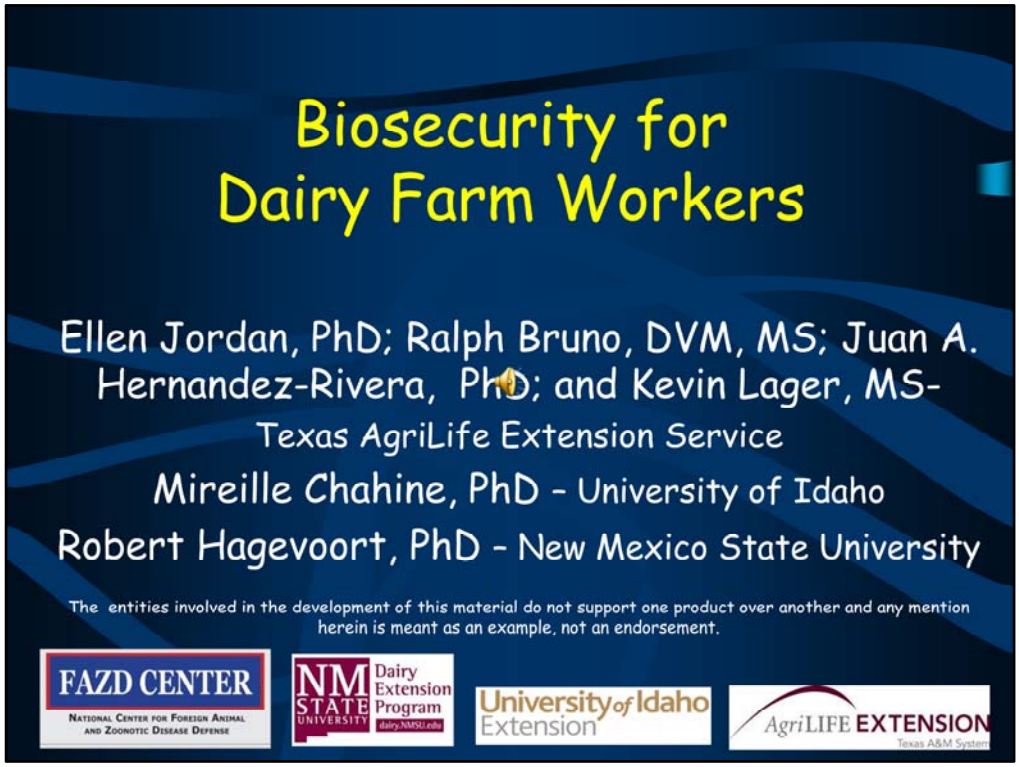


Dairy farm workers provide the first line of defense in keeping dairy cows healthy and content. An important part of those efforts is biosecurity. Biosecurity is traditionally defined as managing the herd to prevent the introduction and spread of infectious diseases.

Biosecurity includes all of the steps taken to prevent infectious diseases from affecting a herd of animals and the people who care for them.

