

*An outbreak of bovine spongiform encephalopathy on U.S. soil would have devastating effects on the beef industry.*



# The BSE Question

**F**loresville, Texas, is not the kind of town that draws much attention. Its quiet, working-class people go about their business each day. Pickup trucks line Main Street. And a local diner draws folks in for conversation and a cup of coffee.

But on a January day earlier this year, this sleepy place became ground zero in the industry's battle against bovine spongiform encephalopathy (BSE).

Seeing how BSE had wreaked havoc on the European beef industry for more than a decade, U.S. consumers had become edgy that a similar outbreak could happen here, even though there never has been a documented case in America and precautionary steps have been taken to prevent it from ever occurring.

So when Purina Mills notified the Food and Drug Administration (FDA) that banned ruminant-derived meat-and-bone meal accidentally had been sold to a Floresville-based feedlot, it didn't take long before the national media got wind of what had happened and flocked to Texas.

The reason there is heightened anxiety over the disease is because BSE is linked to new variant Creutzfeldt-Jakob Disease (nvCJD) in humans. Since the early 1990s, about 80 Europeans have died from nvCJD, most of them in Britain.

Scientists believe cattle in Britain originally contracted the disease by eating feed contaminated with brain and spinal tissue from infected animals. So in 1997 the FDA banned the feeding of ruminant meat-and-bone meal in the United States, though no cases of BSE ever had been found here.



BY ERIC GRANT



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## What happened in Texas

The story of what happened in Texas, though since sensationalized, is straightforward: "Purina got some banned ruminant meat-and-bone meal in our feed supplement, about 600 pounds of it in a 48,000-pound load," explains K.R. Brown, owner of Vaquero of Texas Feeders, the 12,000-head facility where the incident took place. "Purina called us and told us not to feed any of it, then they notified FDA. It was all handled in an outstanding manner."

Brown had fed the supplement to 1,154 head of cattle, which he voluntarily quarantined. Purina quickly purchased and destroyed the cattle, preventing them from entering the food chain — even though there was probably no risk that the cattle would have contracted the disease. It was a precautionary measure, not a food safety problem.

What continues to surprise Brown and others is how the media reacted to the story. After more than several months, Brown continues to get calls from reporters. He cooperates in whatever way he can.

"I couldn't guess how many calls I must have gotten," Brown says. "They're still coming in."

"This whole issue shows just how hypersensitive the media — and the public — are to this issue," says Burt Rutherford, communications director for the Texas Cattle Feeders Association (TCFA). "If there's still a cattleman out there who doesn't think that an incident cropping up like this could be very damaging to the industry, now maybe it's time to reconsider."

## Industry reaction

To counter negative publicity generated by the Floresville quarantine, the industry focused on three key messages.

First, what happened in Texas was not a food safety issue, but a regulatory compliance issue. There never has been a case of BSE found in the United States.

Second, the National Cattlemen's Beef Association (NCBA) and other industry

organizations support full compliance with FDA regulations that prohibit the feeding of mammalian-derived protein supplements that might have a risk of carrying the BSE infectious agent. If there are violations of the law, the NCBA expects them to be dealt with according to the law, says Chuck Schroeder, the association's CEO.

"The FDA feed regulation ban is a critical firewall measure and was implemented as an extra precaution," Schroeder adds. "The feed ban assures that if BSE somehow ever did get into this country, it would not spread and could be quickly isolated and eradicated."

Still, the Floresville incident is just another chapter in a long book about BSE. It just doesn't seem to go away. And U.S. cattle producers for several years now have expended great energy in overcoming consumer perceptions that U.S. beef is unsafe because of what has happened in Europe.

Recently, Texas cattle feeder Paul Engler, in a high-profile lawsuit, sued talk-show host Oprah Winfrey after she made disparaging remarks about the safety of beef, which sent cattle prices tumbling. He lost his case.

## A short history

BSE is a relatively new disease and has been recognized officially only since the mid-1980s. The first official case was acknowledged in 1986 in the United Kingdom (UK), although it is thought that up to 100 cattle developed the disease

before then. The UK Ministry for Agriculture, Fisheries and Food may have known about the disease as long ago as 1983.

Scientists are not completely sure how BSE was created or how it spread so quickly from the initial outbreak, but the strongest theory is that it was transmitted from meat-and-bone meal derived from scrapie-infected sheep then used in the cattle's feed.

BSE seems to have an incubation period of two to five years, which means many infected European cattle went undiagnosed before being used for rendering, which allowed the BSE agent to enter both the livestock and human food chains.

The disease spread quickly across the UK,

with as many as 800 cases a week reported at the outbreak's height. Unfortunately, European Union (EU) regulators were slow to stop the production and exportation of rendered ruminant products from England to other European countries.

