

FMD & BSE

What every producer needs to know.



**The United States
is working to remain
free of BSE and FMD.
Preventing
these different diseases
requires different
actions.**





John Post
Vice President, U.S. Livestock Division
Pfizer Animal Health Group

To U.S. beef and dairy producers:

It's a tribute to the vigilance of U.S. producers and government that our country has not been directly confronted with foot and mouth disease (FMD) or bovine spongiform encephalopathy (BSE). But, as we all know today, it is more challenging than ever to protect our livestock from these kinds of disease outbreaks.

That's why Pfizer Animal Health is pleased to co-sponsor this brochure, prepared by the National Cattlemen's Beef Association and Cattlemen's Beef Board, to remind us of the steps we must take to reduce the chance of FMD and BSE on U.S. farms and ranches.

At Pfizer, we share your goal of ensuring the welfare of your herd. Here in the U.S., Pfizer continues to take a leadership role through long-standing educational programs such as Cattlemen's College, HerdSecureSM and brochures such as this one.

Equally important, we are quick to join the fight against costly livestock diseases before they reach our shores. For instance, in the U.K., three of our researchers are working with scientists at the World Reference Laboratory for Foot and Mouth Disease, seeking resolution to the current outbreak; additional Pfizer veterinarians work directly with the U.K. Ministry of Agriculture on the FMD issue.

Helping you raise healthy and profitable livestock is our business. We hope you find this brochure valuable.

Sincerely,

A handwritten signature in black ink, appearing to read 'John Post', written in a cursive style.

John Post
Vice President, U.S. Livestock Division
Pfizer Animal Health Group



Foot-and-Mouth Disease

(or hoof-and-mouth as it is sometimes called)

Foot-and-mouth disease is common to about two-thirds of the countries of the world and is found on all but three continents — Antarctica, Australia and North America. Since the recent foreign-based outbreaks of foot-and-mouth disease, USDA has moved quickly to increase protection in this country to prevent the introduction of the virus. USDA issued an interim rule Feb. 21 prohibiting or restricting the importation into the United States of live swine and ruminants and any fresh swine or ruminant meat (chilled or frozen) or products from Great Britain or Northern Ireland. This augments restrictions long in place in live cattle and certain cattle products.

On March 13, USDA expanded the ban to prohibit the

importation of animals and animal products from the entire European Union due to FMD concerns. Since the United States hasn't imported beef from the United Kingdom since

1985 and the rest of Europe since 1997 due to BSE concerns, this affected primarily pork on the red meat side.

Argentina suspended shipments of fresh and frozen beef to the United States, Canada and Mexico on March 13 in response to Argentina's foot-and-mouth outbreak.

The U.S. monitoring and surveillance system has protected the industry from reintroduction of foot-and-mouth disease for more than 72 years. That system now must also guard against introduction of the virus from Europe, especially the United Kingdom. ◆

The United States has not had a case of foot-and-mouth disease since 1929, which was contained and eradicated quickly.

What else is being done to keep foot-and-mouth out of the United States?

USDA officials are stationed around the globe to monitor and coordinate with the state agriculture officials. When there is an outbreak of FMD in another country, the United States prohibits the importation of animals and animal products from that country. These restrictions augment those already in place on ruminants and certain ruminant products to prevent the introduction of BSE into the United States.

A team of experts is sent to any country with an outbreak to monitor, evaluate and assist in containment efforts. Forty federal, state and university officials have been sent to the European Union.

There is heightened alert at ports of entry and airports to ensure passengers, luggage and cargo are checked as appropriate. This includes placing additional inspectors and dog teams at airports to check incoming flights and passengers.

USDA on April 9 authorized an additional \$32 million to hire approximately 350 additional staff at critical ports and airports to protect against pests and diseases. Staff added this year will include 127 permanent officers/technicians, 27 canine officers, 173 temporary inspectors and 20 veterinarians.

