Tennessee

Master Beef Producer

VALUE • QUALITY
TENNESSEE CATTLE
PERFORMANCE

UT Extension

Tennessee Beef Cattle Improvement Initiative

Food Safety and Biosecurity

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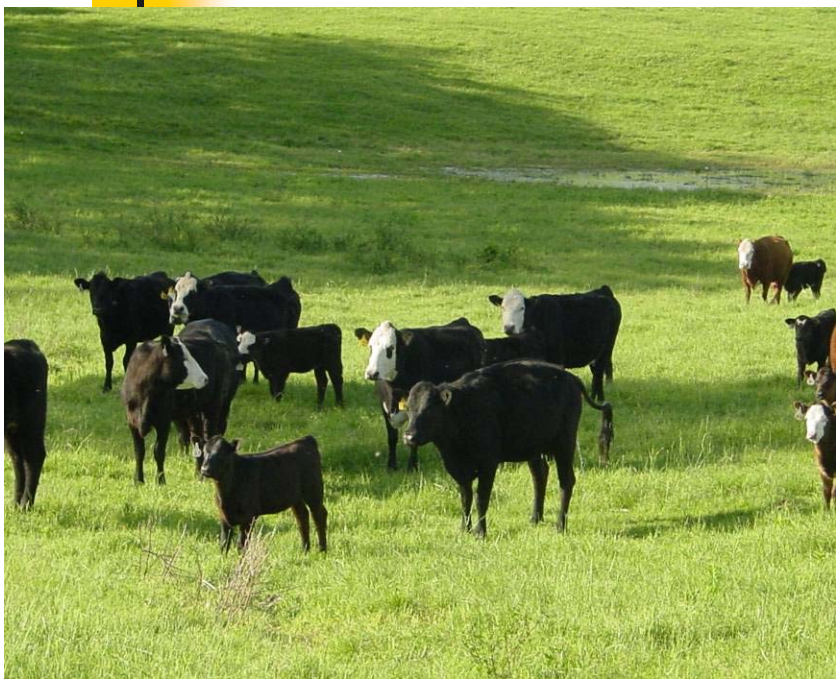
Food Safety



We Are Producing Food- Not Just Cattle

Objectives

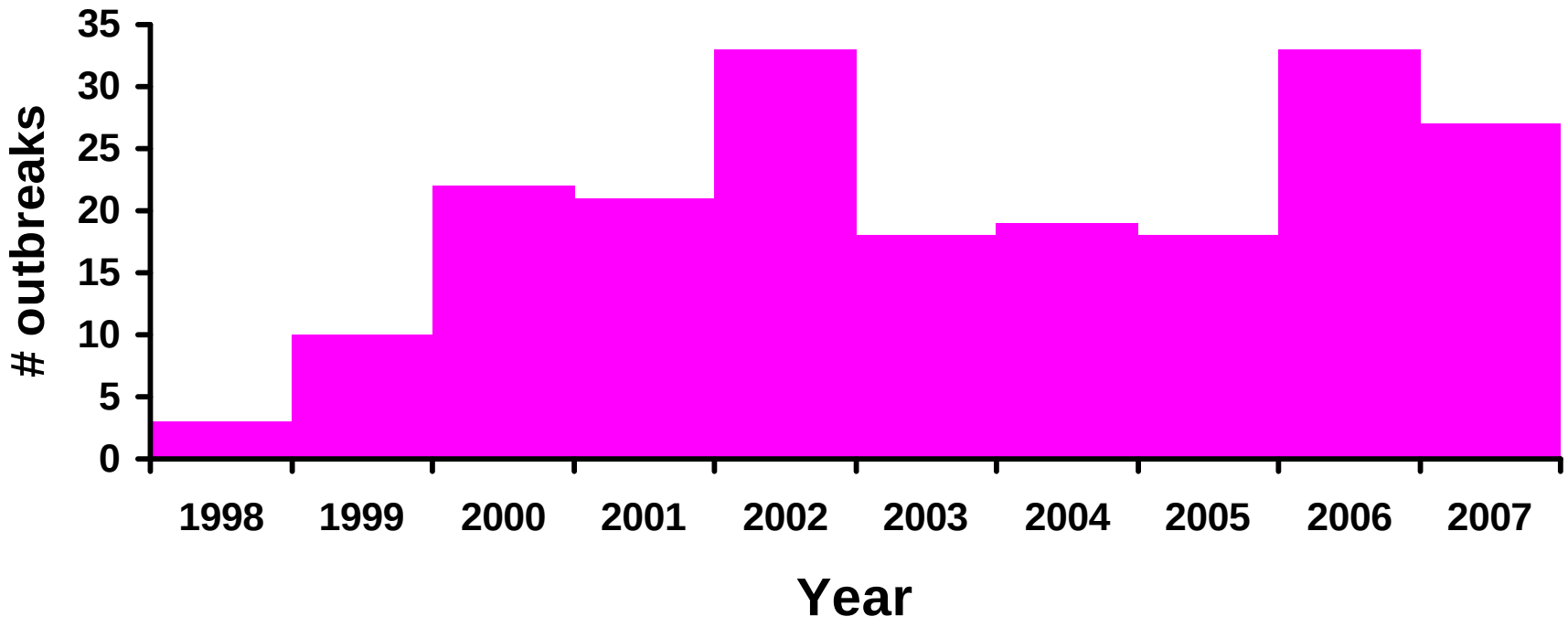
- Demonstrate Need for Food Safety Concerns Among Cow/Calf Producers
- Demonstrate How Beef Quality Assurance Guidelines Promote Food Safety
- Provide Guidelines to Reduce Biosecurity Risks on the Farm

