Global Market Traceability Dynamics

Leann Saunders
NIAA
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Discussion

1) USMEF Global Market Snapshot
2) Is traceability important in the global market place?
3) What are other global exporters doing?
4) What has the U.S. accomplished since 2003?
5) Where do we go from here?
Where Food Comes From, Inc.

Who are we?

- 23 Years in the Livestock Identification/Traceability, Food Verification and Certification business
- Four primary verification divisions
- Currently verify or certify against 35 different standards
- [www.wherefoodcomesfrom.com](http://www.wherefoodcomesfrom.com)
U.S. beef and variety meat exports to set new records this year

2018f: 1.35 mmt, +7%
$8.39 Billion, +15%

Source: USDA/FAS & USMEF
U.S. pork and variety meat exports had been expected to set new records this year. However, the chart shows a trend of increasing exports in both metric tons and billion USD. The sources of these data are USDA/FAS & USMEF. The chart indicates that while 2018 exports could hold close to 2017 record, growth needed to offset larger production.
The markets in export dollars per head

Fed cattle = $318.31, up $44.79 or 16%

Hogs = $54.27, up $0.16 or <1%

Source: USDA/USMEF, fed slaughter for cattle; commercial for hogs Jan-July 2018
Accounting for a larger share of fed cattle value

Source: USDA/AMS & NASS; 5 area wtd. live steer price
Examples of how exports add to carcass value

- Tongues to Japan: $11.14
- Short plate to Japan: $28.15
- Short ribs/chuck short ribs to Korea: $22.56
  per fed head

Source: Global Trade Atlas import data, USDA/NASS, USMEF estimates, data is for Jan – July 2018
The U.S. is the #1 beef exporter on a value basis

Beef & Variety Meat Export Value

Jan-July 2018 total: $21.3 billion, +12%
Led by U.S.: $4.7 billion, +20%
Growth from all top exporters

Beef exports to all markets: Jan-July series

Shipments from the top 11 exporters were up 7%, totaling 4.6 million mt in the first seven months of the year

Source: GTA & USMEF estimates; includes variety meats but not HS0504
Growth in grain-fed from U.S. & Australia...strong demand

Exports of chilled/frozen beef from the U.S. & Grain-fed from Australia

Jan-June 2017
Jan-June 2018 U.S.
Jan-June 2017 A
Jan-June 2018 Australia

Source: GTA & MLA, metric tons
Does traceability matter in the global market place?

• Exports are driven by a large number of interrelated factors
  • Export Prices
  • Competing export country prices
  • Exchange rates
  • Consumer preferences in importing countries
  • Trade barriers
  • Political relations

• Only **clear cut, when it becomes a necessary condition for imported products**
Does traceability matter in the global market place?

- Export requirements are complicated—different market access requirements
- Different trade agreements and subsequent technical agreements between countries are the reality
- Examples today:
  - Animal Identification
  - Animal traceability
  - Age
  - SRM requirements
  - NHTC
  - Animal Fat
Does traceability matter in the global market place?

"The world has recognized significant value in animal identification (ID) and traceability systems. Concerns for animal and human health, as well as food safety assurances, have motivated efforts to adopt animal ID systems. The most widely recognized international animal health, food safety and trade organizations have endorsed animal ID programs as essential components of food animal production and meat product trade. In response, major beef exporters and importers have developed mandatory animal ID and traceability systems.

Source: K-State Dept. of Ag Econ (Publication: AM-GTT-2011.3)
Does traceability matter in the global market place?

• "A critical issue regarding the economic impact of any animal disease outbreak is the ability to contain the disease and restore market access for at least part of the industry as soon as possible”
• Regionalization (or zoning) could be used—so based on a geographic region is can be demonstrated to be isolated and free of disease incidence.
• The defined region could then regain international market access.
• Animal identification, movement tracking, and inflow and outflow documentation are essential in demonstrating whether an auditable biosecurity management system is present

The World--Four patterns of adoption

• Adoption of Mandatory Systems in response to consumer concerns (EU and Japan)
• Imposition of mandatory traceability to maintain or enhance export market shares (Australia, Brazil, Argentina)
• Industry managed mandatory programs for animal identification (Canada)
• Mix of mandatory government programs and Industry managed voluntary programs (United States)

Source: The Economics of Implementing Traceability in Beef Supply Chains: Trends in Major Producing and Trading Countries
### Table 1. Matrix of Global Animal Identification and Traceability System Components

