The Beef Checkoff

Perspectives, Research, and Moving Forward

June 2008

Mandy Carr, Ph. D.
Executive Director, Beef Safety Research
Group Leader for Safety, Nutrition, & Consumer Well-being
National Cattlemen’s Beef Association
REI
Research, Education, Innovation
An integrated approach from gate to plate
Working Groups

- **Enhancing the Value of Beef**
  
  *Co-leaders:* Jim Ethridge & Bridget Baird
  
  Programs: PE; Prod Ed; BIG; Nutrition; Safety; CC/BDC; Mkt Res

- **REI Audits**
  
  *Co-leaders:* Ryan Ruppert & Bucky Gwartney
  
  Programs: PE; Prod Ed; Nutrition; Safety; Mkt Res; BIG; CC/BDC

- **Culinary**
  
  *Co-leaders:* Michaele Musel & Debra Baughman
  
  Programs: CC; BDC; PE; BIG; Nutrition; Safety
Beef Safety Research
Beef Production Research
Product Enhancement Research
Human Nutrition Research
Market Research
James O. “Bo” Reagan, Ph.D. – Sr. Vice President; Research, Education & Innovation

Bucky Gwartney, Ph.D. - Executive Director, Product Enhancement Research
Mandy Carr, Ph.D. - Executive Director, Beef Safety Research
John Lundeen – Executive Director, Market Research
Shalene McNeill, Ph.D., R.D. – Executive Director, Human Nutrition Research

Michelle Rossman, M.S. - Director, Beef Safety Research
Bridget Baird, M.S. - Associate Director, Product Enhancement Research
Jennifer Leheska, Ph.D., R.D. – Consultant, Human Nutrition Research

Betty Anne Redson - Director, Research & Knowledge Dissemination
Michele Melody - Grants Administrator
Deborah Cole - Coordinator
Committee Structure

Research & Knowledge Management

- Keith Hansen
  Chair

- Dick Sherron
  Vice Chair

NCBA Beef Production Research Committee
- Barry Dunn
  Chair
- James Henderson
  Vice Chair

Joint Industry Product Enhancement Committee
- Glen Dolezal
  Chair
- Paul Parker
  Vice Chair

Joint Industry Human Nutrition Research Committee
- Becky Walth
  Chair
- Richard Thorpe
  Vice Chair

Joint Industry Beef Safety Committee
- Duane Theuninck
  Chair
- Mark Riechers
  Vice Chair

Joint Industry Market Research Working Group
- Craig Uden
  Chair
- Laurie Bryant
  Vice Chair
Research Development and Implementation Process

October – December

Beef Industry Fiscal Year Begins (Oct.1)

Staff initiates implementation of approved ARs from prior year

Step One: Research Planning Teams meet

July – September

Step Seven: ARs presented to committees at Summer Conference

Step Eight: Staff revise and finalize ARs

Step Nine: Final ARs presented to BPOC

April – June

Step Five: Draft research budget finalized

Step Six: Draft ARs prepared

January – March

Step Two: Research recommendations presented to committees at Annual Meeting

Step Three: SBC review and input

Step Four: Research staff develop tactical plans
Importance & Impact of Research to the Beef Industry
Beef Safety Research

Maintain consumer confidence in beef as safe and wholesome, identify strategies and technology to continuously improve the safety of beef and beef products from farm to table, and serve as an industry resource for current, science-based beef safety information.

Staff Contacts

- Mandy Carr, Ph.D.
  *Executive Director, Beef Safety*

- Michelle Rossman, M.S.
  *Director, Beef Safety*
Beef Industry’s Commitment to Safety

- History to the approach
- Focus 880,000+ cattle at 35+ processing facilities

This began efforts to develop multiple interventions
Safety Interventions & Best Practices

Organic acid wash
Acidified sodium chlorite
Steam/thermal pasteurization
Carcass microbial mapping
Steam vacuum
Hide wash

Cattle washing
On farm ecology
Sodium chlorate
Vaccine
Neomycin
Direct fed microbials
Transportation and lairage


1993 Blue Ribbon Task Force

1997 Founding of BIFSCo

1994

2003 E. coli Summit

2006

BIFSCo cited as model for other industries

2008 Video of BPs

1992

1994

1996

1998

2000

2002

2004

2006

2008

"Solving the E. coli 0157:H7 problem: A blueprint for industry action."

