussion of these questions, it is appropriate to address what steps can be taken to reduce the presence of antibiotics in watersheds, including (1) Proper disposal of unused antibiotics. They should not be flushed into the sewer or storm sewage systems. (2) Judicious use of antibiotics. Is there a good reason? (3) Proper control of application of animal and human waste within watersheds. Application systems adequately controlling nitrogen/phosphorus runoffs are an excellent starting point until more is known. (4) Consideration of various factors influencing environmental degradation of antibiotics of concern, if widely known. Some are quite labile to heat and light - others are quite stable. Composting results in significant degradation of some. Filtration through simple carbon filters reduces the presence of antibiotics as well as other classes of pharmaceuticals.

Key Words: recognition award, animal welfare, bioethics

Developing effective risk and crisis communication approaches in the food industry. R. R. Ulmer*, University of Arkansas at Little Rock, Little Rock.

Over the past 10 years, the United States food system suppliers and producers have been called upon to respond to a wide variety of crises. A central component of managing and recovering from a crisis under public scrutiny is effective communication. This paper identifies effective risk and crisis communication strategies for use by United States food suppliers and producers. Key risk and crisis communication approaches are based upon extensive research in the food industry. The paper provides guidance on how to prepare for and respond to a crisis in the food industry. Special attention will be paid to managing diverse stakeholder groups and interests. Case study examples will illustrate the consequences for food suppliers and producers on enacting effective and ineffective risk and crisis communication strategies. Particular attention will be paid to communication strategies and approaches that create opportunities for food suppliers and producers to renew and grow following the crisis event. Ultimately, key counter intuitive approaches for preparation and response to a wide variety of crises are provided.

Key Words: crisis, risk, communication, renewal