The government also prohibits travelers from carrying into

the United States any agricultural products, particularly animal products that could spread FMD. Passengers are required to identify any farm contact to Customs and USDA officials. All baggage is subject to inspection. Violations could result in penalties of up to \$1,000. If you are caught importing prohibited material for profit, a \$250,000 fine can be imposed.

USDA initiated an aggressive public education campaign. It includes additional signage in airports, public service announcements, Web site and other tools to inform the public about this important issue and steps they can take to prevent the virus from entering the United States.

As part of its ongoing surveillance program, USDA conducts hundreds of field inquiries each year in an effort to detect animal diseases that might affect livestock.

National Cattlemen's Beef Association officials on March 21 met with agricultural attachés from the Mexican, Canadian and Central American embassies to discuss the foot-and-mouth situation in South America. These countries have implemented measures that are as strict or stricter than those in the United States to keep the FMD virus out.

What can beef producers in the U.S. do to help prevent foot-and-mouth disease?

- Know who is on your farms/ranches/property at all times. If people from other countries where confirmed cases of FMD have been found are scheduled to visit your property, make sure they wear freshly cleaned clothing and footwear. Make sure people wash their clothes and footwear before traveling to another farm/ranch/property.
- As always, farmers should watch for excessive salivating, lameness, and other signs of FMD in their herd and immediately report any unusual or suspicious signs of disease to their veterinarian, state or federal animal disease control officials, or their county agricultural agent.
- Food waste used as feed stuffs is required to be fully cooked before feeding to livestock.



Foot-and-Mouth Disease Frequently Asked Questions

Q. What is foot-and-mouth disease?

Foot-and-mouth disease is a highly contagious viral disease that does not affect humans but has devastating effects on animals with cloven hooves such as cattle, swine, sheep, goats and deer.

There are seven types of the FMD virus, all of which have similar symptoms. Immunity to one type does not protect animals from other types. The average incubation period for FMD is between three and eight days, but it can be up to two weeks.

The disease is rarely fatal, but may kill very young animals. Those that survive are often debilitated and experience severe loss in milk or meat production.

Q. Can people contract foot-and-mouth disease?

No. Foot-and-mouth disease does not affect humans. U.S. beef is safe.

Q. What are the symptoms of foot-and-mouth disease?

The most obvious signs of the disease in animals are excessive slobbering, going off feed and lameness. Affected animals may have a sudden rise in temperature, followed by blisters in the mouth or other areas of tender skin such as udders in females, nostrils and on the feet — particularly near the hooves. Soft tissues under the hoof are often inflamed and the animal can become lame and may even shed its hooves. Eating becomes painful and many animals often go off feed, which results in weight loss.

Q. How is it spread?

Foot-and-mouth disease is a highly contagious virus and can be spread by movement of infected animals, movement of contaminated vehicles and by contaminated facilities used to hold animals. It also can infect animals through contaminated hay or feedstuffs and from using common, infected water sources. While FMD is not considered a threat to human health, people who come in contact with the virus can spread it to animals through clothing, footwear or other equipment/materials. The virus can harbor in the human nasal passages for as long as 28 hours. Wind also can spread the virus.

Q. If foot-and-mouth disease rarely kills animals, and if people can't contract the virus, why is there so much concern about it?

Foot-and-mouth disease is a very contagious virus, with nearly 100 percent of exposed animals ultimately becoming infected. About 2 percent of adult animals can die and up to 20 percent of young livestock. There also can be reduced milk production for dairy cattle and goats, and less meat production. In some cases, affected animals can suffer from sterility, chronic lameness, aborted pregnancies and chronic mastitis.

Q. What would be the economic impact if foot-and-mouth disease did occur in the U.S.?

If FMD occurred in the United States, the degree of economic impact would depend on how quickly the disease was identified and controlled. If it was controlled quickly and eradicated, the damage might be small. However, if the disease became widespread, the economic loss could easily be billions of dollars.