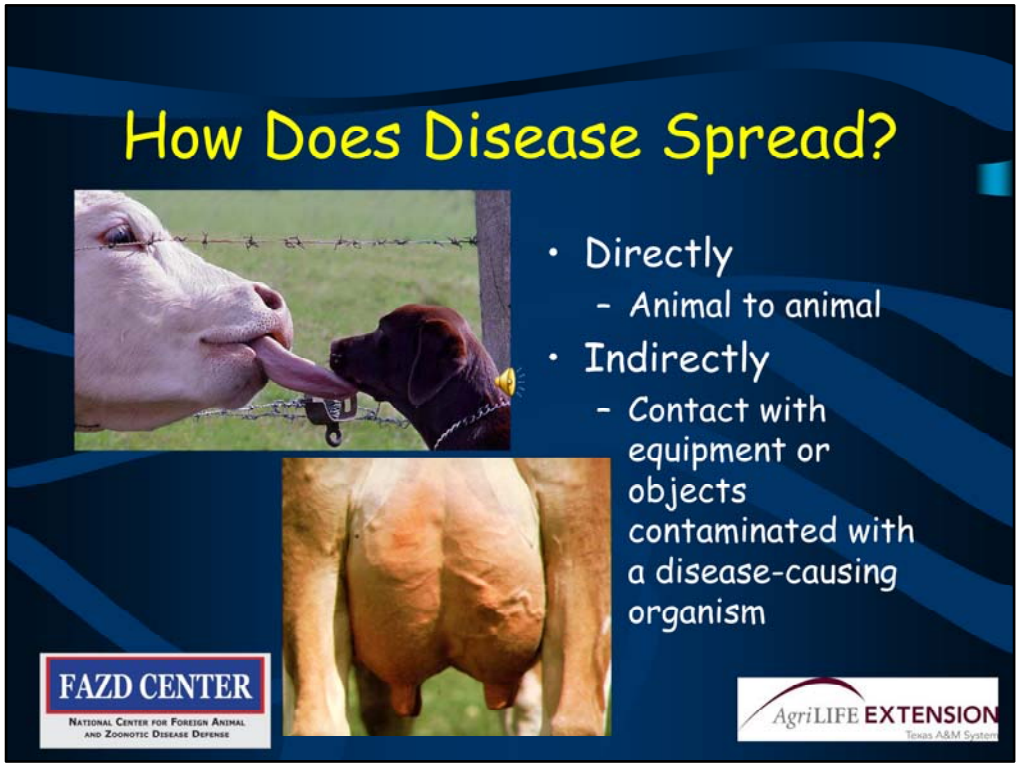
There are four basic goals for any farm's biosecurity program:

1) Prevent the spread of disease, both onto the farm and between animals on the farm,

2) Improve animal welfare by keeping the animals healthy,

3) Identify the disease early if it gets on the farm, and

4) Protect the safety of the food supply.



To accomplish these goals you must understand how diseases spread. Diseases spread both directly and indirectly. Direct transfer occurs when the disease passes from one animal to another. Indirect transfer happens when some type of equipment or other object, contaminated with the disease-causing organism, carries the disease to an animal.

Some examples of disease carrying objects include: boots, coveralls, needles, syringes, obstetrical chains, skid steers, tractors, and loaders.

Your Role … Prevent the Spread of Disease

Keep all equipment clean to prevent the spread of disease. This means not only the trucks, tractors, veterinary tools, etc. on the farm, but also your own boots and clothes.

Think about the many vehicles that go in and out of dairies daily. They can carry disease from farm-to-farm if not cleaned between deliveries. Help enforce farm rules that restrict access to certain areas to reduce the risk. Farm equipment, such as skid steers and loaders, tracks manure from site-to-site on the farm.

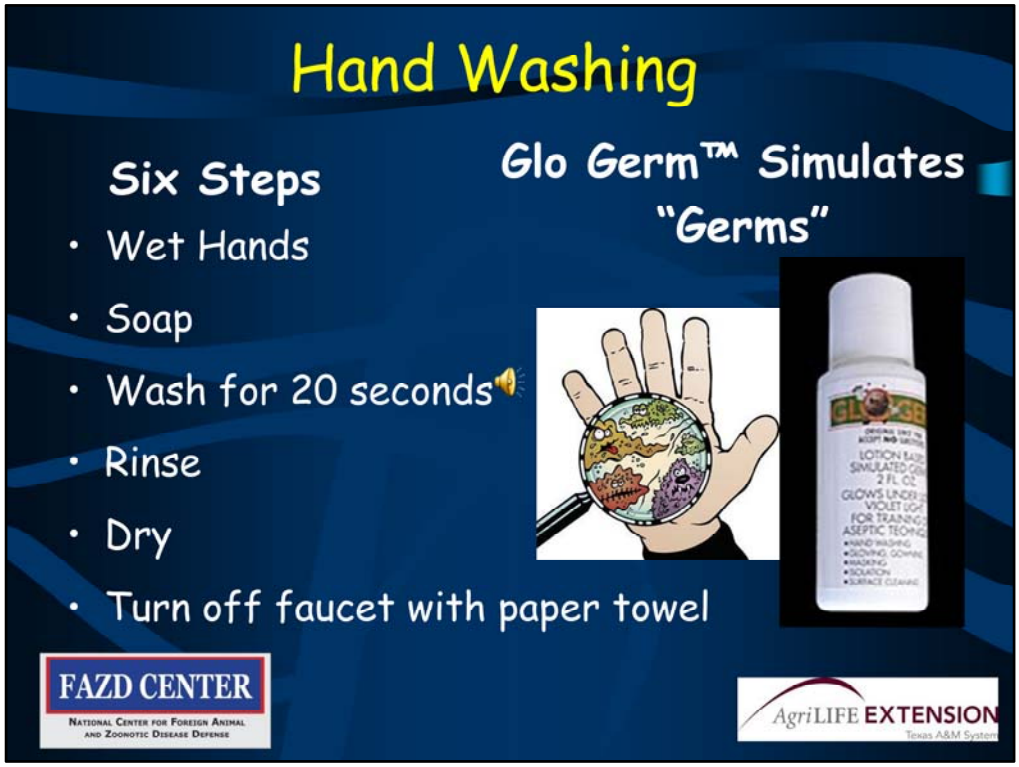
Also, sanitize small equipment such as bolus guns, hoof trimming tools, and calving chains between animals. Start by scrubbing all the tools with a brush. Once they are clean of dirt and debris, disinfect them. Residual dirt left on tools can cause disinfectants to be ineffective.

