



## CRS Report for Congress

# Animal Identification: Overview and Issues

Geoffrey S. Becker  
Specialist in Agricultural Policy  
Resources, Science, and Industry Division

### 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, in order to combat a serious animal disease 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. Some producers oppose new programs, fearing they will be costly and intrusive. In the 110<sup>th</sup> Congress as of April 2007, one related bill (H.R. 1018) had been introduced; it would prohibit a mandatory program. Lawmakers could be asked to consider this or other measures on the topic, possibly as part of a 2007 farm bill.

### 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. Today, however, brucellosis has largely been eradicated from U.S. commercial herds, so such ID is no longer widespread.

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. The existing programs, even where mandated by a state or other entity, are not designed to work in concert with one another, slowing disease response times and/or leaving informational gaps, according to USDA. U.S. limitations were demonstrated 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.<sup>1</sup>

**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.

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, once the number-one 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 is also a prerequisite for access to the Japanese 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.<sup>2</sup>

---

<sup>1</sup> August 30, 2005, technical briefing with Agriculture Secretary Mike Johanns. See also CRS Report RL32199, *Bovine Spongiform Encephalopathy (BSE, or "Mad Cow Disease"): Current and Proposed Safeguards*, by Sarah A. Lister and Geoffrey S. Becker.

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

**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 is more difficult and costly to determine which particular animals, herds, or flocks were involved. Some believe that a more rigorous traceback and animal ID system could 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 extremely costly.<sup>3</sup>

## 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 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 Takes the Lead.**<sup>4</sup> 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, with Congress’s approval, an estimated \$118 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, in April 2006, a new plan setting a timeline for full implementation by 2009. In November 2006, USDA distributed a draft “user guide,” which, it stated, is “the most current plan for the NAIS and replaces all previously published program documents, including the 2005 Draft Strategic Plan and Draft Program Standards and the 2006 Implementation Strategies.” The document seeks to assure producers that USDA will 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 describes three successively greater steps toward full participation, if a producer chooses to do so:

---

<sup>3</sup> See also CRS Report RL32922, *Meat and Poultry Inspection: Background and Selected Issues*, by Geoffrey S. Becker.

<sup>4</sup> 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>].

- Premises registration, done through one of the state (or tribal) animal health authorities (the goal is to register all premises by 2009);
- Animal ID, accomplished by obtaining USDA-recognized numbering tags or devices from representatives of authorized manufacturers (producers are to be responsible for the cost of the devices);
- 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 continues to envision a universal system as 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 anticipates that the NAIS will 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 here are to 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) are to 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.

**Status of Premises Registration.** As of mid-April 2007, APHIS reported that approximately 385,000 animal premises had been registered in one of the available databases. This represented approximately one-fourth of the estimated 1.4 million livestock and poultry farms in the United States (2002 Census of Agriculture data). Registration rates vary widely among states, depending partly upon the level of industry interest and economic activity in each, and whether a state is implementing either mandatory or voluntary participation, for example.<sup>5</sup>

## Selected Issues

Those who worked on earlier versions of an animal ID system assert that one 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 animal ID program supporters have criticized USDA for moving too slowly and/or not setting a clearer path toward universal ID. Others believe that USDA's progress to date simply reflects the deep divisions among producers and other interests over the many unresolved questions. 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 are working within individual states to block mandatory and/or voluntary programs there.

**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

---

<sup>5</sup> Updated premises registration data, including by state, is on the APHIS animal ID website.

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.<sup>6</sup>

**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 the varying designs of the programs that have been proposed. As the extent of traceability increases, so do likely costs. Animal ID *prior* to slaughter, and product tracking *after* slaughter and processing, generally are available (and are often used), industry observers agree. However, linking the two systems could be difficult and costly, according to meat industry officials who say it involves identifying and segregating animals, physically reconfiguring plants and processing lines, and labeling and tracking the final products.

A related policy question is who should pay. USDA’s November 2006 draft user guide (see above) calls for shared expenses among the federal government, states, and industry, with producers paying for ID devices themselves. It estimated the cost to be \$1 for each visual ID tag, \$2-\$3 for devices with radio frequency transponders, and \$15-\$20 for electronic ID devices that are injectable (e.g., for horses). USDA did not provide cost estimates for participating in the tracking databases. It said that these costs could vary depending partly upon whether producers chose to use these non-USDA maintained databases for additional services such as verification of labeling or marketing claims. Past bills have proposed appropriations for a national program, including financial assistance to producers to help them participate.

**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.<sup>7</sup>

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.

“Animal movement records will be securely held in animal tracking databases owned, managed, and controlled by the private sector or the States,” USDA’s November 2006 draft user guide states. “Animal health officials will only request animal movement information from these databases when there is a risk to animal health — such as an

---

<sup>6</sup>“USDA Urged to Move on Mandatory Animal ID,” *Food Traceability Report*, November 2006; also, *Food Chemical News*, February 13, 2006.

<sup>7</sup>Roxanne Clemens and Bruce Babcock, “Meat Traceability: Its Effect on Trade,” in the *Iowa Ag Review*, winter 2002.

outbreak of avian influenza, brucellosis, or tuberculosis.” Still, some in the industry worry about government intrusion into their business practices generally. That is why they prefer the use of a private third party, rather than USDA, to collect and maintain animal data (and why others want no new program). Any agreement between USDA and a private entity would have to clearly stipulate the conditions for use of the information, they assert. Several bills introduced into previous congresses had proposed to more explicitly shield animal ID data from public scrutiny.<sup>8</sup>

**Industry Structure.** How might traceability costs affect the industry’s ability to produce an economically competitive product, and which segments could bear most of the costs? 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 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,” Clemens and Babcock wrote.

## Consideration in the 110<sup>th</sup> Congress

USDA has claimed broad authority, under the Animal Health Protection Act (7 U.S.C. 8301 *et seq.*), to implement an animal ID program. Several bills have been offered in recent Congresses aimed at clarifying USDA’s authority and/or spelling out what type of program should be established. Congress also has played an important role by providing funding and direction for animal ID, through annual appropriations.

A number of policy options, possibly including legislative alternatives introduced in the past that either promoted or discouraged establishment of mandatory animal ID, could be discussed in the 110<sup>th</sup> Congress. As of mid-April 2007, one bill, H.R. 1018, had been introduced; it would prohibit USDA from carrying out a mandatory program and also would seek to protect the privacy of producer information under a voluntary system.

A likely venue for animal ID in 2007 is a new omnibus farm bill. The chairman of the House Agriculture Committee, for example, has been chief sponsor of past legislation (including H.R. 1254 in the 109<sup>th</sup> Congress) to mandate and fund a program. More recently, he reportedly has expressed interest in combining an animal ID program with aspects of mandatory retail country-of-origin labeling (COOL), to be required for fresh red meats (among other commodities) by September 30, 2008, under Section 10816 of P.L. 107-171, the 2002 farm bill, as amended.<sup>9</sup>

---

<sup>8</sup> 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/>].

<sup>9</sup> See CRS Report 97-508, *Country-of-Origin Labeling for Foods*, by Geoffrey S. Becker.