

Pork Chain Uses & Needs for Traceability

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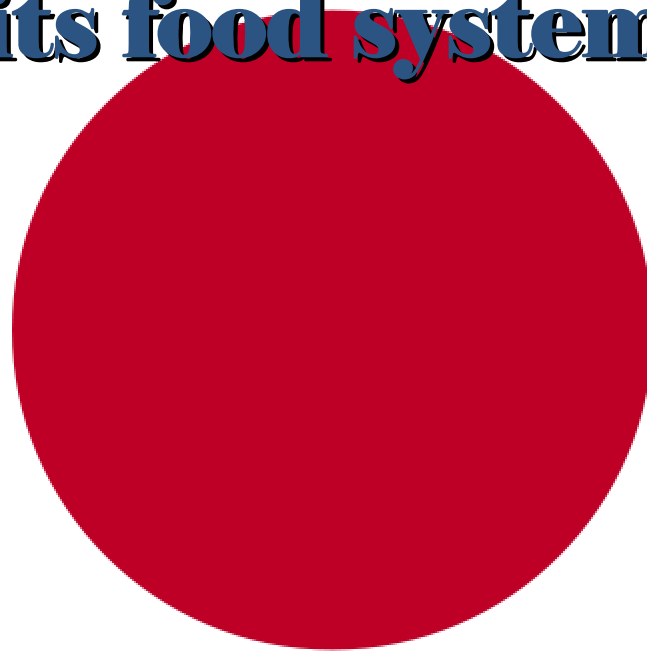
Swine-A History of Traceability

- 1988 Mandatory (Webb, 2007)
- PRV-Interstate
- Record Driven
 - Sows as Individuals
 - Confinement Driven
 - Fewer, more sophisticated producers
- Packer Marketing Agreements

Demand Continues

- Allows rapid reaction to problems identified
- Driven by:
 - BSE and FMD Experience
 - Labeling Scandals in Japan
 - Domestic Consumer Interest
 - Food Safety, GMO, Clones
 - Is it a niche or part of one?
- Country of Origin Labeling
- New Technologies

**“Japan seeks total traceability in
its food system”**



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Know where your
animals/product came from,
and where
they went.

Provide specific
information about a
defined group.

Documentation of program criteria
or segmented animals.

Program Requirements

- Traceability or source verification is a required element of Process Verified Programs.
- What level?
- COL will drive



Live Production

- Sows-Individuals
- Boars-AI
- Cull Animal Opportunities
- Nursery/Finisher Group Based
 - Most issues group based
 - Needle, individual-translate to human not pig

Pork Chain Linkage Greater than Ever!

- Japan and MRL's
- Canada and Carbodox
- China and Ractopamine
- Experimental pigs in marketplace

Traceability-Worst Case Scenario

- **Pigs may be mixed at any of these stages:**
- Weaned pigs are brought in from a variety of states and Canada.
- No effort made to maintain traceability to sow units.
- Pigs are placed into contract nurseries in multiple locations or states.
- Pigs are moved from these nurseries to contract grow finish sites.
- Flow from nursery to finisher is not regular.

Traceability-Worst Case Scenario

- Finisher pigs go to plant.
- At plant, tattoos are administered.
- Tattoos are associated with the holder of the pigs at the time.
- This may be management companies or even creditors.
- A tattoo may be the equivalent of a post office box to send the check.

Best Case Scenario Traceability

- Simple.
- Source country and premises ID are KNOWN.
- Pigs are tracked as groups from birth.
- Trace back can be done from the plant to the sow farm NOT just the last premises.
- Due to integrated nature, controls are in place before animals ever get to the plant.
 - Residue
 - Disease
 - Weight

Traceback Weaknesses

- Channels where animals change ownership more than once (points of concentration)
- Mis-identified animals
 - Incorrect tattoo, paperwork or entry
 - Split Loads
 - Slows/Non-Ambulatory
- Can National Animal ID improve?

Processing

Plant:

Traceability

Requirements

(The 'R' Word)

Traceability Needs

- Objective: Know if, and how much of your product, or customer's product is involved. (Natural Bloom)-90%/2hrs
- Program Requirements – PVP
- Consumer Complaints
- Customer Requirements
- Regulatory Compliance/Recall Capabilities

Plant Traceability

- Carcasses are identified with unique identification that tells the farm
- Defects are tracked on slaughter on individual and farm basis
- HCW record entry order into the cooler
- Cut order is typically run sequentially
- Time and date on box label

Plant Limitations

- Lotting is frequently based on day.
- May be dependent on sequence as well.
- System Flaws:
 - Carcasses/combos held over
 - Rework/repackaging
 - Trimmings
 - Blending
 - Boxing

Customer Requirements

- Support for their own recall programs
 - 24/7 Contact List
 - Copy of Recall Program
- Third party assessment of recall program
- Specific Programs-ABF

Consumer Complaints

- Focused on consumer not customer.
- Examples:
 - Broken tooth/dental
 - Choking
 - **Needle**
 - Food Poisoning
- Accurate information is critical.
- DNA would be helpful here

Product Recalls

- Recalls are “voluntary”.
- Governed under USDA Directive 8080.3 (revised Sept '04)
- Widely communicated by USDA-FSIS to public health, state inspection agencies.
- Relies on “lots” and “breaks”
 - Defined groupings of products.
 - Usually “clean-up to clean-up”
 - Risk defines size

Integrated/Coordinated Traceability

- Less than two HOURS from fabrication to sow farm(s), not two DAYS!
- Enhancing traceability is a laudable goal, but there are considerations....

What would traceability cost for an individual cut?

- Options:
 - Physical tracking
 - Tags, Segregation, Crates
 - Microchips
 - DNA
 - Other
- Question: What would impact an individual and not the group? If something happened, we would want to control the group.

Traceability Technologies

- Software
- RFID
- Bar Coding
- DNA
- Retinal Scan
- What is goal?
- Is there a need for that level?
- Doesn't negate "paper trail".

What doesn't work and why??

- Many of the demonstration systems are very low volume and speed.
- Individually handling product, physically tagging it, or bar coding at 1100-1300 hr equivalents not practical.
- What's Needed?
 - Something that can survive fabrication & conversion

A “triggering event” could change outlook on all of these!

- *Spinach*
Entire product category was implicated until slowly individual areas/companies/causes were identified.
- A BSE-like event in pork where the individual becomes critical.
- Avian Influenza?

Pork Traceability has many goals for many different audiences. These will drive cost and technology choices!

Marketing

Animal Health

Foreign Animal Disease

Zoonotic