America's Food Supply is the Safest in the World, BUT:

There are about 76 million cases of food borne illness in the United States annually. The total US population is around 310 million. That means almost 1 in 4 Americans will fall victim to a food related illness each year. While many of those illnesses turn out to be relatively minor, more than 300,000 of them result in hospitalizations, and, the CDC says, 5000 Americans die from food borne illnesses each year.

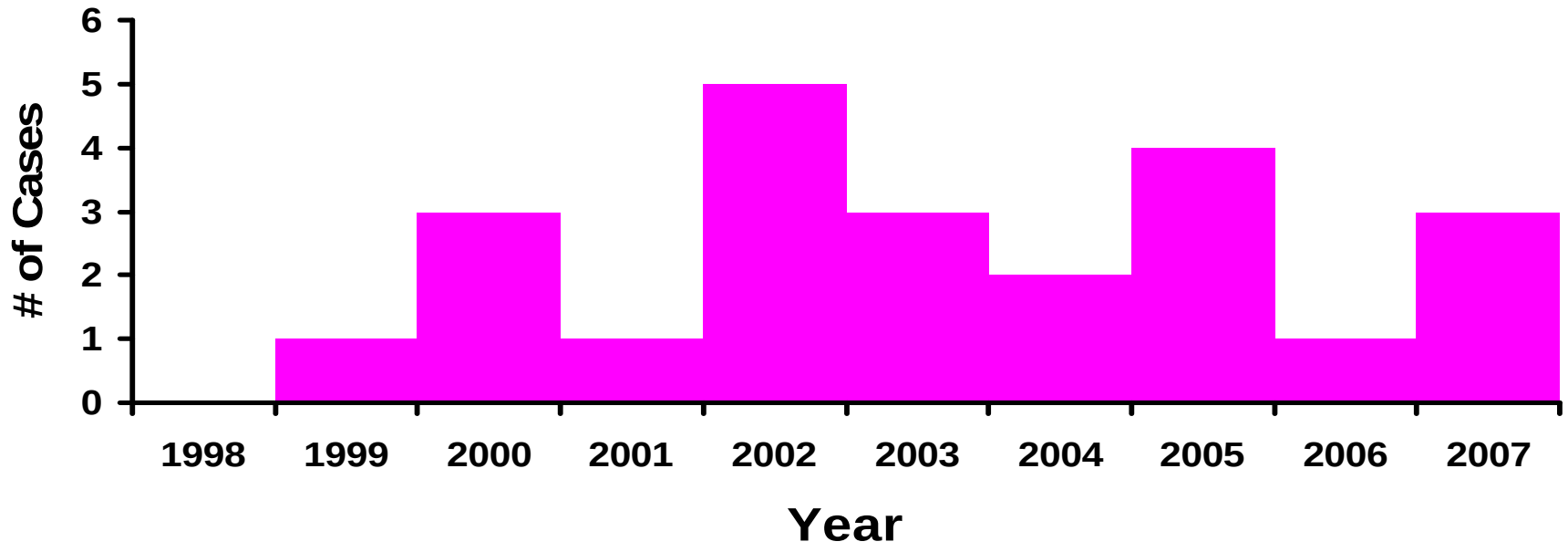
Centers for Disease Control-Atlanta

Foodborne Outbreaks, TN



Source: Centers for Disease Control

TN Outbreaks Beef Related



Source: Centers for Disease Control

Consumers Are Concerned About Food Safety

- Food Recalls Continue to Be in the News
- The Threat of Terrorism Continues
- Publicity About BSE, Foot and Mouth Disease, Anthrax and Other Animal Diseases Continue to be in the Press
- Publicity on “Corporate Responsibility” with focus on Sustainable Supply.
- Misinterpretations (ex. Swine Flu)

Recent Beef Recalls

- August 6, 2010, Frozen Beef Products, California Co., E. coli., 1,000,000 lbs
- June 24, 2010, Imported Beef Products, Illinois Co., Ivermectin, 61,000 pounds
- June 22, 2010, Ground Beef, California Co., E. Coli, 35,000 pounds
- May 15, 2010, Ground Beef, California Co. E. Coli, 53,000 pounds
- 16 Beef related recall thus far in 2010

Hallmark/Westland Meat Packing Company, Chino, CA

- February 2008
- 143,383,823 lbs as Class II Recall
- Violation of FSIS Inspection and 2007 Requirements of Non-ambulatory Disabled “Downer” Animals.
- HSUS Video
- Major Media Coverage although Class II is considered to be a low health risk.

Foreign Animal Diseases (FAD)

- FAD—Those currently not known to exist within the United States and its territories
- FAD would significantly impact the economy
- It is important to protect the long-term health and profitability of U.S. animal agriculture