"Best Practice evolution and Safety Summits"

"BIFSCo cited as model for other industries"

"Video of BPs"
Safety Interventions & Best Practices

Organic acid wash
- Acidified sodium chlorite
- Steam/thermal pasteurization
- Carcass microbial mapping
- Steam vacuum
- Hide wash

Cattle washing
- On farm ecology
- Sodium chlorate
- Vaccine
- Neomycin
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The Impact

- Research validation
- BIFSCo as an education & dissemination vehicle
- Industry implementation of technologies
- End product safety performance
- Research utilized in other programs
  - public relations, issues management, retail, foodservice

- Leveraged value of safety research
  - Since 1992, producers spent $25-27 million in safety
  - Industry invests $350 million/yr in safety
  - THUS, for every $1 invested by The Beef Checkoff, the industry invests an additional $210
Beef Industry’s Commitment to Safety

- Interventions, both pre- and post-harvest are vital parts of a system of hurdles in beef production and processing.

- No “silver-bullet” for common application and because of the multi-hurdle system, one intervention does not have to be
Beef Safety FY 2007 Priorities

- **Pathogen Management**
  - Pre-harvest - pathogen ecology, management practices, interventions
  - Post-harvest – sustained activity of multiple interventions

- **Key knowledge**
  - Non-O157
    - In **10,159 samples** (carcass, trim and ground beef), **15 isolates** are serotypes that match CDC top 6; a fraction of these have the ability to cause disease
Distillers grains
- Few studies
- Variations of corn with DG
- Conflicting data - too early to tell

MDR Salmonella
- Strains in cattle not the same as those linked to human illness

Effectiveness of interventions
- MDR Salmonella
- Non-O157
- O157
- Salmonella
● Beef Industry Food Safety Council
  ● Best practices evolvement
  ● Beef Industry Safety Summit
  ● Unify industry to address major safety issues
  ● [www.bifsco.org](http://www.bifsco.org) update and redesign
● **Education/Dissemination**
  - Research Annual Report
  - Fact sheets, executive summaries, web resources
  - Industry meetings
  - [www.beefresearch.org](http://www.beefresearch.org)
TOTAL RESEARCH RFP Summary

- Total Budget: $4.9 million
- Total proposals Rcv’d: 134
- Total $ Requested: $12.2 million
- Est. projects funded: 36
- RFPs requests distr.: 200
- Institutions submitting: 69

Targeted Summary

- Total budget: $1.7 million
- Total $ requested: $3.7 million
- Est. projects funded: 35
Beef Safety FY 2008 Priorities

- **Safety Threat Research**
  - Pre-harvest – pathogen ecology, management practices, interventions, emerging pathogens, resistance development
  - Post-harvest – survey use of BP and interventions, risk assessment for processed product, optimization of current interventions
  - Projects completed May 2009
Safety Threat Monitoring
- Science beyond The Checkoff

BIFSCo
- Safety Summit
- Small plant outreach
- Best Practice documents

Implementation & Knowledge Transfer
- Annual report, executive summaries, white papers, fact sheets
- Web resources
FY 08 Safety Research Statistics

- FY 2008 Safety Threat Research
  - $1,474,600 budget

- Request for Proposal Results
  - 58 Proposals Submitted
  - $4,520,406 Total Funds Requested

- Institutions Reached
  - 68 Institutions/Companies Received RFP
  - Proposals submitted by 18 Entities

- Proposals Funded
  - 11 to 15 projects for funding
Proposed Beef Safety
FY 2009 Priorities

- Industry/Expert Direction
- Producer Direction
- Priorities

- Safety Threat Research
  - Pre-harvest – interventions, management strategies, ecology
  - Post-harvest – optimizing interventions & novel approaches
  - Emerging Safety Threats - resistance development, new pathogens to beef

- Projects completed May 2010
Safety Threat Monitoring
  - research beyond The Checkoff

BIFSCo
  - Best Practices – new and revised
  - Safety Summit
  - Educational tools to disseminate BPs

Implementation & Knowledge Transfer
  - Think Tank meetings
  - Topical summaries
  - Support information for regulatory comment
  - Support for PR & IM efforts
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