

USDA Bets the Farm on Animal ID Program

By [David E. Gumpert](#) & [William Pentland](#)

In winter 2006, faced with a mandatory program that required him to attach electronic tracking tags on his animals, Michigan farmer Brad Clark sold his cattle herd, and nearly forty years as a cowboy-style rancher came crashing to a halt. Now he's a full-time electrician.

"Cows lose tags like crazy," said Clark. "They get caught in tree limbs. You get an 1,800-pound bull that doesn't want to be tagged, it's an ordeal."

In March, when Michigan became the first state to make parts of the [National Animal Identification System](#) (NAIS) mandatory, requiring farmers to attach radio frequency identification ear tags on cattle and dairy cows, Clark was already among the casualties.

NAIS, which the US Department of Agriculture has been rolling out in concert with many states since 2003, is stunning in its projected scope. Over the next few years each of the nation's 1.4 million farms (plus thousands of veterinary facilities, export/import stations, livestock barns and genetic facilities) will be affected, with all their approximately 95 million cattle, 1.8 billion chickens, 60 million pigs, 93 million turkeys, 6.3 million sheep, 2.5 million goats and every other livestock species, including bison, camelids, cervids, horses and llamas. In all, more than twenty-nine species and more than two billion animals are slated to be fitted with the ID tags or be injected with transponders that transmit, to a national network of databases, information as basic as date of birth and as sophisticated as DNA profiles and chemical-residue measurements in the bloodstream.

NAIS, ostensibly intended to contain disease outbreaks among livestock, has sparked the most severe political backlash rural America has seen in decades. The controversy stems primarily from the backhanded way the government has imposed a deeply unpopular policy. By introducing NAIS as regulatory changes, the USDA has short-circuited the democratic processes designed to protect the public from government overreaching. Congress has never debated NAIS, and few elected officials have been held accountable for its consequences. The USDA has backed off the original plan to make NAIS mandatory and fully operational by 2009 and now describes the program as "voluntary." While it may be voluntary on the federal level, the USDA has pushed states to make NAIS mandatory for their local farmers.

"Farmers like us, we don't want handouts or disaster payments or loans," said Kim Alexander, who raises livestock in central Texas. "We just want to be left alone to raise clean and healthy food for people who will pay a premium because they know it's clean, healthy and local and not contaminated with a bunch of poisons."

A handful of industry stakeholders have cast their shadow over nearly every component of NAIS--past, present and future. A consortium of industry leaders--Cargill Meat Solutions,

Monsanto and Schering-Plough, among others--pushed for NAIS for more than a decade and finally won the USDA's approval shortly after George W. Bush took office in 2001. The consortium, the National Institute for Animal Agriculture (NIAA), designed NAIS for the USDA and includes the USDA's NAIS coordinator, [Neil Hammerschmidt](#), among its alumni.

Critics contend NAIS will be the death knell for small farmers, some religious minorities and organic agriculture generally in America. Although the program will amplify American agriculture's influence in global markets, it will give commercial agriculture an unprecedented monopoly on the future of food--a brave new era of synthetic agriculture and genetically engineered animals.

This era is not beyond some remote horizon. It has already begun. On December 19, the leading cloned livestock producers [announced a program](#) designed to monitor meat and milk products from cloned animals as they moved through the food chain. NAIS is the "tracking system" the industry will use to commercialize cloned livestock on a mass scale.

"The industry's proposal to track cloned animals ignores consumers' concerns about the offspring of cloned animals, creating a false sense of security, said Judith McGeary, founder of Farm and Ranch Freedom Alliance in Austins The entire NAIS plan is much the same, by creating a false sense of security instead of addressing the real problems. NAIS was designed as a marketing program to increase consumer confidence domestically and abroad, without changing any of the industry practices that have created the lack of confidence in our mainstream food supply."

The USDA compounded public skepticism by encouraging states, with the enticement of federal funding, to impose the program on local farmers. Several states have followed Michigan's lead and implemented various aspects of the program in different ways.

In May, Wisconsin required dairy farmers to register their farms (the step preceding registration of animals). Those with livestock are given a unique number keyed to a GPS monitoring system before they can receive dairy licenses. Many of the state's estimated 10,000 Old-Order Amish claim that participation would violate their religious principles, which bar participation in government programs.

Scores of Amish farmers have abandoned dairy production and others have refused to participate, often forfeiting their licenses to sell milk as a result. Some of Wisconsin's most conservative Amish groups have reportedly considered a mass migration to Venezuela. The [Christian Legal Society](#) plans to challenge Wisconsin's registration law as an infringement on the Amish's religious rights.