<table>
<thead>
<tr>
<th>Country</th>
<th>Government-Mandated System</th>
<th>Components</th>
<th>Data Managed by Private Third Party</th>
<th>Oversight Body w/Industry Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Premise ID</td>
<td>Individual Animal ID</td>
<td>Group/lot ID</td>
</tr>
<tr>
<td>Argentina⁹</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Australia¹⁰</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Brazil¹¹</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Canada¹²</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>European Union</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico¹³</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Uruguay</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

### 2015 US Beef Competitor Traceability Grid

<table>
<thead>
<tr>
<th>Country</th>
<th>System Name</th>
<th>Launch Date</th>
<th>National Individual Animal ID</th>
<th>ID System</th>
<th>Movement Tracking</th>
<th>Motivation</th>
<th>Accessible Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td><strong>Servicio Nacional de Sanidad y Calidad Agroalimentaria (SIGSA):</strong></td>
<td>2007</td>
<td>Yes (cattle and sheep)</td>
<td>Diff colored tags based on region; and one large and one small ear tag, hot brand</td>
<td>Yes</td>
<td>Needed for FMD classification and Market Access (EU)</td>
<td>SIGSA</td>
</tr>
<tr>
<td></td>
<td><strong>National Livestock Identification System (NLIS):</strong></td>
<td>1999 (expanded in 2009)</td>
<td>Yes for cattle, sheep and goats</td>
<td>YES for cattle. Sheep and goats can be &quot;mob&quot; or group tagged.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td><strong>Brazilian System of Identification and Certification of Origin for Bovine and Buffalo (SISBOV):</strong></td>
<td>2002</td>
<td>No - only for export livestock; TRACES is mandatory for EU exports only</td>
<td>Not mandatory</td>
<td>Ear tag</td>
<td>Needed for FMD classification under OIE and market access (especially to the EU)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Canadian Cattle Identification Agency:</strong></td>
<td>2001</td>
<td>Yes</td>
<td>Yes</td>
<td>RFID (required after July 2010)</td>
<td>Animals must be tagged before leaving their farm of origin; next scanning occurs at slaughterhouse</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Each member state has their own system and name: <a href="http://ec.europa.eu/food/animal/identification/bovine/index_en.htm">http://ec.europa.eu/food/animal/identification/bovine/index_en.htm</a></td>
<td>1997</td>
<td>Yes</td>
<td>Yes</td>
<td>Double ear tags for each animal with an individual ID</td>
<td>All animals</td>
<td>BSE response; tracing and control of infectious diseases; traceability of beef for public health reasons; marketing</td>
</tr>
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</tr>
<tr>
<td><strong>EU</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mexico</strong></td>
<td>SINIIGA (National Livestock Individual Identification System)</td>
<td>2003</td>
<td>Yes</td>
<td>Yes. Thus far it has been implemented in bovines and bees</td>
<td>Ear tags (with bar codes for bovines)</td>
<td>Not yet: only 15% of the livestock is there; Dairy cattle are more controlled at this point</td>
<td>Zoosanitary control and traceability</td>
</tr>
<tr>
<td><strong>New Zealand</strong></td>
<td>National Animal Identification and Tracing (NAIT)</td>
<td>2009</td>
<td>Yes for cattle and deer</td>
<td>Yes</td>
<td>RFID tags (two different options)</td>
<td>All movements must be recorded</td>
<td>Industry led initiative, funded by NZ gov't</td>
</tr>
<tr>
<td><strong>Paraguay</strong></td>
<td>Management System Regional Offices (Sigor - mandatory) and Paraguay Traceability System (SITRAP)</td>
<td>2006 (SITRAP)</td>
<td>SIGOR group traceability is mandatory; SITRAP individual traceability is voluntary</td>
<td>Voluntary program (mandatory for EU)</td>
<td>Mandatory: COTA (Official Certificate of Animal Transit); SITRAP: iron brand or earmark, plus specific colored tags for the EU</td>
<td>Yes</td>
<td>FMD control; EU and foreign market access</td>
</tr>
<tr>
<td><strong>Uruguay</strong></td>
<td>National Livestock Information System (SNIG) and Animal Identification and Registration (SIRA - individual)</td>
<td>2006 (individual)</td>
<td>Yes (for bovines)</td>
<td>Yes (for bovines)</td>
<td>Ear tag and RFID</td>
<td>Yes</td>
<td>FMD control; EU and foreign market access</td>
</tr>
</tbody>
</table>
Comprehensive Feasibility Study: U.S. Beef Cattle Identification and Traceability Systems
January, 2018
Evaluation of Opportunities, Obstacles and Incentives Across the U.S. Beef Industry Value Chain by World Perspective, Inc.