Wear clean clothes to work each day. If you work at more than one farm, make sure you have clean clothes for each farm. When washing your clothes, use the hottest temperature possible. Tumble dry.

Make sure there is NO dirt on boots. Disinfect your boots between pens, particularly after working in a "sick" pen. Work with youngest animals first as they are most susceptible to disease. To keep from taking some disease organism off the farm, always wash your boots before you leave the farm. Better yet, leave your boots at the farm and wear different shoes home. Don't use the same boots at home that you wear at work.

Some common disinfectants include Nolvasan solution, household bleach (1 part bleach:10 parts water), and chlorhexidine. Follow directions from your herd manager or veterinarian when mixing the disinfectant.

To protect yourself and the animals, wash your hands frequently. This means before you start work, before you eat, before treating an animal, and after you finish work. It takes at least 20 seconds to properly wash your hands.



There are really six different steps to properly washing your hands. First, you wet your hands. Next you add soap. Then you wash your hands thoroughly making sure you get the palm, heel of the hand, finger tips and back of the hand. Steps 4 and 5 are rinse and dry. Finally turn off the water with a paper towel, so you don't contaminate your hands. Today we are going to use a product called "Glo Germ™" to simulate how what goes on our hands is not so easy to wash off unless we follow these steps.

On many dairies the herd owner wants employees to wear gloves to minimize the spread of germs from one animal to the next. Our hands have many cracks and crevices where the bacteria can hide, particularly when we work hard or during the winter when they become cracked and chaffed. A gloved hand is a much smoother surface, which is easier to clean.

A dirty hand can spread germs from cow to worker to cow or from equipment to worker to cow. The person whose hand is in this picture had put some “Glo Germ™” on their hand and we looked at it under a black light. See how the “Glo Germ™” gets in the crevices and in the area around the blister on the middle finger.

Here is an illustration of the effects of using all six steps to wash either a bare hand or the gloved hand. Note that there is still a "glo" on the heel of the hand and on the tips of the finger on the bare hands after washing the first time. After a second wash almost everything came off, except a spot on the heel of the hand that was "missed". It was easier to get everything off and have a clean hand when wearing gloves.

But don't let gloves give you a false sense of security. When you touch a pipe in the parlor you can still pick up dirt and "germs" on your gloved hand and transfer it to another object, such as a drying cloth, or the next cow you are milking unless you wash your hands thoroughly.

Be aware of visitors. Ask visitors to report to the office or to the owner. If you see someone you don't recognize, TELL the boss.

For security, lock gates and doors as directed. Areas of restricted access include:

drug storage rooms/refrigerators, bulk tank area, feed storage areas, water sources, and hazardous chemical storage areas.

Clean out feed storage areas before unloading new feed. Check the corners and bottom of walls and bins for moldy feed. Clean up spilled feed to help control the rodent population. Destroy rancid and wet feed that could cause animals to become ill.

Always follow set procedures when cleaning trailers, tractors, etc.

Start cleaning by removing loose dirt, hay, manure, etc.