- It may be difficult to predict the risk and control the spread of FADs

Foot and Mouth Disease (FMD)

- U.S. has been free of FMD since 1929
- Extremely contagious and spreads Rapidly
- Symptoms can be confused with other diseases
- Outbreak would result in extreme economic loss.
- Early detection and Importation and Travel Safeguards are key

Foot and Mouth Disease (FMD)

- The costs of a FMD outbreak in the United States
  - Export losses in year-2000 dollars could total in excess of 4.3 billion dollars or 12 million dollars per day
  - The median duration of a FMD outbreak in the United States is projected to be 30–109 days
  - This would result in 360 million to 1.3 billion dollars loss in exports

BSE in the United States

- December 23, 2003, Imported from Canada
- June 24, 2005, Texas cow had conflicting test results died at age 12. Born before 1997 feed ban. 1st US endemic case
- March 15, 2006 Alabama, 10 years old. 2nd Native Case
- October 2009 Enhanced Feed Ban- Harmonizes US with Canadian Ban which now prohibits all SRM from all animal feeds and fertilizers not just beef as the 1997 stated
- USDA is approaching 1 million head tested in the BSE Surveillance program
- TN does participate if cattle are over >30 months old.

Efforts to Reduce Foodborne Contaminants Are Increasing

More Testing in Slaughter Facilities

More Intervention at Slaughter Facilities

New Technological Practices

More Information on Care and Preparation Being Provided to Consumers

Corporate Responsibilities McDonalds Corporation

- McDonald's Global Policy on Antibiotic Use in Food Animals
- McDonald's USA Animal Welfare Council (Made up of University Professors.)
- McDonald's Animal Welfare Auditing Program
- Use this and other committees to monitor scientific findings and consumer acceptance to emerging agricultural technologies(ex. Cloning).

