



Animal Identification: Overview and Issues

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Summary

Livestock industry groups, animal health officials, and the U.S. Department of Agriculture (USDA) have been working to establish a nationwide identification (ID) system capable of quickly tracking animals from birth to slaughter, to deal with animal diseases and/or to satisfy foreign market specifications. Some consumer groups are among those who believe ID also would be useful for food safety or retail labeling purposes. Not all producers support the evolving new program, fearing it will be costly and intrusive. In the 111th Congress, lawmakers are monitoring USDA's work on the program and could propose legislation aimed at shaping its scope, design, and pace of implementation.

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What Is Animal ID and Why Is It Used?

Animal ID refers to keeping records on farm animals or groups (e.g., flocks; herds) so that they can be more easily tracked from birth to slaughter. Use of animal ID dates back at least to the 1800s, when hot iron brands were used throughout the U.S. West to indicate ownership. ID methods today include ear, back, and tail tags; neck chains, freeze (as opposed to hot iron) brands, and leg bands. Some producers use radio frequency ID transponders with information that is read by scanners and fed into computer databases. The reasons for identifying and tracking animals and their products also have evolved.

Animal Health

Animal ID can help to identify the source of dangerous and costly animal diseases and to contain them. In the global marketplace, animal disease programs, aided by traceability systems, are used both to reassure buyers about the health of U.S. animals and to satisfy foreign veterinary and/or food safety requirements. USDA's Animal and Plant Health Inspection Service (APHIS) oversees animal health in consultation with state veterinary authorities, and some of its disease eradication and control efforts effectively require ID and tracking. For example, for brucellosis, a highly contagious and costly disease mainly affecting cattle, bison, and swine (once common here), uniquely numbered brucellosis ID tags were routinely attached to animals, which noted that they had been vaccinated or tested. Because brucellosis has largely been eradicated from U.S. commercial herds, ID was becoming less common. Examples of other official disease programs include pseudorabies in swine and scrapie in sheep, where swine and sheep, respectively, must be officially identified before entering interstate commerce. Often state laws or breed association rules require animals of these and other species, like cattle and horses, to be identified to participate in shows or races.

Still, no universal system captures the locations and movements of all farm animals across all states. U.S. limitations were noted after bovine spongiform encephalopathy (BSE, or mad cow disease) was discovered in the United States (in a Canadian-born dairy cow) in December 2003. A number of trading partners that had quickly closed their borders to U.S. beef reportedly were reluctant to reopen them, due in part to U.S. difficulties in tracing the whereabouts of other cattle that had entered the United States with the BSE-infected cow; similar difficulties arose in determining the whereabouts and/or herd mates of the two later U.S.-born BSE cases.¹

Commercial Production and Marketing

Many farmers and ranchers already keep track of individual animals and how they are being raised, in order to identify and exploit desirable production characteristics. Universal bar codes on processed food, including many meats, are widely used by processors and retailers to manage inventories, add value to products, and monitor consumer buying. When consumers seek meat, eggs, or milk from animals raised according to specified organic, humane treatment, or environmental standards, ID and traceability can help firms verify production methods.

¹ See CRS Report RL32199, *Bovine Spongiform Encephalopathy (BSE, or "Mad Cow Disease"): Current and Proposed Safeguards*, by Sarah A. Lister and Geoffrey S. Becker.

Government-coordinated programs also have been established for these purposes. For example, a process verification program operated by USDA's Agricultural Marketing Service (AMS) "provides livestock and meat producers an opportunity to assure customers of their ability to provide consistent quality products by having their written manufacturing processes confirmed through independent, third party audits," according to AMS. USDA "Process Verified" suppliers can have marketing claims such as breeds and feeding practices, and so label them, under this voluntary, fee-for-service program.