When possible, remove mats as they trap debris

Start at the front ceiling and work to the back

Work your way down from the top to the bottom

Pay particular attention to wheel wells and under carriage.

Don’t forget the gates in trailers and tail gates in pick-ups

Leave disinfectant on for 20-30 minutes before rinsing.

In trucks, clean and disinfect pedals and mats as well.

After cleaning, allow the vehicle to dry and put away supplies

Repair fences immediately. This helps keep wildlife and other people's animals out. Both are a source of disease causing organisms.

Remember, report sick animals to your supervisor immediately. Also, tell them about suspicious activity or people and any unusual events.

An important part of your job is to provide the best possible care. This improves the welfare of the animals on the dairy and helps keep them healthy.

Although specific procedures for providing the best animal care vary for different areas of the dairy, always provide a clean, low stress environment. Stress reduces an animal's ability to fight disease. Although vaccination programs differ, they help keep animals healthy. Whether you are moving animals to and from the parlor or caring for baby calves, always handle animals gently and calmly.

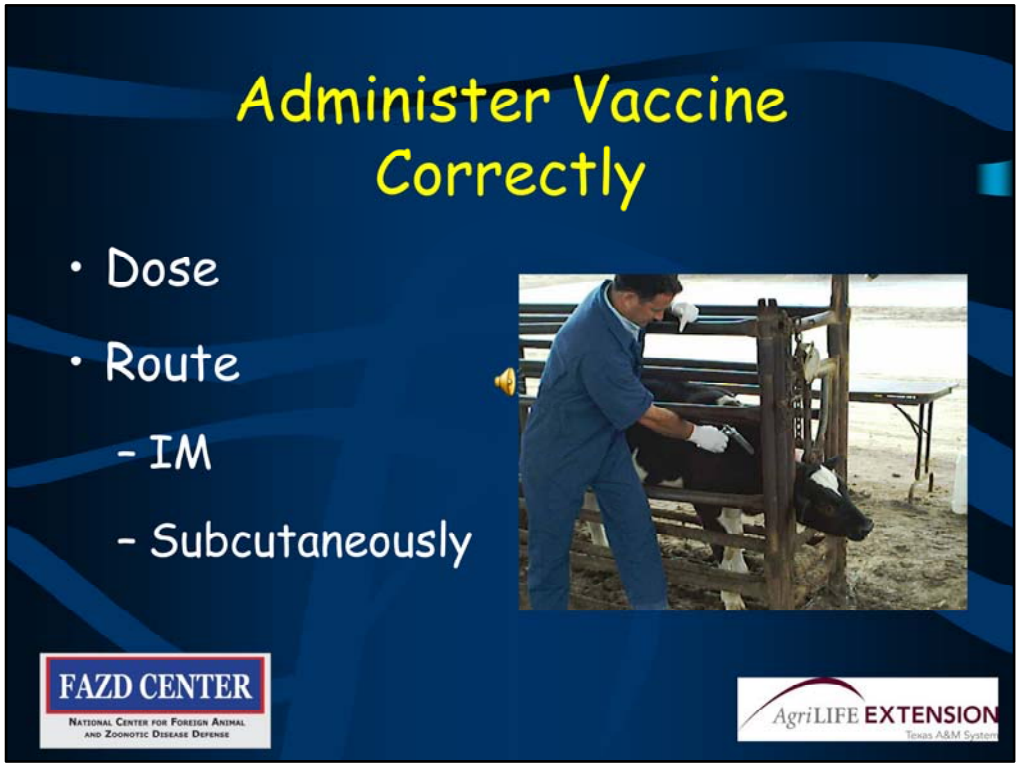
If you are responsible for caring for newborn calves: 1) provide clean, dry housing for the calf, 2) keep calves separated from older animals, and 3) work with them before older animals.

Feed every newborn calf colostrum within four hours of birth. The antibodies in colostrum protect the calf from disease. Dip the navel in iodine to prevent disease causing organisms from entering the calf.

Vaccination programs prevent certain diseases caused by viruses and bacteria. Follow herd owner and veterinarian guidelines for when to give each vaccine.

