The Effect of Carcass Wash Time on Pathogen Reduction in Ground Beef

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INTRODUCTION

The safety of ground beef to the consumers is a well-known topic. Recently new laws have been put in place to more closely regulate the production of ground beef. Dorsa and others determined that making ground beef from carcasses containing the lowest initial bacterial populations could substantially reduce the frequency of contaminating bacteria. Pressurized water treatments are effective for reducing the initial bacteria populations of a reduction in conditions which would favor the growth of pathogenic bacteria.

METHODS

Wash cabinet and application of treatments
Chad carcass wash cabinet (model FWS 1000, four station washer with an acid rinse).
Treatment 1
28 second water wash
12 second lactic acid rinse
Carcasses chilled and stored 24-72 hours
Treatment 2
60 second water wash
12 second lactic acid rinse
Carcasses chilled and stored 24-72 hours

Ground Beef Preparation
Ground beef consisted of the trim from washed carcasses and supplemented with purchased outside meat receiving steam vacuum treatment only.

RESULTS AND DISCUSSION

There was a significant difference between treatments in coliform counts (*0.05). The rank mean for both treatments was 50, however, statistically treatment 2 was significantly higher than treatment 1 for coliform counts.

CONCLUSION

Increased carcass wash time resulted in overall reduced generic E. coli counts. The reduction of generic E. coli counts is suggestive of a reduction in conditions which would favor the growth of pathogenic bacteria.

REFERENCES