

PORK QUALITY

Title: Identification and Traceability for the Pork Industry - A Proposal for a Feasibility Study
NPB #01-158

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Abstract:

A study of methods of animal identification and traceability in use in the European Union (EU) has been made. An investigation of the potential for adaptation of this method for deployment in the U.S. pork meat chain has been conducted. Relationships between traceability, food safety, economics, and country of origin labeling have been considered.

It has been observed that although many consumers in EU perceive individual animal traceability in their food chain from producer to retail, in reality only a small percentage of the meat marketed in the EU actually provides this traceability. From a technological viewpoint, an industry-wide adaptation of the individual animal traceability methods used in the EU into existing pork processing facilities in the U.S. will likely not be practical due to the high costs associated with their implementations, due to the limited focus and resources associated with optimizing their systems, and due to the much higher line speeds and efficiencies needed for processors to be competitive in the U.S. Some features of their systems such as the use of conventional ear tags, the passport concept, the use of electronic implantable tags to keep track of animal identity through the production process, and the use of electronic identification chips, tattoos, and “luggage tags” to keep track of carcasses, primals and subprimals to trace meat from the break-up floor to the retail counter could be adapted in the U.S. pork chain if individual animal identification and traceability is ever implemented through either market or regulatory pressures. It was, however, observed that the EU does maintain a reasonable level of batch traceability.

From an economic viewpoint, there seems to be little incentive at this time to establish industry-wide individual animal traceability even to the producer in the U.S. and correspondingly little interest from the producer, packer, distributor, retailer or consumer at this time in establishing this level of traceability. From both food safety and liability viewpoints, some form of traceability from retail to the producer and packer may be important in the U.S. pork chain but with the increasing role the large producers play in providing the pork consumed in the U.S., this can be achieved more practically with a batch traceability system in which breaks in the boning floor are used to separate batches from different producers. It can be argued that the batch processing systems are effectively in use today in some (if not many) existing U.S. packing facilities with daily or more frequent breaks in the boning floor although the packers may still be commingling carcasses from several large producers along with a small percentage of animals from larger numbers of small producers in a daily batch or they may be storing selected primals from slaughter over several days for subsequent boning or cutting.

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It is believed that the incremental cost of actually maintaining batch traceability from retail to large producers will be modest but the cost of maintaining traceability to the individual small producer could be high. The high costs associated with establishing traceability to the small producer would likely result in a significant discounting of their animals and could limit their options for packing facilities that would even be willing to accommodate small batches if batch traceability is either established voluntarily or mandated.

Contrary to our prior view that the EU was much farther ahead in the traceability area than the U.S., it can be argued that some U.S. plants are already involved in batch traceability though with very large batches. This suggests that the issue has more to do with semantics and marketing than with process flow, engineering, or economics.

Finally, the issue of Country of Origin Labeling (COOL) has been considered. Although there may be a perception that COOL provides some form of traceability, our study shows that compliance with COOL requirements can be achieved without the use of traceability and without any substantial impact on improving food safety.