To insure success, handle vaccines properly. Note the expiration date; if it has passed, don't use the vaccine. Store the vaccine according to the directions. Freezing can inactivate some vaccines, while too high a temperature also inactivates them.

Never leave vaccines on the dash of a truck as even in the winter it gets too hot or can freeze.

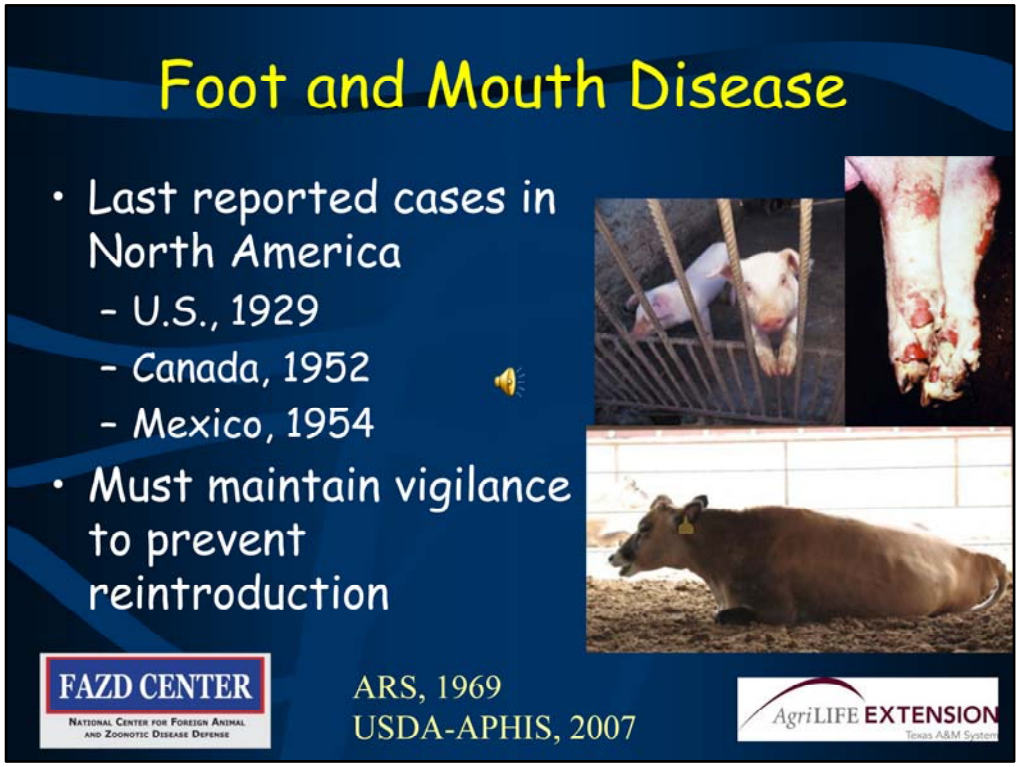


Administer the vaccine correctly. That includes giving the right amount or dose, by the correct route (intramuscular or subcutaneous) in the correct location.

Once opened, vaccines need to be used immediately. When finished, dispose of the needles and discard unused vaccine at end of day. Put needles in a puncture-proof container.

Your job also includes identifying disease early. Although you may not be on the dairy's "health" team, observe the animals where you work. If you spot abnormal behavior or sick animals, report them to the herdsman, manager or veterinarian immediately.

