Preferences & Complaints Associated with American Lamb Quality in Retail & Foodservice Markets

(Preliminary Results)

Keith E. Belk, Travis W. Hoffman, Dale R. Woerner, J. Daryl Tatum, Robert J. Delmore, R. Kraig Peel, Stephen B. LeValley, Henry N. Zerby, Steven J. Moeller, and Francis L. Fluharty

**Conducted by:**
Colorado State University &
The Ohio State University

**Funded by:**
American Lamb Board &
National Sheep Industry Improvement Center
National Lamb Quality Audit

• Phase I – Face to Face Interviews
  1) Retail (Grocer, Butcher, Farmer’s Market) n = 40
  2) Foodservice (Casual and Fine Dining) n = 40
  3) Purveyor/Distributor n = 20

• Phase II – Retail Case Audit
  ❖ 12 metropolitan cities; ≥ 4 stores/city

• Phase III – Retail Product Evaluation
  ❖ Cuts include loin & shoulder chops; rib chops, sirloin chops, & leg steaks were collected as available.
  ❖ Lamb was purchased & shipped CSU & OSU meat laboratories.
  ❖ Product dimensions (i.e. loin eye area, cut thickness, fat cover) are collected. Packaging, label information, and price are collected. Shear force evaluation will be conducted on loin/rib chops.

Preliminary Results – not for dissemination
What is “quality” and what quality factors drive retail and foodservice purchasing decisions?

Best/Worst Comparison

1) Eating Satisfaction  
2) Origin 
3) Sheep Raising Practices 
4) Product Appearance / Composition 
5) Weight / Size 
6) Nutrition / Wholesomeness 
7) Product Convenience / Form

Next Steps:

Calculate Shares of Preference
Demographic & Category Comparisons
Quantify Willingness to Pay for 7 Attributes
Evaluation of retail cuts

Preliminary Results – not for dissemination
Top 3 Quality Attributes

• Eating Satisfaction  
  ❖ Overwhelmingly **Flavor/Taste/Aroma**

• Origin  
  ❖ LOCAL, more important than U.S. vs. Imported

• Sheep Raising Practices  
  ❖ Humanely Raised  
  ❖ What the lambs are fed (i.e. grass vs. grain)  
    ○ Most retailers/foodservice consider lamb holistic & sustainable compared to competitive proteins.
  ❖ Preferences of practices vary greatly
    • Free Range / No Added Hormones / No Antibiotics

Preliminary Results – not for dissemination
Lamb Flavor = Quality Eating Experience
Embrace the Pastoral Image & Environmental Stewardship of Lamb
The Good, the Bad…

and the Ugly.
Consumers

a) Millennials/Young Professionals

b) LAMB: A red meat protein alternative that offers opportunity for new and creative items on a menu or for the at-home cook.

c) Chefs are the new Rock Stars (i.e. Food Network)

d) Lamb purchasers at grocery often purchase greater total $ value/visit.

e) Marketing of lamb was often noted as both a weakness and an opportunity.
Take Home Messages

- **Flavor** (perceived or real) is the reason consumers purchase lamb—it also is the reason they decide not to purchase lamb.

- **Local** trend for protein is real for both retail & foodservice sectors.

- Bimodal lamb consumer base
  - Customer purchases lamb irrespective of price vs. price sensitive customer that will substitute.

- Fine dining rewards Americans with quality eating experiences for “Celebrations in Life.” Lamb provides that unique flavor profile.

- The time is NOW to capitalize on the adventurous consumer & aspiring chefs at home . . . however, price (not quality) may be the limitation.

Preliminary Results – not for dissemination
Lamb Quality: Any Questions?
USDA Lamb Nutrient Database for Standard Reference Update

Dale R. Woerner, Cody Gifford, Keith E. Belk, J. Daryl Tatum, Robert J. Delmore

Conducted by:
Colorado State University

Funded by:
American Lamb Board & The National Sheep Industry Improvement Center
Sample Collection

• Table 1 indicates total samples collected for each retail cut.
• Samples were collected from three commercial lamb processing facilities
  – Mountain States Rosen (Greeley, CO)
  – Superior Farms (Denver, CO)
  – Superior Farms (Dixon, CA)
• Equal number of samples were collected from each processor
• Grain-fed samples were collected from every processor during each season (Spring, Summer, Fall, Winter).

• Grass-fed samples were collected during each season from Superior-Dixon and during Summer at Mountain States Rosen; grass-fed lamb carcasses were only harvested during at these processors during those specified seasons.

• Samples were collected from each processor for raw and cooked analysis
<table>
<thead>
<tr>
<th>Retail Cut</th>
<th>Total Samples Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leg, Foreshank, IMPS 210, 1/8&quot; trim level</td>
<td>40</td>
</tr>
<tr>
<td>Leg, Whole, Boneless, IMPS 234, 1/8&quot; trim level</td>
<td>80</td>
</tr>
<tr>
<td>Leg, Bone-in, Sirloin Chop, IMPS 1245, 1/8&quot; trim level</td>
<td>40</td>
</tr>
<tr>
<td>Loin, Block-Ready Trimmed, IMPS 232A, 1/8&quot; trim level ³</td>
<td>40</td>
</tr>
<tr>
<td>Loin Chop, IMPS 1232A, 1/8&quot; trim level</td>
<td>40</td>
</tr>
<tr>
<td>Rib, Rack, Roast-Ready, Frenched, Cap-off, IMPS 204D, 1/8&quot; trim level</td>
<td>40</td>
</tr>
<tr>
<td>Rib, Chop, Frenched, Cap-off, IMPS 1204D, 1/8&quot; trim level</td>
<td>40</td>
</tr>
<tr>
<td>Rib, Rack, Roast-Ready, 204B, 1/8&quot; trim level</td>
<td>40</td>
</tr>
<tr>
<td>Rib Chop, IMPS 1204B, 1/8&quot; trim level</td>
<td>40</td>
</tr>
<tr>
<td>Shoulder, Whole, Boneless, IMPS 208, 1/8&quot; trim level</td>
<td>40</td>
</tr>
<tr>
<td>Shoulder, Blade Chop, IMPS 1207B, 1/8&quot; trim level</td>
<td>80</td>
</tr>
<tr>
<td>Shoulder, Arm Chop, IMPS 1207A, 1/8&quot; trim level</td>
<td>40</td>
</tr>
<tr>
<td>Stew meat, IMPS 295 (approximately 95% lean)</td>
<td>40</td>
</tr>
<tr>
<td>Ground Lamb, IMPS 296 (approximately 85:15)</td>
<td>80</td>
</tr>
</tbody>
</table>
Project Update

• Final collection was shipped to Colorado State University on January 29, 2015
• All product from grain-fed and grass-fed (forage fed) lamb has been collected
• Approximately 50% of samples have been dissected, homogenized and are being stored at -80° C until nutrient analysis occurs
• All samples have been processed following approved protocol from the USDA Nutrient Database Laboratory
Research Timeline

• End of February – all dissections will be complete and samples will be prepared to begin analysis of nutrient composition
• September – nutrient data will be submitted to USDA Nutrient Database Lab for inclusion into USDA Standard Reference 28
• September – final report due to American Lamb Board
• Fall 2015 (November) – Standard Reference 28 released with updated lamb nutrient composition