



United States
Department of
Agriculture

Agricultural
Marketing
Service

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TO: Keith Belk, Mark Boggess, Charlie Bradbury, Chris Calkins, Jerry Cannon, Michael Dikeman, Glen Dolezal, Elisabeth Huff-Lonergan, Dwain Johnson, John Killefer, Andy King, Virginia Littlefield, Jared Long, Casey Maddock-Carlin, Floyd McKeith, Mark Miller, Rhonda Miller, Warren Mirtsching, Brad Morgan, Dean Pringle, Anne Rasor-Wells, Bo Reagan, Brian Reuter, Bob Richmond, Paul Rodgers, Steven Shackelford, Kris Scheller-Stewart, Ted Schoeder, Dan Shiley, Jeyam Subbiah, Derek Vote, Tommy Wheeler, Brent Woodward, Lora Wright, Duane Wulf

FROM: Martin E. O'Connor
Chief
Standards, Analysis, and Technology Branch

DATE: July 27, 2007

SUBJECT: Summary of Agricultural Marketing Service (AMS) Meat Tenderness Forum, March 27, 2007

On March 27, 2007, AMS hosted a Meat Tenderness Forum in Kansas City, Missouri, to determine if there is sufficient need and/or interest in establishing a tenderness standard to address quality issues encountered when marketing meat products. Forty-six individuals from academia, industry and government were in attendance. Basic factors that were discussed include: (1) what meat characteristics are most important, (2) the feasibility of how and where (specific cut, muscle, or a process verification) these characteristics would be evaluated, and (3) if needed, what processes would be included to adequately address the expectations of the requirements for a standard.

Additionally, it was discussed to form a multi-disciplinary committee to provide assistance to AMS as we develop requirements for this initiative prior to publication for public comment. Consequently, interest was so great for this committee that we are proposing the formation of multiple sub-committees that will focus on a specific dynamic of meat tenderness. The proposed sub-committees are: (1) Predictive Technology, (2) Methodologies, Testing & Verification, (3) Economic Implications, and (4) Consumer Implications & Sensory. Ultimately, these sub-committees (and their findings) will filter upward through a Meat Tenderness Steering Committee which will be accountable for organizing each groups work and the drafting of a proposed standard. The steering committee will be represented by Martin O'Connor, Mohammad Koohmaraie and Jeff Savell with support from each sub-committee chairperson

listed in the table below. The steering committee will meet in the next month to discuss initial questions brought out during the March 27 forum. They will then set objectives for each sub-committee, ensuring that the essential issues are clearly defined so that the information garnered from each sub-committee will assist in the development of the requirements for this initiative. Your respective sub-committee chairperson will be contacting you regarding scheduling meeting times, specific goals/objectives and an overall timeline of the primary initiative once the Steering Committee meeting has been conducted.

The team members for each sub-committee are as follows:

Predictive Technology Chair Person: Kerry Smith	Methodologies, Testing & Verification Chair Person: Justin Ransom	Economic Implications Chair Person: Lawrence Yates	Consumer Implications & Sensory Chair Person: Darin Doerscher
Elisabeth Huff-Lonergan	Keith Belk	Charlie Bradbury	Mark Boggess
Andy King	Chris Calkins	Warren Mirtsching	Glen Dolezal
Casey Maddock-Carlin	Jerry Cannon	Bo Reagan	Jared Long
Brad Morgan	Michael Dikeman	Ted Schoeder	Floyd McKeith
Bob Richmond	Dwain Johnson		Mark Miller
Dan Shiley	John Killefer		Rhonda Miller
Jeyam Subbiah	Virginia Littlefield		Paul Rodgers
Brent Woodward	Anne Razor-Wells		Dean Pringle
Duane Wulf	Brian Reuter		Kris Scheller-Stewart
	Steven Shackelford		
	Derek Vote		
	Tommy Wheeler		
	Lora Wright		

Also, for your information is a bulleted synopsis of the notes taken during the forum. They are broken out by presentation segment of the event.

Overview – O’Connor

- Formation of an advisory committee needed
- What factors do we take into consideration
 - Whole Carcass, primals, etc.
 - Enhancement allowed?
 - Electrical stimulation?
- Methodologies
 - Need written procedures – standardize/validate/certify

Background – Savell

- USDA needs to embrace all facets of the tenderness initiative
 - All sectors of the industry must be considered
 - Stakeholders?
- Tenderness Research Thrusts
 - Cold shortening
 - Enzymatic work

- Characteristics – Grade, age, etc.
- Mechanical processing
- Injection/marinades
- Economic effect of tenderness
- Cookery methods – degree of doneness
- A “Number” is needed for efficacious level tenderness
 - What factors? – by species, by muscle, by consumer preference
 - Testing versus prediction
 - Validation programs and processes
 - Subjective versus objective
- What about an overall “Palatability” score.
 - How would it be measured?

Forum Discussion – Attendees

- General
 - What is the discussion issue – Labeling? Process? Methodologies? Others?
- Consumer Perspective
 - Tenderness tiers like ham categories
 - “Naturally tender”
 - “Much tender
 - Electrical stimulations?
 - Methodologies must be measurable and manageable
 - Removal of outliers
 - How far down the chain should a tenderness claim go?
 - Claims are less than 1%/Refund \$?
 - What is tender? – NUMBER!!!
 - What are the factors – species, muscle, etc. or just one number?
 - Needs to be simplified for the sale of the consumer (at point of sale).
 - What muscles are/should be considered, or whole carcass
 - If LD of a carcass is “tender”, is the rest of the carcass as well?
 - % of population – audit verification concerns/Have I documented enough?
 - Is there another way rather than designating a NUMBER
 - What if a relative improvement is shown from traditional tenderness perceptions of a cut of meat?
 - What factors are most important for each species?
 - Implementation of various factors that should directionally improve tenderness.
 - How does this discussion help consumers?
 - Overall improvement of industry – consumer back to seed stock supplier (and all in between).
 - How would this voluntary claim affect current marketplace items that claim “tender”?
 - Different consumers have different needs.
- Protocols/Methodologies
 - Use AMSA resources to organize/manage

- What is the “gold standard”?
- WBS & SSF
- Aging time, freezing, rate of freezing and thawing
- Cookery and control thereof
- Intervention steps to show improvement
- Why do all this? The market will drive it anyway. Consumers will figure out who the “good” suppliers are for tenderness and purchase accordingly.
- A literature review must be completed on what the most important factors of tenderness and then weigh them accordingly.

- Upstream Predictors
 - DNA data to verify animals
 - What about producers and their technologies and practices?
 - DOF/Implants Environment/Ration
 - Genetics

Feel free contact me at 202-720-4486 or martin.oconnor@usda.gov if you have any questions or know of others who may be interested in participating on the committees. Your continued support with this initiative is appreciated.

cc: Darin Doerscher, Mohammad Koochmaraie, Justin Ransom, Jeff Savell, William Sessions, Kerry Smith and Lawrence Yates