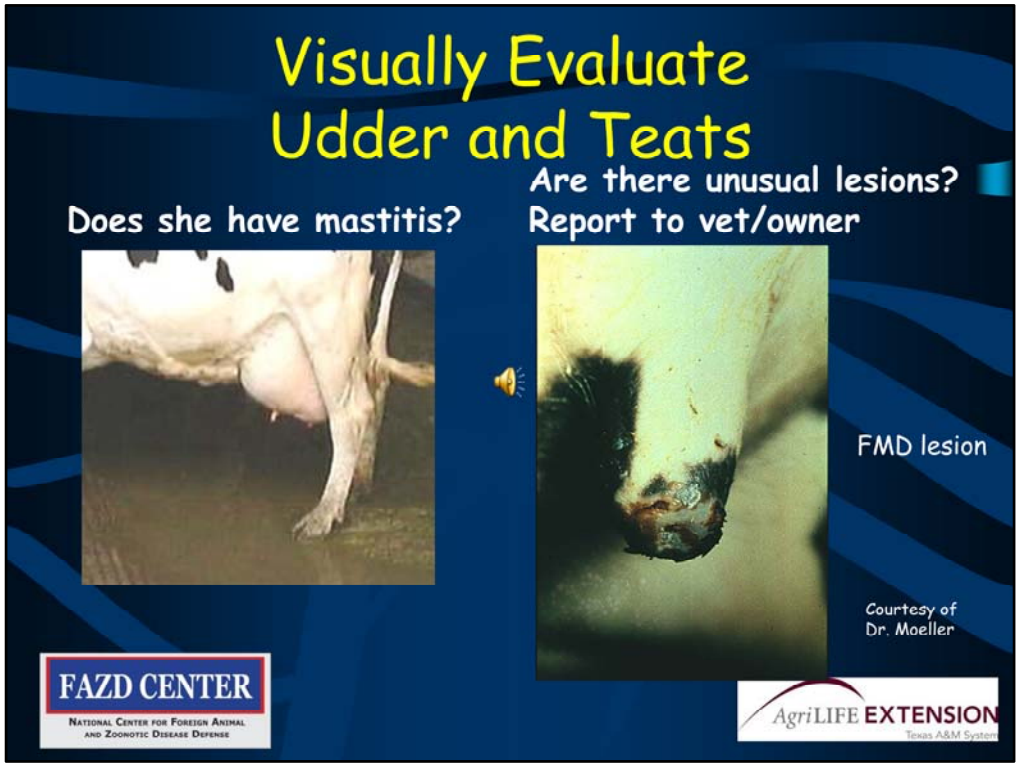
When checking a herd, you should always watch for symptoms beyond what you are used to seeing each day. Many dairy employees are immigrants and may travel out of the U.S. In addition there is more and more international travel by citizens from around the globe. This increases the potential to bring in foreign animal diseases. One example of a foreign animal disease we don't find in the U.S. is foot and mouth disease. Early detection of any disease, including foreign animal diseases, can prevent its spread and minimizes the impact on the herd.



Foot and Mouth Disease was last reported in the United States in 1929, Canada in 1952 and Mexico in 1954. It is still found in South America and parts of Asia, Europe, and Africa.

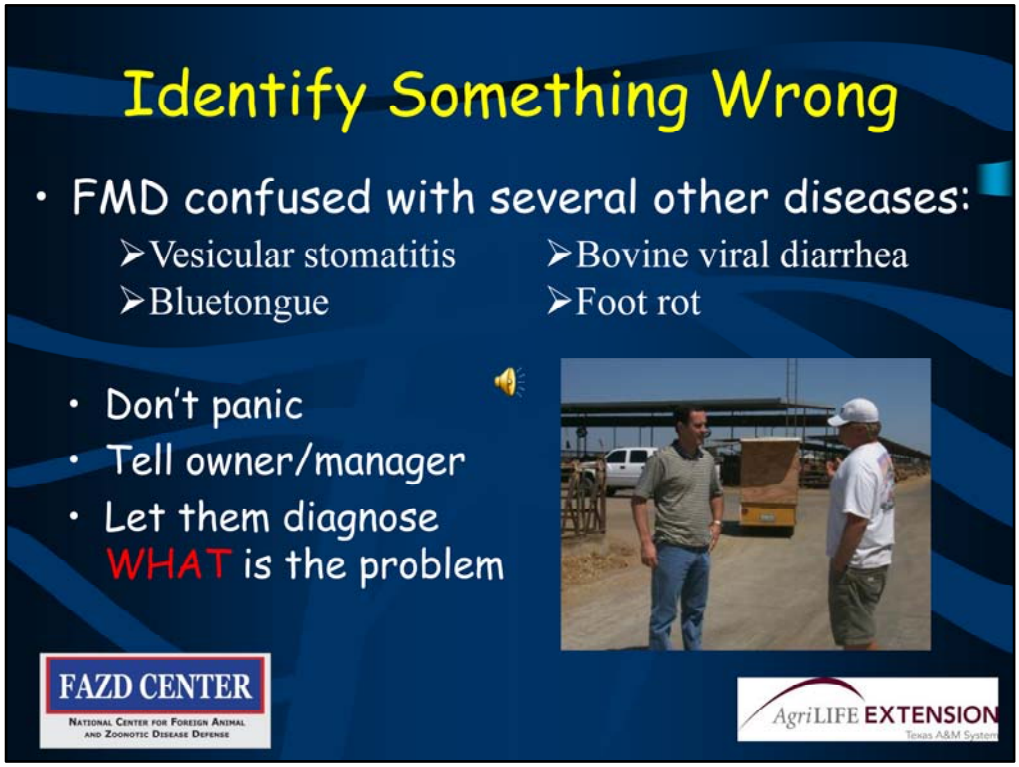
Everyone in agriculture as well as our border security must work together to prevent the reintroduction of Foot and Mouth Disease.

