

# **Instrument Augmented Lamb Grading**

## **Status of the Industry**

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# Rationale for Instrument Grading

- Reduce variation
  - Within plants
  - Between plants, areas and regions
- Increase accuracy, precision and resolution of grade factor assessment
- Increase efficiency of USDA graders
  - Allows adequate time to perform other duties of their jobs
    - Plant Monitoring
    - Training
    - Paperwork

# Template to work from

- Fed Beef Cattle
  - Roughly 45% are being graded using Instrument Augmented Grading
  - Expect this to increase to around 70% by the end of 2017

# Challenges

- Stationary Instrument
  - In Beef the Instrument is placed directly on the ribeye
- Environmental Factors
  - Lighting Source
    - Xenon vs Halogen vs LED
- Does not look inside of the carcass
  - Cannot evaluate flank streaking

# Where are we in the approval process

- Worked with manufacturer to refine regression equations
- Visited a processing facility twice within 2016
  - Suggested a couple of changes to their SOP's to ensure carcass ID is maintained
    - These changes were placed into effect on January 18, 2017
  - Collected data to verify accuracy of instrument
- Will be going out to the plant in the first quarter 2017
  - Verify, with the manufacturer, the accuracy and repeatability of the instrument

## Where are we in the approval process (cont.)

- The plant is running the instrument unofficially
  - Collecting both yield and quality grade information
  - Comparing the information that the instrument is giving to that of the grader
    - Using the information to help refine the instrument further
- Based on the progress, we are targeting the first half of 2017 to get an approval.

# ASTM International

- Tenderness Standard Specification
  - Tenderness Marketing Claims Associated with Meat Cuts Derived from Lambs
    - F-2925 draft document
    - Splitting the lamb and beef species draft document

# ASTM International (cont.)

- New draft includes
  - Minimum Tenderness Threshold – 3.4 kg Warner Bratzler Shear Force
  - Tender Program
    - Certified Tender
      - <3.4 kg WBSF
    - Certified Very Tender
      - <2.4 kg WBSF
    - Certified Extremely Tender
      - <1.4 kg WBSF
  - If carcass Longissimus Dorsi is measured and meets minimum Tenderness Threshold
    - Associated Rack will qualify as certified
    - Associated Loin will qualify as certified



# ASTM Upcoming Meeting

- April 13, 2017 in Aurora, CO
- USDA will be submitting draft prior to this meeting

# Challenges to the Standard

- Garnering support of the ASTM process
  - Looking for
    - Academia personnel who are unbiased to give an objective evaluation
    - Lamb industry members who are interested in a tender program
    - Meat industry companies and individuals who would be using a tender program

# Conclusion

- USDA is working on getting the approval for the 1<sup>st</sup> instrument augmented grading program in lamb
  - Expect that once that approval is earned, more plants will be entering the approval process
- We are working on a draft tenderness spec for lamb
  - Certified Tender, Very Tender, and Extremely Tender
- Exciting Times as we move forward with Technology!