Corporate Responsibilities Wendy's Corporation

- Animal Welfare and Handling Audits for United States and Canada Suppliers
- Adopted the American Meat Institute animal welfare guidelines for beef.
- Wendy's Animal Welfare Council
- Supplier Requirements address transportation, handling, holding and nutrition.
- Wendy's Antibiotic Use Guidelines Addresses antibiotic use, growth promotion, bio-security and avoidance of using classes of antibiotics used in both human and food animal medicine.

Consumers Want Meat From Healthy Animals That Are Properly Cared for

A Producer Code of Care Has Been Developed

Producer Code of Cattle Care

Beef cattle producers take pride in their responsibility to provide proper care to cattle. The Code of Cattle Care below lists general recommendations for care and handling of cattle:

- Provide necessary food, water and care to protect the health and well-being of animals.
- Provide disease prevention practices to protect herd health, including access to veterinary care.
- Provide facilities that allow safe, humane, and efficient movement and/or restraint of cattle.
- Use appropriate methods to euthanize terminally sick or injured livestock and dispose of them properly.

Producer Code of Cattle Care

- Provide personnel with training / experience to properly handle and care for cattle.
- Make timely observations of cattle to ensure basic needs are being met.
- Minimize stress when transporting cattle.
- Keep updated on advancements and changes in the industry to make decisions based on sound production practices and consideration to animal well-being.
- Persons who willfully mistreat animals will not be tolerated.

Beef Quality Assurance

A Documented Way to Insure That Animals Receive Proper Care And Management.

Plan and Work to Prevent Problems

Select and Use Antibiotics Carefully

Select the appropriate antibiotics and vaccines. Follow Label Directions and avoid broad spectrum antibiotics.

Avoid Using Antibiotics That Are Important in Human Medicine

Utilize Laboratory Results to Help Select Antibiotics

EXAMPLE OF PACKAGE INSERT INFORMATION
COWBIOTIC®

(hydrocillin and streptazolidin in aqueous suspension)
For Use in Beef Cattle, Lactating and Non-lactating Dairy Cattle and Swine.
Read Entire Brochure Carefully Before Using This Product.

For Intramuscular Use Only
Composition: Cowbiotic is an effective antimicrobial preparation containing hydrocillin and streptazolidin. Each ml of this suspension contains 200,00 units of hydrocillin and 250 mg of streptazolidin. The combination permits treatment of many mixed bacterial infections with the convenience of a single dosage form.

Indications: Cattle: Bronchitis; footrot; leptospirosis; mastitis; metritis; pneumonia; wound infections and other infections caused by or associated with hydrocillin - and streptazolidin - susceptible organisms.

RECOMMENDED DAILY DOSAGE

Continue treatment for 1 to 2 days after symptoms disappear.