After BSE appeared in North America in 2003, AMS developed an export verification (EV) program for U.S. plants seeking to meet the differing beef import specifications of various countries like Japan, a key foreign market for U.S. beef. AMS establishes the standards that U.S. suppliers must follow if they want to ship beef to these countries, and certifies that the proper procedures are in place. While EV is "voluntary," it also has become a prerequisite for access to the Japanese, Korean, and other foreign markets. Other programs employing varying levels and types of traceability include the domestic origin requirement for USDA-purchased commodities used in domestic feeding programs; and the national organic certification program, which AMS also oversees.²

Food Safety

Federal and state food safety agencies collaborate with APHIS to protect the food supply from the introduction, through animals, of threats to human health, such as tuberculosis; and foodborne illnesses from bacteria like *Salmonella* and *E. coli* O157:H7. Generally, when local health officials can link an illness to a particular product, firms and their regulators have been able to trace that product back to the processor and/or slaughter facility. It has been more difficult to determine which particular animals, herds, or flocks were involved. Some believe that a more rigorous traceback and animal ID system would facilitate food recalls, possibly contain the spread of a foodborne illness, and help authorities stem future incidents. Others, particularly many within the food industry, strongly disagree, countering that such a system would not be based on sound science, and would be technically unworkable and costly.³

Development of a National Plan

Early Private-Public Efforts

Work toward a coordinated national animal ID system began in earnest in the early 2000s and evolved into a joint industry-government-professional effort whose principal goal was the ability to trace animals of interest within 48 hours of an animal disease problem. A draft "U.S. Animal Identification Plan (USAIP)" published in December 2003 called for recording the movement of individual animals or animal groups in a central database or in a "seamlessly linked" database

² For more information see the AMS website at <http://www.ams.usda.gov/>.

³ Traceability requirements related to food safety likely would be within the purview of USDA's Food Safety and Inspection Service (FSIS), which regulates meat and poultry products under, respectively, the Federal Meat Inspection Act (21 U.S.C. 601 *et seq.*) and the Poultry Products Inspection Act (21 U.S.C. 451 *et seq.*). See also CRS Report RL32922, *Meat and Poultry Inspection: Background and Selected Issues*; and CRS Report RS22955, *Country-of-Origin Labeling for Foods*, both by Geoffrey S. Becker.

infrastructure. APHIS roles would be to allocate premises (e.g., farms, feedlots, auction barns, processing plants) and animal numbers and to coordinate data collection. The work plan envisioned by the USAIP had first called for all states to have an animal premises ID system by July 2004, with farm animals of all major species identified by July 2006.

USDA Actions⁴

As the draft USAIP was being published in December 2003, the first U.S. BSE case emerged. Among the initiatives USDA quickly announced to shore up confidence in the beef supply was accelerated implementation of animal ID. Since early 2004, the Department has committed nearly \$128 million to its development, providing many of the funds to states and tribal organizations for research, database systems, and startup of premises registration.

USDA first announced a “framework” for its National Animal Identification System (NAIS) in April 2004 and has been periodically revising the outlines of the program since then. It issued a “draft strategic plan” in May 2005, announced a new set of “guiding principles” in August 2005, and unveiled a new plan in April 2006 that set a timeline for full implementation by 2009. In November 2006, USDA distributed a draft “user guide” as “the most current plan for the NAIS [which] replaces all previously published program documents, including the 2005 Draft Strategic Plan and Draft Program Standards and the 2006 Implementation Strategies.” The user guide sought to assure producers that USDA would not require them to participate in the program, and that it is bound by law to protect individuals’ private and confidential business information. The draft user guide described three successively greater steps toward full participation:

- premises registration, done through one of the state (or tribal) animal health authorities (by late 2006, the goal was to register all premises by 2009);
- animal ID, accomplished by obtaining USDA-recognized numbering tags or devices from representatives of authorized manufacturers;
- selection by the producer of one of the NAIS-compliant animal tracking databases to which the producer can report animal movements.

On this last point, USDA has envisioned a universal system to be a series of state or privately held databases which the Department could tap only in the event of an animal disease outbreak, with the goal of tracing animals from point of origin to processing within 48 hours. Its user guide anticipated that the NAIS would cover the following species: cattle and bison; poultry; swine; sheep and goats; cervids such as deer and elk; horses and other equines; and camelids (e.g., llamas and alpacas). Household pets and other animals not listed would be excluded from NAIS. Only animals that enter commerce or that commingle with animals at other premises (like sales barns, state or national fairs, or exhibits) would be identified. Also, animals that typically are moved in groups—such as hogs and poultry—could be identified as part of their group rather than individually.