An FMD outbreak in the United States today would halt beef exports for at least one year. Many of our beef customers overseas are in countries that are FMD-free and they wouldn't want to take the chance of bringing the virus into their countries through our meat products.

Q. Is there a treatment or cure?

The virus can be killed by heat, low humidity and some disinfectants. There is no cure, and the virus usually runs its course in two to three weeks with most animals recovering.

Q. What can consumers do to help prevent foot-and-mouth disease from occurring in the U.S.?

All international travelers coming into the United States must state on their Customs declaration form whether or not they have been on a farm or have been in contact with livestock. If they have, then:

- Any soiled footwear must be disinfected with detergent and bleach.
- Dirty clothing must be washed and disinfected prior to returning to the United States.

All international travelers also must declare if they are bringing any meat or dairy products into the United States. USDA officials then will inspect baggage of those travelers and confiscate products of swine and ruminants (cattle, sheep, goats, deer and other cloven-hoofed animals), with the exception of hard cheeses and canned products with a shelf life.

If travelers are around livestock in the United Kingdom or other affected countries, they should avoid contact with susceptible animals for at least five days after returning to the United States.

Q. Is the meat or milk from affected animals also contaminated?

Uncooked meat and some types of milk products from contaminated animals can carry the virus. However, since the virus does not affect humans and would be destroyed when products are cooked, the primary risk from raw products is transmission of the virus to susceptible animals.



The USDA Web site for foot-and-mouth disease is:
www.aphis.usda.gov/oa/fmd/index.html
or call 1-800-601-9327 (then press 2)

The government's emergency response plan

The federal government has a national emergency response plan in place to handle the possible outbreak of a highly contagious animal disease, such as foot-and-mouth. USDA's Animal and Plant Health Inspection Service will coordinate the effort.

The goal of an emergency response plan is to detect, control and eradicate a highly contagious disease as quickly as possible to return the United States to "free" status. A *presumptive positive* case will generate immediate, appropriate local and national measures to eliminate the crisis and minimize the consequences. A *confirmed positive* case will generate additional measures on a regional, national and international scale.

A Foreign Animal Disease Diagnostician will help determine the likelihood of a highly contagious disease based on clinical signs, history and professional experience.

Assessments are classified as unlikely, possible or highly likely. For the first two, at a minimum, the diagnostician should request that the producer put himself under a voluntary quarantine until lab results come back. Lab samples are sent with a Priority 1 status, meaning a presumptive diagnosis can be returned in less than 24 hours.

If the diagnostician determines the case is highly likely, he immediately consults with the state veterinarian and the lead federal veterinarian for APHIS Veterinary Services in the area. This is what can happen then:

- A state quarantine will be placed on the farm.
- A movement control zone will be established around the farm.
- Local ag and emergency officials will be notified.
- All contacts to the farm will be traced.

Once the laboratory has determined it has a positive sample, a cascade of action steps occur. Under this *Presumptive Positive* scenario, the state veterinarian will, among other things:

- Quarantine the affected premises.
- Consider stopping the movement of animals within the state.

- Consider active case finding based on suggestive clinical signs in the states to include the field veterinarians, Food Safety Inspection Service, extension agents, industry partners and public awareness campaigns.
- Consider herd depopulation in consultation with USDA, industry and other stakeholders.
- Determine whether wild animals may be a risk factor in the dissemination or persistence of infection.
- Notify appropriate contacts that are needed to support a response.

When there is a *confirmed positive* case and the agent is isolated and identified:

The state veterinarian will, among other things:

- Depopulate and dispose of the infected herd.
- Request a Governor's Declaration of Emergency.
- Continue quarantine and movement restrictions.

The state emergency director will, among other things:

- Evaluate the need for a Presidential Declaration of Emergency, thus implementing the Federal Response Plan.