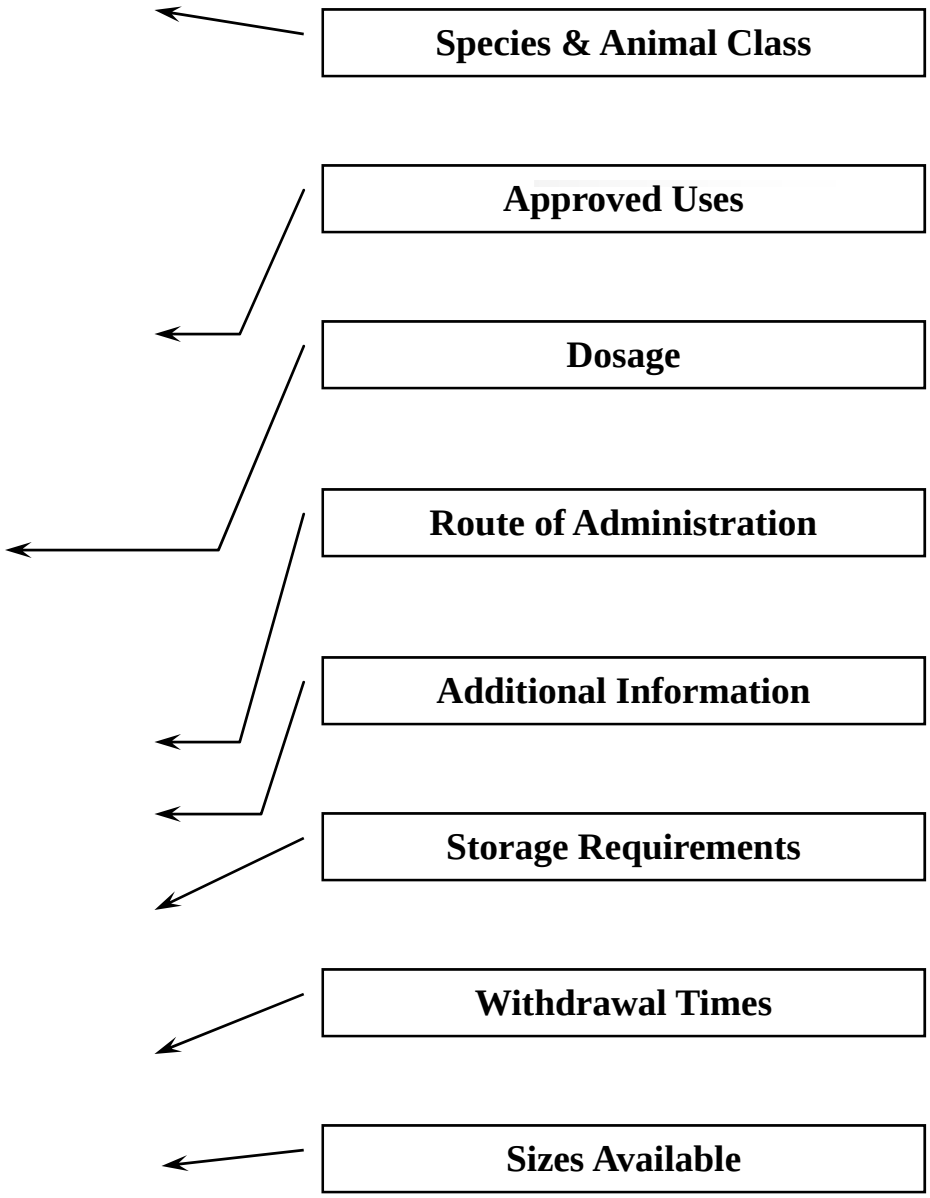
CATTLE	Body weight	Dosage
	up to 100 lbs	2 ml
	100 to 300 lbs	2 to 6 ml
	300 to 700 lbs	6 to 10 ml
	700 lbs or more	10 to 10 ml

CAUTION: 1. Cowbiotic should be injected deep within the fleshy muscle of the neck. Do not inject this material in the hip or rump, subcutaneously, into a blood vessel, or near major nerve. 2. If improvement does not occur within 48 hours, the diagnosis should be reconsidered and appropriate treatment initiated. 3. Treated animals should be closely observed for at least one-half hour. Should a reaction occur, discontinue treatment and administer epinephrine and antihistamines immediately. 4. COWBIOTIC must be stored between 2 to 8 C (36 to 46 F). Warm to room temperature and shake well before using. Keep under refrigeration when not in use.

Warning: Milk that has been taken from animals during treatment and for 48 hours (4 milkings) after the latest treatment must not be used for food. The use of this drug must be discontinued for 30 days before treated animals are slaughtered for food.

How Supplied: Cowbiotic is available in vials of 100 ml and 250 ml.

Follow Label Directions



Treatment Programs Should Reflect Best Use Principles

Treatment Regimes Should Reflect Best Use Principles

Check With the Local Veterinarian to Develop The Most Current and Best Treatment Protocol

Treat the Fewest Number of Animals Possible

Limit Antibiotic Use to Sick or At Risk Animals

Treat Animals For the Recommended Time

Treating Beyond The Recommended Time Increases The Potential For Bacteria To Become Resistant To Microbials. Treating For Too Short A Time May Result In Animal Not Being Cured

Observe Withdrawal Times

Marketing Animals Before the Withdrawal Time Has Passed Can Result in Drug Residues

Avoid Environmental Contamination With Antibiotics

Prevent Antimicrobials From Reaching the Environment Through Spillage, Contaminated Ground Runoff or Volatilization