Foot and Mouth Disease is caused by a virus. It impacts cows, sheep, pigs, deer and other cloven hoofed animals. It is a very contagious virus. Animals may have a fever and blister-like lesions on teats, tongue, lips, and between hooves. Milk production decreases dramatically in dairy cows.



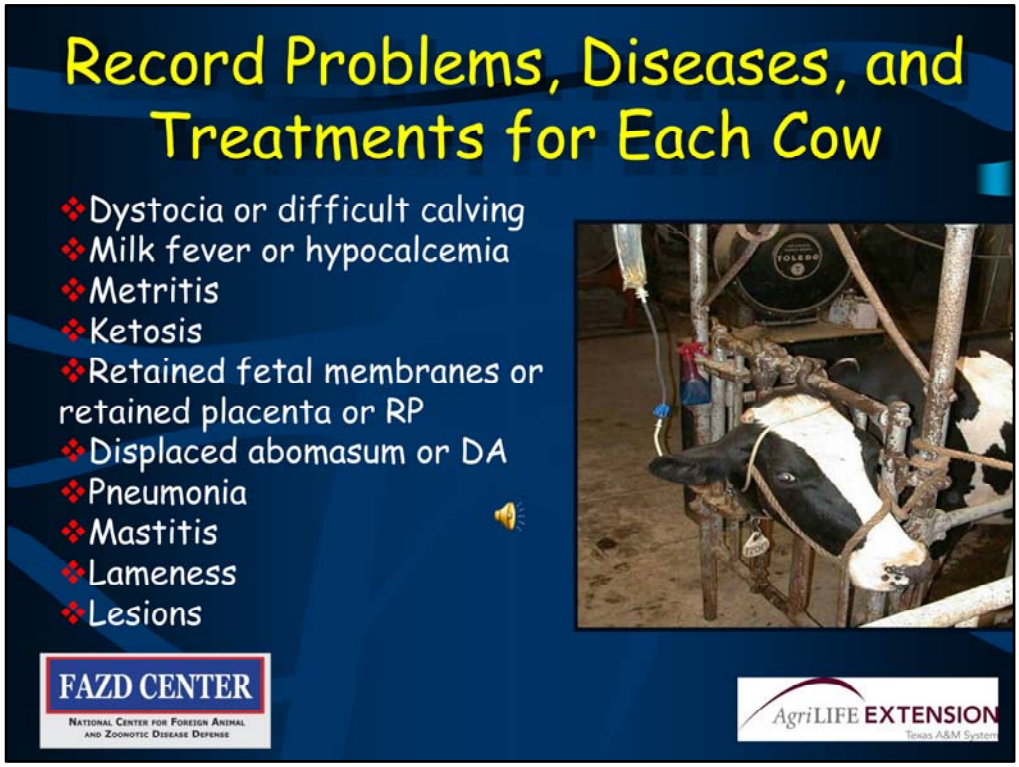
When working, look at the udder and teats. Does a cow have mastitis? Are there unusual lesions on the teats?

When you are out among the cattle also check the feet and legs. Are there unusual lesions on the feet? Are the cows walking “funny”?



