



Part 1

Making Farmland Secure

Government, university agencies take steps to guard agriculture from terrorist attacks.

by Janet Mayer

As beef producers and farm and ranch owners, you are at the mercy of Mother Nature, the beef markets, financial institutions, hunters, vandals, downright thieves and a multitude of other problems encountered on a daily basis. Now, after recent world events and the terrorist attacks on our country Sept. 11, 2001, we are forced to consider the potential threat of terrorist attacks on the food and agriculture industry. Add farmland security to your growing list of priorities.

Instead of attacking humans personally, what better target for terrorists than farms or agricultural facilities where there is easy access? Accounting for one-sixth of the gross domestic product, our country's ag industry plays an important role in our economy. And, it provides an appealing vehicle for the

introduction of chemical and biological agents to harm a large number of people in the general population.

Stepping up security

In Pennsylvania, Angus operations and other agricultural institutions have been advised to pump up security by the state's Homeland Security Director, Jonathan Duecker. He advises farmers to avoid relying solely on emergency management and law enforcement and to be more vigilant themselves, looking out for suspicious situations or unusual behavior.

"No one knows an area better than those who live there, and no one knows the farm animals better than the owners," he says. "If you see something that doesn't fit and think it is serious enough to merit a report, call it

in on the state's terrorism toll-free tip line, and appropriate measures will be taken."

At Pennsylvania State University (Penn State) and Delaware Valley College, security measures have been stepped up the last several years. Gone are the days of free access to stroll through the barns and other parts of the ag facilities. Now, all access is restricted to prevent the spread of an infectious disease, whether introduced intentionally or accidentally.

Although colleges in the state and many others facets of the ag industry have heeded warnings to guard against terrorism, Glenn Eberly, Angus breeder and director of the Pennsylvania Department of Agriculture (PDA) Livestock Evaluation Center at Penn State, says he senses some beef producers lack interest in threats of terrorism.

"I think the hog people have taken security measures, but a lot of beef producers are not worried," he says. "Although there have not been any cases of foot-and-mouth disease (FMD) in our country since the 1920s, that doesn't mean the disease can't be introduced into our livestock herds again, and if that happens, losses to the industry could be astronomical."

At the 2005 Cattle Industry Annual Convention in San Antonio, Texas, cattle producers were warned that a potential terrorist attack on our system is a very real threat, and to ignore the situation is to be naïve. The development and implementation of a National Animal Identification System (NAIS) to track any potential problem was a hot topic among many of those in attendance.

Although advantages for an animal ID program have become more evident since the Sept. 11 World Trade Center attacks, it is an issue that is not new to the livestock industry. In fact, it has been under discussion for nearly a decade, without a clear solution. If put into effect now, the program would provide a possible way of protecting the U.S. cow herd against the spread of foreign diseases. Broad participation from all producers could provide a highly effective surveillance system while also giving producers an efficient management tool.

Affecting the economy

The state of Alabama has taken measures to ward off an attack against its ag industry by establishing rapid-response plans. At a three-day conference on agricultural security for 500 officials from health, agricultural and law enforcement organizations, Jim Walker, director of the Alabama Department of Homeland Security, said the need to respond quickly to contain any acts of ag terrorism can be fostered by early detection and tracking trends in animal health.

Speaking to the same group, David Franz, adjunct professor at the University of Alabama at Birmingham and an international authority on biological weapons, cautioned those in attendance that the nation's ag industry should not be taken for granted. The world has shrunk and threats have grown.

"We are clearly vulnerable and not an island anymore because of international trade agreements and airline travel," he said. "The agriculture industry makes an easy target, where farm animals are often concentrated into small areas with little security. It could be extremely easy to introduce an agent into livestock herds, and the impact would be enormous."

He pointed out the outbreak of FMD in Great Britain's livestock population in 2001 as a prime example. The outbreak caused \$12 billion in damage, with 6 million head of cattle destroyed and the loss of thousands of jobs.

According to a Congressional Research Service report on agroterrorism, an FMD outbreak on just 10 farms could cost \$2 billion in losses due to effects on consumer confidence, commodities and markets, as well as cost of clean-up and eradication. The report stresses that the economic effects of a major outbreak — affecting cattle, sheep and hogs — in the U.S. would exceed \$10 billion.