Keep Records of Antibiotic Use

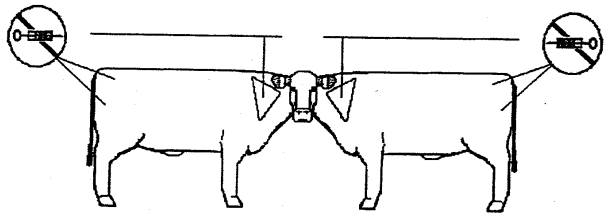
TREATMENT RECORD

_____
Cattle Group

Date_____

Animal ID_____ **Date Sick**_____

Date returned to group_____ **Date Sold**_____



All records should be maintained for at least two years.

Date	Temp	Diagnosis	Treatment /Product	Site*	ROA**	Withdrawal	Lot #	Exp Date	Company

*** = Location from map** ****=Route of Administration**

Producer's Name:_____

Address:_____

City/State/Zip:_____ Phone:_____

Comments:_____

_____

_____

Extra Label Antibiotic Use Must Follow FDA Regulations

Veterinarians Must Have a Valid Patient-Client- Relationship

Subtherapeutic Antibiotic Use is Discouraged

Producers Should Follow Label Directions and Use Antibiotics to Prevent or Control Disease.

Antibiotics Should Not Be Used With the Intent Of Improving Performance

Biosecurity and Agrosecurity

The Threat Of Terrorism Has Resulted In A Need For Producers To Be More Aware Of Potential Threats To Their Animals and Farming Operations

Effects of Agroterrorism

- Cripples the nation economy
- Destroys the livelihood of many people
- Risk to the food supply
- Causes mortality and morbidity
- Physiological impacts

What Makes Agroterrorism Attractive to Terrorist?

- Economic Damage
- Smaller chance of outrage or backlash
- Soft Targets, Lower Level of Security
- Lower physical risk to terrorist
- Similarity to natural outbreaks makes detection hard
- Unconventional

History of Agoterrorism

- World War I (WWI)—German sabotage campaign with anthrax and glanders
- World War II (WWII)
  - German experimentation with Foot-and-Mouth Disease (FMD)
  - French experimented with rinderpest virus to infect cattle
  - Japanese used aerial dissemination in an attempt to spread anthrax and glanders
  - Great Britain attempted to weaponize anthrax, FMD, and plague

Vulnerabilites?

- Transportation
- Water Sources
- Production
- Storage
- Processing
- Labs
- Retail
- Employees

Courtesy of FEMA

Who Might Pose a Threat?

- Domestic
- Foreign
- Al-Qaeda
- Cults
- Animal Extremist
- Environmental Extremist
- Criminal

Threats and Sources

- Threats
  - Chemical, Biological, Radiological, Nuclear, or Explosive (CBRNE)
- Sources
  - Accidental or intentional
  - Emerging/evolving from domestic or foreign/international

Threats and Potential Biological Attacks (continued)

- Anthrax**
- Botulism
- Brucellosis**
- Cholera
- Cryptosporidiosis*
- E. coli 0157.H7*
- "Emerging diseases*"
- Epsilon toxin*
- Glanders **
- Melioidosis*
- Plague*
- Psittacosis**
- Q-fever**
- Ricin toxin
- Rift Valley fever**
- Salmonellosis*
- Shigellosis*
- Smallpox
- Tularemia**
- Typhoid fever
- Typhus fever*
- Viral (equine) encephalitides**
- Viral hemorrhagic fevers*

Note: * *Zoonoses* **Weaponized*

What Can We Do?

- Awareness
- Barriers
- Community
- Inventory Control
- Signage
- Locks
- Planning
- Visitors and Personnel

Source: USDA Pre-Harvest Security Guidelines Publication

Awareness

- Be observant as you check your cattle for anything or anyone out of place
- Look for any signs of tampering with crops, livestock, fence, facilities, or equipment.
- Conduct perimeter checks at random. Maintain unpredictability.