"It's hugely painful to them," said Karin Bergener, an Ohio-based attorney and farmer who has spent two years raising awareness about NAIS among Amish communities and others. "The thing that comes to all of us is the brutality of treating these animals like widgets. That's probably the way large corporate confinement operations see the animals, but anyone who has raised them--even if you're going to slaughter them--knows that they're not widgets."

In Pennsylvania, a Mennonite poultry farmer sued Pennsylvania's Agriculture Department in June for violating his religious rights by registering him in a state NAIS program without his consent. The state settled the lawsuit a few weeks after it was filed. The settlement terms have not been made public.

Many farmers suspected NAIS would meet stiff opposition from the start, but few realized how aggressively the USDA and state agencies would pursue it anyway. When opposition blocked one means of implementation, some states merely changed tactics, often pushing registration through lower-profile policies. In 2006 hundreds of farmers and ranchers descended on a Texas Animal Health Commission hearing to protest a plan to make premises registration mandatory. A few months after the high-profile defeat, the commission notified farmers and ranchers in a press release that, due to a low-risk bovine disease incident, it would require "identifying all Texas dairy cattle--regardless of age--with an official or TAHC-approved identification device prior to movement within the state."

Similar stories have surfaced in Massachusetts, Missouri and Tennessee.

"What is really unique about the NAIS is that people from the far left to the far right find it appalling," said Bergener. "As long as you're a populist, as long as you believe in independent people running the country instead of big corporations with conflicts of interest, you find the NAIS pretty appalling."

The USDA dismisses many of the program's critics. "Folks tend to make it more complicated than it really is," said Agriculture Undersecretary Bruce Knight in an interview. "The important thing is to have a system whereby in the event of catastrophic animal disease, we can identify everyone in the community and let them know what's going on, and do it within forty-eight hours. It builds off a long tradition of cooperation between American farmers and the federal government."

But Knight acknowledges that NAIS isn't just about protecting livestock. Being able to guarantee in the global marketplace that American farmers can quickly track disease "is a desirable factor with some of our trading partners, certainly in the Japanese export market. Countries like Australia have been marketing their (animal) traceability to gain market share."

Some worry that NAIS technology may be good at tracking animals but not at preventing epidemics. In July a [General Accounting Office report](#) said NAIS may not be able to achieve its stated purpose, largely because the USDA has raced to implement a system larger and more ambitious than any other in the world.

Agribusiness Versus the Family Farm

Small farmers and ranchers share the USDA's concerns about animal diseases, and some say they might even support NAIS if they believed it would stop the spread of dangerous diseases that have emerged in the past decade. But many worry that NAIS will have the opposite effect. Factory farms are fertile breeding grounds for dangerous new pathogens. The food-borne pathogen responsible for the [spinach recall in 2006](#) and ground-beef illnesses this year originated in feedlots.

The risk of epidemics that spread between animals and humans has grown primarily because of the "inappropriate use of antibiotic drugs," which has fostered the evolution of "resistant forms of bacterial disease," according to a 2006 report by the Center for American Progress. An estimated 70 percent of antibiotic usage occurs in agriculture.

Considering how much noise owners of small farms and ranches are making, they haven't had much of an impact. Their biggest gain may have been the victory in the 2006 Missouri Senate campaign by Democrat Claire McCaskill over Jim Talent. McCaskill opposed NAIS while Talent supported aggressive implementation of it and attracted more money from agribusiness than any other candidate that year. Missouri farmers say McCaskill's position on NAIS was decisive.

But the issue has not raised much interest in Congress. The proposed five-year \$289 billion farm bill focuses mostly on subsidies and disaster aid. The only reference to NAIS in the farm bill is a provision that exempts NAIS data from Freedom of Information Act coverage and imposes potential criminal penalties on those who publish NAIS data.

Nebulous details about how NAIS will work have exacerbated resistance to it. According to USDA and state descriptions of the program, farmers will need to keep special records of their animals and update them whenever an animal leaves the farm. Informal arrangements that have long been part of traditional farming--such as trading a cow for a used piece of machinery--must now be reported to the government.

NAIS allows large factory farms whose animals spend their entire lives in feedlots to register large groups of animals as a single unit, but farms whose animals are not confined must register animals individually. As a result, most small farms could pay as much as \$20 or \$30 per animal to comply with NAIS, compared with \$1 to \$2 per animal for large farms.

"People don't realize that they're going to have to tag every single chicken," says Gail Damerow, a Tennessee farmer who is editor of [Rural Heritage](#) magazine. "When you look at the cost of a chicken or goat and the cost of a tag, it's not going to work economically." Indeed, if the radio frequency tags cost \$2 for a chicken that sells for \$3 or \$4, the thin margins that keep most small farms afloat will vanish.