Results of a computer study done on FMD by Paul Knepley, PDA chief of animal and poultry health, show the disease could affect animals in 38 states in just five days because it is exceptionally contagious. He cautions livestock producers that the virus can easily be transmitted by humans on clothing or shoes, with people from a farm with infected animals harboring the germs in their respiratory systems for up to five days.

For these reasons, authorities believe it could be "weaponized" by terrorists more easily and effectively than more sophisticated biological agents, such as anthrax, botulism and tularemia, which can infect humans as well.

Readying responses

In a joint effort between the U.S. Department of Agriculture (USDA) and state land-grant universities, the formation of programs like the USDA-funded Extension Disaster Education Network (EDEN) is being used to protect public well-being. Led by Purdue University and Louisiana State University, the program brings agricultural bioterrorism response and dissemination efforts together. It is being used in 40 states and Puerto Rico.

The National Plant Diagnostic Network (NPDN), a program also developed by land-grant universities, allows the U.S. Department of Homeland Security to unify defenses against human, animal and plant diseases that could be used as terrorist weapons. All 50 states and Puerto Rico participate in this program.

Since land-grant veterinarians stand as the first lines of defense against any livestock disease outbreaks caused by accident or acts of biological terrorism, states have launched programs similar to the North Dakota

Reserve Veterinary Corps. Used to train veterinarians in the use of laptops, global positioning system (GPS) units and digital photography, this program gives veterinarians the ability to rapidly investigate

those findings electronically to experts in the field.

With rural residents becoming the eyes and ears for biosecurity breaches, veterinarians have developed protocols to prevent human transmission of devastating livestock diseases through the development of biosecurity guides with the National Pork Board's Homeland Security initiative and the establishment of a National Biosecurity Resource Center.

Local Cooperative Extension services are also being put to use to minimize the effects of any bioterrorism attack. Located in nearly every county, Extension staffs are ideally positioned as first responders to provide communications critical in easing public fears, should a strike occur.

In Nebraska, the Extension service has developed a program to help producers adopt biosecurity practices and train food



processors in awareness of potential bioterrorism. This training has helped at least 1,460 Nebraska livestock producers and food processors guard against intentional or accidental biosecurity threats.

At Texas A&M University, a national center with surveillance networking systems, satellite imaging technology, field and lab techniques using biotechnology, and an information system to predict and track the spread of toxins or infectious organisms on our nation's farms has been established.

For Penn State, the threat of terrorism to our food supply has implemented the launching of a course in agricultural biosecurity in the College of Agricultural Sciences. Aimed at graduate students, the goal of the course is to develop an understanding of how agroterrorism targets the food system and how biosecurity works.

Robert Steele, College of Ag Sciences dean, says many of the issues facing agriculture today are not new. He points out the burning of crops during General William Sherman's march to the sea at the end of the Civil War as a prime example of bioterrorism.

"Although there are many skeptics, it is important that we have intervention programs in place to deal with acute episodes of bioterrorism," he says. "We are working to confront the threats and challenges facing agriculture today, through research and the training of scientists who will be the ones to achieve the breakthroughs that will secure our homeland and our food system in the future."



Editor's Note: Part II will discuss what some individuals, operations, universities and companies are doing for security and what you, as a beef producer, can do to protect your own operation.

Yes, we are all vulnerable

The recent news reports of the mass-transit system bombings in London have not only heightened security awareness in our own country, they have brought back memories of Sept. 11, 2001, when our own country was under attack by terrorists and how those incidents have affected all of our lives.

The memory of that day stays fresh in my mind. Our farm is located at about a 30-minute drive from the location where Flight 93 went down in Pennsylvania. My workplace is located even closer to the site, and on that bright, sunny, fall day, I had just enjoyed the short brief walk between the two buildings that make up our company. Upon entering the main office, I listened in disbelief to what people were saying about the attacks happening in New York City and Washington, D.C. We soon learned another plane had gone down not far from where we were. With an airport nearby, our major highways and our phone systems were shut down soon after the crash. We were virtually prisoners, without knowledge of where or what was happening to our families or what was really happening nationwide. It was truly terrifying.

With the cleanup of the Flight 93 crash site and the aftermath of the attack came a new realization that we are vulnerable, and serious improvements needed to be made to our country's security systems, including those on our own farm, to protect our part in the food chain and to protect our customers.

—Janet Mayer