USDA will, among other things:

- Update the Secretary on a daily basis.
- Coordinate the efforts of all USDA agencies to support Animal and Plant Health Inspection Service.
- Impose on the affected state a federal quarantine for interstate commerce and request enforcement by the affected state and adjoining states.
- Evaluate the role of vaccination in the response and eradication plan.

The Secretary of Agriculture will, among other things:

Declare an emergency, if necessary, to release the funds to cover expenses for response activities, including funds for indemnity.

Source: USDA

USDA has a compensation plan in place

USDA has a plan to financially compensate livestock owners for losses due to an outbreak such as foot-and-mouth disease.

If an "extraordinary emergency" developed due to a U.S. outbreak such as foot-and-mouth disease, the Secretary of Agriculture

emergency, producers will receive 100 percent of fair market value for animals depopulated due to an outbreak of foot-and-mouth disease. That value will be determined by federal and state government employees.

Payment for the livestock will be shared equally between the state and federal governments. If a state is unable to pay its 50 percent, the federal government will pay the entire amount. Producers are assured of receiving 100 percent of fair market value from one source or another. There is no risk that the producer will only be partly compensated if the state does not have a cooperator program or matching funds. The indemnity program is designed so producers can work with government agencies to eradicate foreign diseases.

"Bankers and creditors should be reassured that losses from animal disease are fully covered by a cooperative federal and state indemnity program. Producers will receive fair market value, appraised by the federal and state government employees, for animals depopulated due to an outbreak of foot-and-mouth disease or another animal disease."

— NCBA Chief Economist Chuck Lambert

legally may seize, quarantine, and dispose of any livestock found to have been affected with or exposed to the disease. In such an

However, if the producer intentionally moves or handles animals in a way that violates the law, he will receive no payment.



U.S. Works to Remain BSE Free

Because BSE has been identified in several foreign countries, the disease has gained attention from the U.S. news media. They are asking if the disease is in the United States, or could it happen here?

The National Cattlemen's Beef Association (NCBA) is working aggressively to educate reporters and the general public about BSE — the so-called “mad cow” disease — and steps the industry and government have taken to prevent the disease from entering the United States. NCBA spokespersons have done numerous interviews with network and cable television,

newspaper and radio reporters.

“The most important thing we can do now is make sure the public understands that we’ve never had a case of BSE in the United States and that we have stringent protective measures in place to prevent the disease from occurring here,” said Gary Weber, NCBA Executive Director of Regulatory Affairs.

NCBA has worked closely with the government, feed manufacturers, renderers, packers, processors, veterinarians and animal scientists to keep BSE out of the United States. ◆

POINTS TO REMEMBER

1. There has never been a case of BSE in the United States.

- BSE remains a foreign animal disease, never identified in the United States. It is believed cattle can contract the disease by consuming feed containing the BSE agent. The prevailing belief is the agent is a mutated protein molecule called a prion. If cattle have BSE, the disease causing agent is almost exclusively found in the brain and spinal cord and in retina tissue of infected cows. BSE has been determined to be spread as a result of feeding meat and bone meal containing brain and spinal cord from cattle with the disease. The United States has prevented BSE from entering here through restrictions on importing cattle and feed ingredients capable of carrying the infectious agent from any country suspected of having the disease, or at risk to have the disease.

2. The government, the cattle industry and allied industries have put stringent safeguards in place to prevent the disease from occurring here.

- More than 10 years of active surveillance for BSE in the United States has never found this or any similar disease. The surveillance program targets cattle at slaughter that show signs of possible neurological disease, as well as field cases of cattle exhibiting possible neurological disease signs. The program especially focuses on animals over 30 months of age who exhibit behavior that could be caused by neurological disease, and non-ambulatory animals (fallen stock). They are slaughtered and brain samples are tested for BSE. As of December 2000, 11,954 brain specimens had been tested. Because the sampling focuses on animals with the highest risk of having a neurological disease, USDA/Animal and Plant Health Inspection Service considers this an adequate sample to find BSE if the disease were here.
- The U.S. began aggressive measures to prevent BSE in this country in 1989. A ban was imposed on imports of live ruminant animals and certain ruminant products from countries where BSE had been found. That was expanded in 1997 to include all European countries, regardless of whether or not BSE had been found there.