Planning

- Develop a plan and share with family and employees.
- Identify vulnerabilities and increase security measures in those areas.
- Consult with industry experts, extension, veterinarians.
- Plan how to respond to threats, theft or tampering.
- Update regularly

Barriers

- Minimize areas where people could hide or be concealed by trimming trees or shrubs.
- Maintain fences in good repair
- Secure pesticides, fuel, fertilizers, feed and other production inputs
- Secure water sources and identify alternates if available

Community

- Know your Neighbors
- Educate neighbors on awareness and what to in the case of suspicious activity.
- Do not advertise when you will be away from your facility.

Inventory Control

- Maintain current up-to-date inventory of all pesticides, fertilizers or potentially valuable or hazardous materials.
- Make sure all the storage areas for inputs and drugs are secured.
- Inspect and inventory all equipment and look for any tampering or theft.
- Remember to safeguard computer records, protect from any unauthorized access and back up records.

Signage

- Post signs that direct visitors to central sign in area.
- Post “No Trespassing along the perimeter of property and “Do Not Enter” on the outsides of all the buildings
- Periodically check the signs and replace or repair if necessary.

Locks

- Keep all gates entering the farm locked
- Make sure all water supplies are locked as well as critical inventory storage
- Verify who has the keys and when they are returned.
- Lock all equipment and Vehicles.

Visitors and Personnel

- Have one clearly marked entrance for visitors and require check in or sign in.
- Maintain records of visitor name, times and purpose of visit.
- Do not allow visitor unlimited access to premises.
- Make sure to screen employees as well as train them in farm safety and security.
- Make sure employees no what to report and how to report.

7 Signs of Suspicious Activity

1. ***Surveillance:*** Someone recording or monitoring activities around your farm.

2. ***Elicitation:*** People or organizations attempting to gain information about your operation including feed delivery times, routine herd check times, etc.

3. ***Tests of security:*** Any attempts to measure reaction times to security breaches.

7 Signs of Suspicious Activity

4. ***Acquiring supplies:*** Because the food supply is especially vulnerable to Biological and chemical contamination, be aware of unusual theft of items that could be used in this manner.

5. ***Suspicious persons out of place:*** People who don't seem to belong around loading docks, trailer parking areas, receiving and grading sheds, loitering in areas not normally used for employee breaks.

6. ***Dry run/Trial Run:*** Putting people into position and moving them around according to their plan without actually committing a criminal or terrorist act.

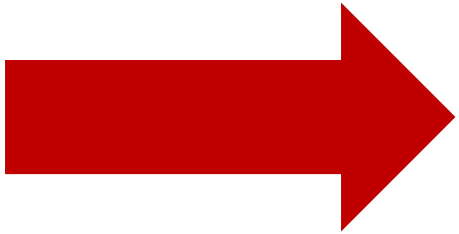
7. ***Deploying assets:*** People and supplies getting into position to commit the act. ***This is your last chance!***

Suspicious Activity Report (SAR)

Observe

Assess

Report



- What did you see?
- Where did you see the activity?
- When did you observe the activity?

TN Fusion Center & TN OHS

1-88-TN-HOMELAND or 1-877-250-2333

Cattle Security

- Maintain and animal identification system (eartags, brands, tattoos,)
- Record animal health records including vaccination, purchase, arrival dates, sources, birthdates
- Quarantine new additions to the herd or those that have returned from being off the premises.
- Purchase animals, feed and pharmaceuticals from known and reputable sources.
- Keep animal feeds away from hazardous materials.

Cattle Security

- Observe animals for signs of disease and isolate sick animals immediately.
- Keep equipment and farm premises as clean and sanitary as possible.
- Disinfect and wash all clothing after visiting another farm or sale.
- Make sure visitors take proper biosecuity measures. Producer can provide disposable coveralls and boot covers for high risk visitors.

Cattle Security

- Limit unrestricted pet movement on the farm premises.
- Avoid cross contamination with spray equipment and/ or manure handling equipment and feeding equipment.
- Restrict vehicle entry if possible. If vehicle must enter make sure to properly clean vehicle before entrance.

Summary

- Beef cattle producers are food producers
- Beef Quality Assurance Guidelines protect animals and food supply
- The best protection from agroterrorism is good management and being extra observant

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