A so-called business plan released by USDA in 2008 has attempted to further clarify current implementation strategies. One of seven key strategies would be to prioritize species, with the primary commercial food animals in “Tier 1,” along with horses that need a health certificate or

⁴ This section is based primarily on current and archived materials found at APHIS’s animal ID website at <http://animalid.aphis.usda.gov/nais/index.shtml>.

test when moved. All other livestock and poultry would be in a lower-priority Tier 2. One key objective would be to bring 70% of the cattle breeding herd into NAIS by the end of 2009.⁵

It was unclear as of mid-February 2009 what, if any, changes the incoming Obama Administration would propose in the design or implementation of the program.

Selected Issues

Supporters assert that an animal ID system is needed to maintain U.S. competitiveness in the global marketplace, where other major meat-exporting countries have been rapidly developing their own ID programs, in part to meet importing countries' demands for such traceability. Some livestock producers say they are not convinced that any new program, mandatory or voluntary, will improve animal health oversight, and they fear that it will only impose costly and intrusive regulations on their operations without adding any significant value to their animals. Some reportedly have been working to block mandatory and/or even voluntary programs in various states.

Implementation Pace

Some animal ID program supporters, on the other hand, have criticized USDA for moving too slowly and/or not setting a clearer path toward universal ID. As of early 2009, APHIS reported that approximately 502,000 animal premises had been registered in one of the available databases. This compares with an estimated 1.4 million livestock and poultry farms in the United States⁶. Registration rates vary widely among states.

A July 2007 report by the Government Accountability Office concluded that a number of problems had hindered effective implementation of animal ID, such as no prioritization among the nine animal species to be covered to focus on those of greatest disease concern; no plan to integrate NAIS into existing USDA and state animal ID requirements; and no requirement that some types of critical data be provided to the databases, such as species or age.⁷ Others believe that USDA's progress simply reflects the wide differences among producers and other interests over many unresolved issues.

House and Senate appropriators also have questioned USDA's progress and direction in implementing a national system. Over several years through FY2007, about \$117.8 million went into the program's development. The enacted FY2008 appropriation (part of the Consolidated Appropriations Act, 2008, P.L. 110-161) provided \$9.8 million more to continue implementation of NAIS, which was well below the Administration's requested appropriation of \$33.2 million for NAIS for FY2008. The conference report cited concerns about "the lack of information provided

⁵ This plan, released in draft form in April 2008 and currently bearing a September 2008 date, is *A Business Plan to Advance Animal Disease Traceability*. Accessed February 18, 2009, at http://animalid.aphis.usda.gov/nais/naislibrary/documents/plans_reports/TraceabilityBusinessPlan%20Ver%201.0%20Sept%202008.pdf.

⁶ 2002 Census of Agriculture data. The more recently published *Business Plan* breaks this total into an estimated 1.046 million cattle premises, 66,000 hog premises, 163,000 poultry premises, 69,000 sheep premises, and 91,000 goat premises. In addition, the *Business Plan* estimates there are 570,000 premises for horses in the United States.

⁷ *National Animal Identification System: USDA Needs to Resolve Several Key Implementation Issues to Achieve Rapid and Effective Disease Traceback*, GAO-07-592.

on full costs and concerns about the use of funds to date,” including information on how APHIS would reach its 48-hour traceback goal, and information on how the funds for the program have been used to that date. The report stated the committees’ concern that more than 50% of the obligations for NAIS up until then had been for “cooperative agreements that, until very recently, did not require that cooperators or grantees agree to specific performance goals.” The committees also expressed concern that 25% of the funding had gone for program management.

Administration officials, seeking \$24 million for the program for FY2009, were harshly criticized by the chair of the House Appropriations agriculture subcommittee at a hearing on April 9, 2008. She indicated that she wanted more accountability regarding the spending. The House Appropriations Committee did not mark up a USDA FY2009 appropriation. However, the subcommittee’s draft bill reportedly contained incentives to encourage wider adoption of animal ID, notably a requirement that USDA purchase meats for the school lunch program starting in 2010 only from suppliers in the ID system.⁸ A Senate-reported USDA appropriations bill, which also did not advance, would have provided \$9.9 million for FY2009. Instead, USDA’s funding was made part of a continuing resolution (P.L. 110-329, Division A), enacted on September 30, 2008, to fund the government until March 6, 2009. Thus the full FY2009 amount for animal ID was still uncertain as of mid-February 2009.⁹

Mandatory or Voluntary?