Then there's the pesky matter of who will control the massive databases with farm and animal information. Although government officials say the tags will only include a limited scope of information related to animal location and movements, the government apparently does not have access to all the data collected under the NAIS program. The GAO report cited as a major flaw the USDA's inability to access information essential for traceability purposes. The USDA has transferred control of the databases to more than a dozen private companies--AgInfoLink, Micro Beef Technologies, iSavent, Global Animal Management, GlobalVetLink and several others. Several of these companies belong to the NIAA consortium that pushed NAIS and most of those that don't have close relationships with consortium members.

"We can all spend time talking about who are the three guys sitting in a room trying to get rid of all the independent farmers," said attorney Karin Bergener. "Or we can try to understand that...a

great confluence of interests is behind this thing.... Large corporations want to import or export without having to deal with anything like a quarantine at the borders. Microchip companies have pretty well maxed out their market in Europe for these reprogrammable chips. State bureaucracies need more money from the USDA, and the USDA, which has had its budget cut over the years, will get an astonishing amount of money from running this program. So you have these groups who are having their needs addressed by the program, and the problem is that nobody outside of those groups is involved in the decision-making process."

Global Scramble

Intentional or not, an uncanny number of cutting-edge animal biotechnology projects intersect at NAIS.

At a recent animal genetics conference in Switzerland, a team of geneticists described how NAIS-like animal identification systems had "huge potential for a genetic improvement programme where lack of individual identification is one of the main hurdles."

Agribusiness is in a global scramble to secure intellectual property rights over the next generation of biotechnology products. China, Brazil, India and many other countries have accelerated animal biotechnology research. In Canada, Aqua Bounty Farms has patented the first transgenic salmon, which grows to adult dimensions in half the time it takes conventional salmon. Regulators are considering whether to approve the salmon for sale.

The National Animal Genome Research Program, which pioneered the first disease-resistant transgenic cow in 2001, describes NAIS as "a key user" of its national network of genomics resources.

"I'm not really at liberty to say anything about [NAIS] because I don't know how they will be using the databases," said Muquarrab Qureshi, USDA-CSREES program leader for the National Animal Genome Project. "The genome information could be used to identify all the animals there and all the way up to the meat you buy at the grocery store."

Qureshi's comments capture the most maddening aspect of NAIS: it's so vague that it's hard to pin down exactly what it will do or how or even why. The USDA has left NAIS open-ended so stakeholders can maximize the program's potential value by using it as a platform to develop additional processes or systems. NAIS is a set of open-ended standards and protocols that can support a wide range of operations and processes--including genetic tracking--many of which have nothing to do with disease surveillance.

Some NAIS databases may already be tracking genetic data. In 2005, AgInfoLink partnered with Viagen, an animal genomics company that cloned the first dairy cows, to develop a NAIS-compliant data system for the beef industry. In addition to meeting NAIS requirements, the system allows producers and ranchers to "collect, sort, analyze and store genetic information instantly." This information can then streamline "documentation of age and source verification information being demanded in the marketplace today," according to an AgInfoLink press release.

Also in 2005, MMI Genomics, a company affiliated with Cargill and Monsanto, described, in a presentation at an NIAA conference in Kansas City, how NAIS could create "forensic barcodes" for meat products with DNA samples. The samples of every production animal could then be stored in a long-term DNA archive. Other companies have designed radio frequency chips that allow genetic tracking.

"NAIS is going to truly coalesce the food supply," said Bergener. "All the people who like to go to a nice farmers' market so they can buy fresh eggs and chickens from a farmer they can look in the eye won't be have anywhere to go. We won't be there anymore. We won't exist."

But NAIS might destroy far more than farmers' markets. In the past fifty years, industrial agriculture has promoted a handful of high-performance breeds so aggressively that the genetic diversity of livestock has been decimated in developed economies and is rapidly accelerating in developing countries, according to a recent report by the Food and Agriculture Organization.

Since 2000, at least one livestock breed has disappeared every month, and roughly 20 percent of the world's livestock breeds are at risk of extinction, according to the report. Perhaps the cruelest irony of NAIS is that by hastening the demise of genetic diversity it may ultimately expose the food supply to catastrophic and irreversible risks.

"The security of America's food supply and the resilience of livestock in the face of diseases are best served by the decentralization and dispersal of food production and processing," said Mary Zanoni, during testimony against NAIS before the Texas Animal Health Commission. "[T]he agricultural sciences have demonstrated time and again that the least-cost and least intrusive method is the most effective and protective of health."

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