The result was widespread infection, with BSE cases since documented in almost all countries of western Europe. At last count, there have been more than 180,000 documented cases in cattle worldwide, most of them in Britain. Experts project the total could top 325,000 head in the coming years.

European consumers have reacted by eating less beef. In some countries, including Germany, beef sales are down by as much as 50%. In France, with 218 documented cases, consumer demand seems to be on a slight rebound — evidence that diligence even after an outbreak can restore confidence.

Even fast-food king McDonald's has not been immune to consumer concerns over the disease. It announced earlier this year that BSE concerns continue to have a negative effect on sales. About 25%, or \$9.29 billion, of its yearly sales come from Europe, where consumers remain skittish over hamburgers. As a result, McDonald's saw its fourth-quarter profits fall 7%, due in large part to drooping European sales, which fell by 10%.

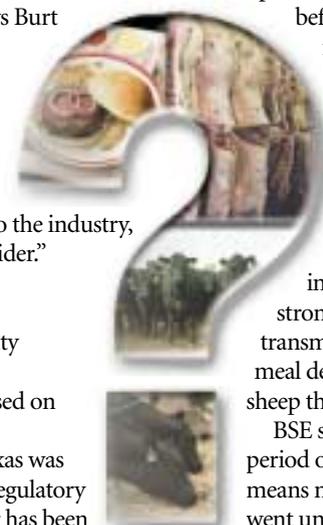
In February, the EU finance ministers approved almost \$1 billion to pay for the destruction of approximately 1.7 million cows, about a quarter of them in Germany. In addition, the EU will spend about \$3 billion on precautions, mostly on killing cattle and compensating farmers.

## What are the chances?

Is a similar outbreak possible here? Most industry experts believe that, with the precautionary measures the industry has taken, it's highly unlikely BSE ever will occur in the United States.

Most likely, if a case does arise in cattle, it will be an imported animal, industry experts say, although most imported cattle were destroyed several years ago.

"I feel confident that we've done all the right things to keep the disease out," says Tom Cook, executive vice president for the National Renderers Association (NRA).



## What the law says producers must do

The Food and Drug Administration (FDA) requires that anyone feeding ruminant animals must save copies of invoices and labeling of all feed they receive that contains animal protein. Feed that does not have an invoice or label from the manufacturer or distributor does not comply with the law, and the feed cannot be fed to cattle.

Exemption: Porcine (pork) and equine (horse) protein that originate from single-species slaughter plants have been exempted from the 1997 FDA ban and may be used in ruminant feeds. There is no evidence feeding byproducts from these species represents a risk to the health of cattle.

## What producers can do

The National Cattlemen's Beef Association (NCBA) urges that producers have written documentation from their feed suppliers that the premixes, supplements and complete feeds they buy are free of prohibited materials. Cattle feeders and producers should consider buying feeds exclusively from feedmills that do not handle prohibited materials. While this is not part of the FDA regulations, the NCBA believes that this is a reasonable step to reduce the risk of prohibited materials' being incorporated in premixes, supplements and complete feeds destined for cattle.

## New variant Creutzfeldt-Jakob Disease (nvCJD)

1. This disease never has been found in the United States. New variant Creutzfeldt-Jakob Disease (nvCJD), believed to be linked to exposure to the BSE agent, has caused the deaths of 87 people in Europe (83 in England, three in France and one in Ireland). It first was diagnosed in England

in 1996. It is believed people contract nvCJD when they become infected with the BSE agent. The BSE agent is primarily found in the brain and spinal cord from older, BSE-infected cattle. The infectious protein that causes BSE has not been found in muscle meat.

2. Sometimes people, including the news media, mistake nvCJD with another disease. According to the federal Centers for Disease Control and Prevention (CDC), the United States never has had a case of nvCJD. There is some confusion, however, because of a disease with a similar name. *Classic CJD* is a rare disease that annually occurs in an average of one person per million worldwide. The annual incidence rate of classic CJD in older populations (55 years and older) ranges between five and seven cases per million. Classic CJD first was diagnosed in the 1920s.

"It is important to know that we believe we know the probable cause of new variant CJD, namely consumption of product containing brain and spinal cord from older, BSE-infected cattle," says Gary Weber, NCBA's executive director of regulatory affairs. "While there are no dietary or occupational factors associated with classic CJD, there is a genetically inherited form of the disease, and it can be transmitted by inadvertent exposure to CJD-contaminated equipment or material as a result of neurosurgery.

"We do know new variant CJD and classic CJD are distinct diseases and, as such, there must be a difference between their respective causes. One must not be confused with the other."