According to the Department’s latest thinking on the NAIS (see above), “Participation in NAIS is voluntary at the Federal level.... The NAIS does not need to be mandatory to be effective.” Others, including many state animal health officials, reportedly disagree. At meetings in October 2006, the National Assembly of State Animal Health Officials and the U.S. Animal Health Association’s livestock committee each approved a recommendation that, as a step toward a national system, USDA make animal ID mandatory for all U.S. breeding cattle. Consumer advocacy groups also have pressed for a mandatory national system.

Costs and Who Pays

An animal ID system will impose a variety of costs, such as for tags or other identifying devices and their application, and data systems to track animals. Cost estimates of a national system have varied broadly—and are not directly comparable, a reflection of estimators’ differing assumptions and of the varying designs of proposed programs. As the extent of traceability increases, so do likely costs. A related policy question is who should pay—the industry (and ultimately consumers), government, or both? USDA’s current thinking calls for expenses to be shared (e.g., database costs funded by government and the identifying devices by producers).

It has been argued that, as more tracing requirements are imposed, large retailers and meat packers will exercise market power to shift compliance costs backward to farms and ranches, making it even more difficult for the smaller, independent ones to remain in business. Larger, more vertically integrated operations are more likely to have the resources and scale economies to survive, some have argued. On the other hand, if traceability costs forced big meat plants to

⁸ See, for example, “Funding bill links NAIS, school sales,” *Feedstuffs*, June 23, 2008.

⁹ See also CRS Report R40000, *Agriculture and Related Agencies: FY2009 Appropriations*.

reduce line speeds, “smaller plants with slower fabrication speeds may be better equipped to implement traceability to the retail level and may find niche market opportunities.”¹⁰

Liability and Confidentiality of Records

Some producers are concerned they will be held liable for contamination or other problems over which they believe they have little control after the animal leaves the farm. On the other hand, documentation of management practices, including animal health programs, can help to protect against liability because they can prove where animals came from and how they were raised.¹¹ Also at issue is whether producers can and should be protected from public scrutiny of their records. The federal Freedom of Information Act (FOIA) entitles members of the public to obtain records held by federal agencies. Some producers are concerned, for example, that animal rights extremists might misuse information gained through FOIA, or that the data collection might reveal proprietary information. However, FOIA exempts access to certain types of business information, such as trade secrets, commercial or financial information, or other confidential material that might harm the provider.¹²

In the 110th Congress, conferees deleted a provision (Sec. 10305) in the Senate-passed version of H.R. 2419, the omnibus farm bill enacted as P.L. 110-246, that would have required USDA regulations addressing “the protection of trade secrets and other proprietary and/or confidential business information” disclosed due to participation in an animal ID system.

Congressional Consideration

USDA has claimed it has existing authority, under the Animal Health Protection Act (7 U.S.C. 8301 *et seq.*), to implement an animal ID program. In the 110th Congress, proposed bills, not adopted, aimed to clarify USDA’s authority or spell out what type of program should be established. They included H.R. 1018, prohibiting USDA from carrying out a mandatory program and also seeking to protect the privacy of producer information under a voluntary system; H.R. 2301, establishing an industry-led Livestock Identification Board to manage a national ID system; and S. 1292, requiring USDA to implement a more comprehensive farm-to-consumer animal ID and meat traceability program. H.R. 3485 would have required comprehensive new traceability systems for both USDA-regulated meat and poultry and for other foods regulated by the U.S. Food and Drug Administration (FDA).

In the 111th Congress, food safety bills again have been introduced that would amend meat and poultry inspection authorities to require traceability. Such requirements in H.R. 814 and S. 425 include the ability to trace live food animals to any premise or location where they are held.

¹⁰ “Meat Traceability: Its Effect on Trade,” *Iowa Ag Review*, Winter 2002.

¹¹ *Ibid.*

¹² For more discussion of the liability and confidentiality issues, see National Agricultural Law Center, *Animal Identification—An Overview*, National AgLaw Center Reading Room, at <http://www.nationalaglawcenter.org/readingrooms/animalid/>.

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