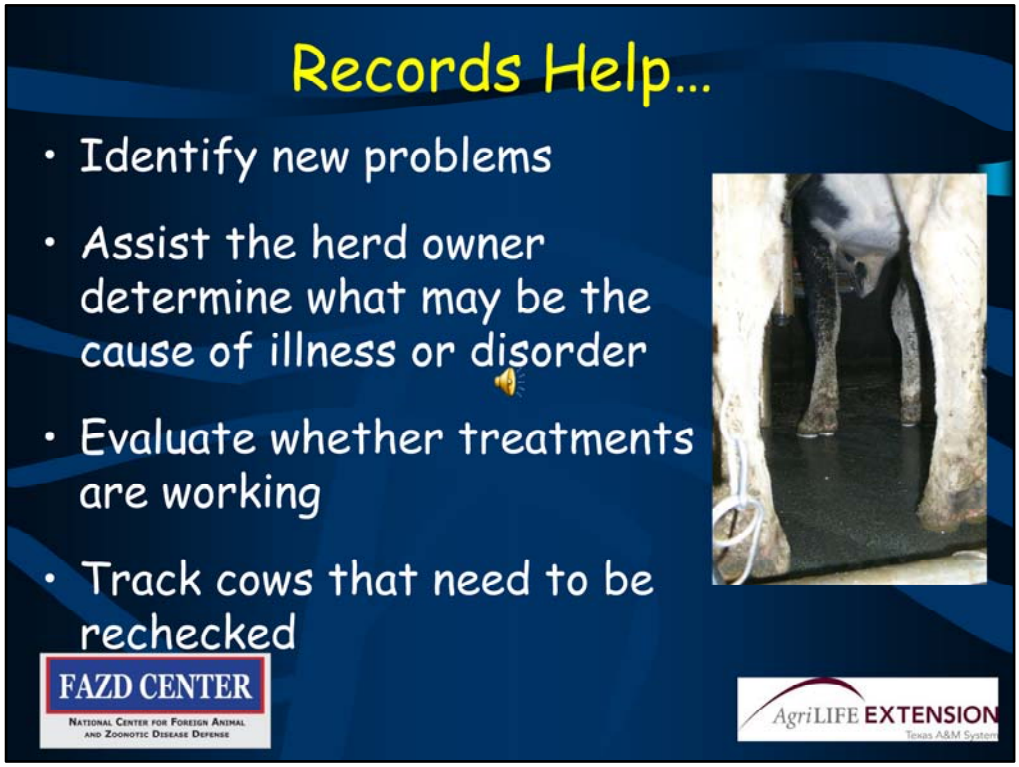
Foot and Mouth Disease can be confused with other diseases that we do have in this country such as vesicular stomatitis, bovine viral diarrhea, foot rot or blue tongue. Do NOT panic if you don't recognize something, tell the owner, manager, or veterinarian so they can diagnose the problem. Again, early identification is the key to treating and preventing the spread of any disease.

Dairy farm workers harvest food. Keeping cows healthy helps insure that an abundant supply is produced. But when cows get sick, dairy workers must take steps to insure the quality and safety of the food supply.



Record problems, diseases and treatments for each cow. There are many different problems that may not be an infectious disease, but the treatment still must be recorded. These other problems can make the cow more likely to get a disease.

At a minimum, include the date, cow identification, diagnosis, any treatment, and withdrawal times on the farm record.



The records you create help…

identify new problems

assist the herd owner determine what may be the cause of an illness or disorder

evaluate whether treatments are working

track cows that need to be rechecked

If antibiotics are used in treatments, mark the cow, follow discard protocols for milk, and note meat withdrawal time in the record.

Again, if you see something unusual – report it! Whether it is a lesion, suspicious activity, unknown visitor, or abnormal animal behavior doesn't matter.

When you leave work remember to protect your animals at home from disease as well. Change your clothes before working with your animals. Keep a separate pair of boots for when you work at home.

If you travel out of the U.S., realize you may need to stay off farms when you return for a period of time. Protecting the food supply means you don't bring something to work from your travels. For current animal disease concerns when traveling call 1-866-SAFGUARD.

By practicing basic biosecurity steps, you can help keep the animals on the farm where you work healthy. You also reduce the risk of taking diseases home to your animals. You minimize the chance that you or your family get sick. And finally, you help keep the dairy producer in business so you can keep your job!

Remember, healthy cows provide an abundant safe food supply for our products consumer.

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