"USDA (U.S. Department of Agriculture) has continuously sampled and evaluated cattle brains since the early 1990s — 12,000 of them to date — and has found absolutely nothing.

"These samples came exclusively from high-risk populations of cattle that died of central-nervous-system (CNS) disorders. The disease simply doesn't exist here, and as we move ahead and work our way through the older cattle, which could have been exposed to BSE through feed prior to the ban, our chances of the disease ever arising here decrease."

The USDA in 1991 restricted importation of ruminant meat-and-bone meal and edible products from at-risk countries. In 1996 the U.S. beef industry voluntarily banned sheep and certain other animal parts from U.S. feed. In 1997 the FDA passed formal regulations that banned any proteins from cows, sheep, goats, deer or elk from being used as ingredients in feed for cows, sheep or goats. The FDA also imposed paperwork and labeling restrictions associated with the ban.

Even though these precautionary steps have been taken, BSE was thrust into the

spotlight in January when FDA officials reported that hundreds of feed makers had failed to comply with its 1997 feed regulations.

Nearly 30% of 180 rendering plants, the FDA announced, had no system of preventing feed mix-ups, and 16% didn't comply with labeling requirements.

That same month, FDA regulators quarantined the cattle in Floresville. The media attention caused nationwide consumer jitters about the confidence of the country's beef supply.

## Potential bright spots

Still, if the United States remains clean of BSE, there may be some positive effects over the next two years. Parr Rosson, an economist with the Texas Agricultural Extension Service, believes that in the near term, U.S. producers "might pick up some extra markets where European beef was

previously shipped and now is banned because of the presence of BSE."

This most likely would occur in North Africa, eastern Europe, the Middle East and possibly in some of the Asian markets. "Longer term, the second impact could be that we'll see herd rebuilding occur in many parts of the European Union," Rosson says.

"In Germany, they're looking at the immediate slaughter of 400,000 head with longer term prospects with slaughter of up to 2 million head," Rosson says. "That could have quite a significant impact on the ability of the European Union to supply its own needs."

U.S. beef exports are already on the upswing. In 2000, exports rose 10% in volume and 11% in value over previous-year levels, according to the U.S. Meat Export Federation (USMEF).

The U.S. beef industry exported 1.2 million metric tons of beef and beef variety meats in 2000, topping 1999 by 10 percentage points. U.S. beef exports were worth more than \$3.5 billion in 2000, an 11% increase over 1999.

"All the leading markets for U.S. beef exports purchased more U.S. beef products

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THE BSE QUESTION CONTINUED

in 2000 than in 1999," says USMEF's Phil Seng. "Consumption is rising, but our exports are rising at a higher rate. The world has recovered from the 1998 currency crisis, and most developing countries had a positive growth rate, although many of the world's economies remain fragile. Beef production is declining in countries without a large forage base. Beef and pork production is easier in large, less-densely populated countries, such as the United States."

Still, the presence of BSE anywhere on the planet should be worrisome for anyone who produces cattle. In all likelihood, it will go down in history as the most damaging disease ever to strike the worldwide beef industry, and it will take many years — possibly decades — for European producers to restore consumer confidence in their product.

If the United States ever were to have an outbreak, it would have a devastating effect

on the cattle industry. Just one look at the media frenzy over the Floresville incident is enough to demonstrate the massive amount of hysteria that could be generated if BSE actually were found here.

"Producers need to be diligent in their efforts to make sure the feed they give their cattle does not contain any ruminant material," Cook says. "Every producer needs to ask their feed supplier to verify where they get their feed and to certify what's in it. The producer is just as subject to the regulations as the renderer or the feedmill. We can't overemphasize that this thing goes all the way to the producer level."

In February, McDonald's Corp. notified beef processors that it would begin requiring signed affidavits that certify all beef purchased by the company was not produced with ruminant-rendered meat-and-bone meal. It hoped to have 100% compliance by April 1 among packers and



processors, and it plans to have 100% compliance among producers by year's end.

This means that just about all producers will have to verify that they have not used the banned ruminant feeds for their cattle. Many who've sold cattle at auction barns this spring already have been asked to sign the affidavit.

Looking back to January, Brown is a little bit wiser and a lot more aware of the issues

surrounding BSE. "I learned a great deal during those couple of weeks," he says. "I learned how sensitive this issue is. I learned just how much we've got at stake. And I learned we don't ever want that disease here. It would be absolutely devastating."



## Cases of BSE documented in cattle worldwide



Cases of BSE also have been confirmed in cattle imported from the UK to the countries named in red.