- In 1997, the Food and Drug Administration enacted a feed regulation that banned the feeding of ruminant-derived, and most mammal-derived, animal protein to ruminants. This feed ban will ensure that if BSE ever gets into the United States, the disease could not be amplified or spread and it could be isolated and eradicated.
- Although there is no evidence the BSE agent has ever entered the United States, achieving 100 percent compliance with the feed regulation is the government and industry goal. The most important regulation with respect to BSE prevention is keeping this foreign animal disease out of the United States. The feed ban is an extra level of protection and it is our goal to rapidly achieve 100 percent compliance with this important regulation.
- In December 2000, the USDA banned the import of all rendered animal protein regardless of species from all European countries.
- NCBA on Jan. 29, 2001, held a meeting with representatives of the rendering industry, feed producers and meat processors. Government officials from the Food and Drug Administration and USDA/Animal and Plant Health Inspection Service also attended. Participants discussed the need for 100 percent compliance with the U.S. ban on feeding ruminant protein from other ruminants.

Canada and Mexico have similar stringent BSE preventative measures in place.

Officials from the National Cattlemen's Beef Association, Canadian Cattlemen's Association and Conferacion Nacional Ganadera of Mexico on Feb. 3, 2001, signed a joint statement pledging to keep BSE out of North America.



What the Law Says Producers Must Do

The Food and Drug Administration 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 Food and Drug Administration ban and may be used in ruminant feeds. There is no evidence feeding byproducts from these species represent a risk to the health of cattle, especially the spread of BSE.

What Producers Can Do

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/producers should consider buying feeds exclusively from feed mills that do not handle prohibited materials. While this is not part of the Food and Drug Administration regulations, 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.

RESOURCES

To view further information about **BSE & FMD**, visit the following sites:

For more information on BSE, visit
www.bseinfo.org

NCBA's scientifically-reviewed Web site about BSE, classic CJD and new variant CJD.

- USDA/APHIS Veterinary Services
<http://www.aphis.usda.gov/oa/bse/>
- Centers for Disease Control and Prevention
<http://www.cdc.gov/ncidod/diseases/cjd/cjd.htm>
- Food and Drug Administration
<http://www.fda.gov/cvm/index/bse/bsetoc.html>
- Council for Agricultural Science and Technology,
TSE report - <http://www.cast-science.org/>



The USDA Web site for foot-and-mouth disease is:
www.aphis.usda.gov/oa/fmd/index.html
or call 1-800-601-9327 (then press 2)

New variant Creutzfeldt-Jacob Disease (nvCJD)

The human disease that has been linked to BSE

1. This disease has never been found in the United States.

New variant Creutzfeldt-Jacob Disease (nvCJD), believed to be linked to exposure to the BSE agent, at press time had caused the deaths of about 90 people in Europe, primarily in the United Kingdom.

New variant CJD was first diagnosed in England in 1996. It is believed people contract nvCJD when they become infected with the BSE agent. Since the BSE agent is primarily found in the brain and spinal cord of animals over 30 months of age, it is assumed people with nvCJD must have consumed products containing brain or 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 new variant CJD with another disease.

According to the federal Centers for Disease Control and Prevention, the United States has not had any cases of new variant CJD. There is some confusion, however, because of a disease with a similar name.

The disease known as classic CJD is a rare disease that occurs in an average of one person per million, per year, worldwide. The incidence rate of classic CJD in older populations (55 years and older) ranges between five and seven cases per million, per year. Classic CJD was first diagnosed in the 1920s.

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

"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."

– Gary Weber, NCBA Executive Director
of Regulatory Affairs

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