• “The global trend is for the top beef exporting nations to be reactionary; national traceability systems are adopted in response to a major negative event. Contrastingly, the U.S. is presented with the opportunity to proactively develop a nationally significant system(s) potentially resulting in an industry-driven, hybrid approach that becomes the global standard”

• Topline takeaways:
  • Global systems tend to delineate between premise identification, individual animal identification, and group.lot identification. Some or all may be voluntary or mandatory
  • It is not uncommon for third-party entities to manage program databases, thereby protecting industry/producer data from freedom of information legislation
  • Initial tagging of calves tends to be mandated by a given period of days after birth or animals first movement off of their farm of birth
What the USA has done since 2003 to address critical export markets

- 2003 forward Export Verification Instructions
- USDA Process Verified Program Data Service Providers
  - Implemented Standards to allow different segments to meet EV requirements
  - Verifiable audit trail required since all cattle aren’t enrolled in system
  - Discipline created
  - Multiple export market verification now built off of this base model
- China—new entrant
Value of Program Compliant Tag (PCT) Definition

- One-time use, tamper evident, uniquely numbered (ISO compliant)
- Foundation for Verification Programs
- Serves as unique individual animal identifier
ADT

- Mandatory Animal Disease Traceability Ruling
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• Why systems are becoming a global norm
  • Accountability—both to foreign governments/regulatory agencies as well as foreign and domestic consumers
  • Maintenance or regaining of foreign market access
  • Management of animal health issues
  • Investment in long-term industry practices that provide insurance in the case of an animal disease
• For use as a talking point/tool in market access negotiation efforts
• “The fact remains that, among top exporting countries, nationally significant traceability systems are the norm”.
• The only key import market that requires traceability is China
• “Speed of commerce is a crucial aspect"
Figure 6. Participation by Herd Size.

Participation in voluntary traceability/animal ID system by herd size

Source: Aspen Media and World Perspectives, Inc.

Figure 7. Reasons for Voluntary Participation.

For what reason(s) do you choose to participate in a voluntary traceability/animal ID system?

Source: Aspen Media and World Perspectives, Inc.
Figure 8. Integration with Existing Systems.

How strongly would you support or oppose integration of the system you are participating in with a larger, more nationally-significant traceability/animal ID system?

Source: Aspen Media and World Perspectives, Inc.

Figure 9. For What Reason Would a Stakeholder Participate in a Voluntary System?

For what reasons, if any, would you consider participating in a voluntary traceability/animal ID system?

Source: Aspen Media and World Perspectives, Inc.
Figure 12. Levels of Acceptance for System Components.

Please rate your level of acceptance with the following traceability/animal ID system component: Animals are ID'd at the ranch of origin.

Source: Aspen Media and World Perspectives, Inc.
Figure 13. Levels of Acceptance for System Components.

Please rate your level of acceptance with the following traceability/animal ID system component: Information is collected every time an animal physically moves to a new premise.

Source: Aspen Media and World Perspectives, Inc.
Figure 10. Measuring Support for an Expanded Mandatory System.

How strongly would you support or oppose a mandatory traceability/animal ID requirement in addition to those already included in the ADT program?

Source: Aspen Media and World Perspectives, Inc.

Figure 17. Levels of Acceptance for System Components.

Please rate your level of acceptance with the following traceability/animal ID system component: Information is made available to government entities only in the event of an animal disease outbreak.
“Unfolding” Theory

• Competition creates and environment where you talk about the positive aspects
• As a result, those that are not labeled, consumers immediately make inferences
The Global Food Industry

Complex supply chains
If transparency is your goal, traceability is your challenge.

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- **Recommended Tenants:**
  - Industry Driven
  - Managed and overseen by an entity that includes both private and government interests
  - Maintains data privacy
  - Is equitable to all industry sectors
  - Is compatible with common industry practices
  - Operates at the speed of commerce
  - Is credible in domestic and international markets
Conclusions

• Markets are becoming accustomed and accepting of our current ADT program with the voluntary Export Verification Program
  • NHTC- required for EU exports
  • China Source Verification- individual program compliant tag must be put in at the source of origin Saudia Arabia- No animal fat (animals enrolled in a USDA PVP Program
  • Domestic programs requiring verification of credence attributes
• This is positive from a market access perspective
• This does not help issues around disease traceability for the critical masses but it is growing
Thank you

Leann Saunders
lsaunders@@wherefoodcomesfrom.com

Corporate Office:
202 Sixth Street, Suite 400
Castle Rock, CO 80104
(866) 395-5883
www.wherefoodcomesfrom.com