\*The United Kingdom includes Great Britain, Northern Ireland, Isle of Man, Jersey and Guernsey. Figures as of Oct. 31, 2000. Source: Office of International Epizootics, February 2002. [http://www.oie.int/eng/info/en\\_esb.htm](http://www.oie.int/eng/info/en_esb.htm).

# Cattlemen Play Key Role in Keeping Diseases Out

*Local community is part of nationwide effort to protect safety of American cattle.*

COMMENTARY BY LYNN CORNWELL

Europe's most famous animal disease is back in the news lately. From the pages of *USA Today* to network news programs, the press is putting bovine spongiform encephalopathy (BSE), [calling it] "mad cow disease," on the public radar screen. A recent outbreak of foot-and-mouth



Lynn Cornwell

disease (FMD) has added insult to injury for the already beleaguered Europeans. All of the coverage about BSE and FMD, it seems, really boils down to one basic question: Could the same thing happen here?

There has never been a case of BSE in the United States, and FMD has not been seen in the United States since 1929. America's cattle producers—and our government partners—are working hard to keep it that way.

The United States was the first country to take aggressive prevention measures against BSE without ever having the disease within its borders. A national surveillance program, started by the U.S. Department of Agriculture (USDA) in 1990, hasn't turned up a trace of BSE in U.S. cattle. So right now, it remains a foreign disease confined largely to Great Britain and parts of Europe. In addition, a number of stringent protective measures, or firewalls, have been put in place over the last 12 years to keep the disease from ever occurring here.

As for foot-and-mouth disease, American cattlemen are part of an ongoing surveillance effort that helps detect any potential disease among U.S. herds. And whenever FMD is reported in any country, the USDA enacts a series of aggressive measures, including import bans, to keep it from spreading here. It's because of this cooperative relationship that FMD has not been seen in the United States in more than 70 years.

**These measures represent** a combined effort by the government and the entire U.S. cattle industry to make sure the nation's beef supply remains the safest in the world. It's an effort that involves every cattleman in this state, given their strong professional and personal interest in ensuring the safety of the beef they feed the public and their own families.

Local cattlemen know firsthand what a roller coaster ride the beef industry has been on for the past few years. After a long decline in consumer demand for beef, the coaster is heading back up again, and producers have played a vital part in the industry's dramatic turnaround. At the same time, we've seen the devastation BSE has caused in Europe—both in animal health and public confidence. Every cattleman in America knows how great a threat [BSE] is to our industry and to the revival we've worked so hard to achieve.

As a result, producers have been vigorous supporters of steps taken by the U.S. government to keep BSE out of this country. Because of other concerns, the United States has banned beef imports from Great Britain since 1985. Other bans, enacted in response to BSE in Europe, now prohibit the importation of live ruminants—animals such as cows, goats or sheep—and all animal protein products from all of Europe. A small number of animals that were imported from Europe before the bans were in place have been quarantined and closely monitored. The purpose of these bans is clear: to protect our borders and keep this foreign animal disease from entering the United States.

**Ten years of active surveillance** confirm the effectiveness of those steps. As of December 2000, U.S. government labs have tested nearly 12,000 brain samples from cattle that showed even the slightest risk, including older animals, those that had difficulty walking and cattle with possible neurological symptoms. Not a single one of these tests has found BSE or any similar disease among U.S. cattle.

As an added level of protection, in 1997 the Food and Drug Administration (FDA) banned the practice of feeding to cattle any protein supplements, such as meat-and-bone meal, made from cattle and other animal byproducts. The feed ban came in response to findings that the disease was spread in Europe by way of feed contaminated with BSE. It ensures that if BSE were ever to get into the United States, it would not spread. Both the government and the U.S. cattle industry are working to assure full compliance with the feed ban.

For the past two-and-a-half years, America's BSE prevention efforts have been under review by the Harvard Center for Risk Analysis. The USDA asked for the review to assess the risk of BSE in this country. According to George Gray, the center's program director for food safety and agriculture, the study's preliminary findings confirm we are on the right track. In recent statements about BSE, Gray concludes that the disease is "not likely to occur here" and further notes that the risk of BSE's being found in the United States "is low, and the risk that it could spread as it did in Europe is lower still." Gray also has said that even if an infected animal shows up in this country, the safeguards in place would keep that animal out of the human food chain.

Keeping BSE and other foreign animal diseases out of this country requires the continued vigilance of the government and all segments of the cattle industry. Full compliance with all preventive measures is the only acceptable standard when the need is to protect America's cattle herd and to protect American consumers. America's cattlemen have shown they are ready to meet that standard.

**Editor's note:** Lynn Cornwell, a beef producer from Glasgow, Mont., is president of the National Cattlemen's Beef Association (NCBA).