

Disasters: Preparing a Livestock Operation

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Disasters occur in the United States every year and cost the livestock production industry millions of dollars in the form of animal mortality. While disasters are usually beyond human control, livestock producers can enact some management techniques to minimize the amount of loss and damage that these disasters can cause. The most important step that a producer can do to mitigate the effects of a disaster is to prepare. Producers, who are properly prepared to deal with a disaster, are more capable of preserving life and property. They will also be able to recover much quicker and resume production in less time. Preparation for a disaster can be done by 1) developing a farm disaster plan, 2) keeping accurate records at all times, 3) creating a disaster supply kit, and 4) preparing the farm and the animals in case a disaster occurs.

Farm Disaster Plan

The objective of a disaster plan should be to ensure the safety of family members, personnel and livestock. The plan should also address the protection of farm infrastructure such as buildings and farm equipment, and ensure the availability of necessary resources after the disaster such as food and water for the animals.

Discuss and coordinate your disaster plan with neighbors, local emergency personnel, and agricultural groups such as the local extension service, the Natural Resource and Conservation Service, and the Farm Service Agency. These groups can also provide information and resources that may be used collectively among multiple producers, which would make the implementation of a disaster plan easier.

If evacuation of your livestock is necessary, it is important to have already identified and arranged possible locations to relocate your animals. Friends or neighbors that live appropriate distances away may be able to provide shelter for your animals. It is also a good idea to identify other facilities that may give shelter to animals in an emergency such as fairgrounds and sale barns.

The disaster plan must also include an emergency loading plan. A loading area should be prepared where the animals can be loaded easily and quickly. The trailer or truck that will be used to carry the animals should be stored in that location. Practice loading the animals to decrease the anxiety level of the animals during an evacuation as they will already be familiar with the procedure. In addition, evacuation routes need to be established. Consider identifying routes that will have very little traffic because extended traveling times will increase the stress on the animals. Remember to have more than one route and a second plan of action just in case.

Records

Keeping current and comprehensive records will be very useful to expedite recovery. The records should include inventories of all livestock, property, equipment, and agricultural chemicals. For livestock, it is important to have copies of all registration papers, health records, and other pertinent information. The animals need to have some type of identification. Some common types of identification include tags, tattoos, and branding. They should be easy to read from a distance and do not fall off easily. In the event that animals become commingled with animals from other farms, it is important to have some type of identification on the animals that can't be duplicated or identifies that a particular animal is from your farm. Diagrams of the floor plans, wiring, the lighting protection system, and the water supply system should also be stored in a secure location. These become important for both preparation and recovery when utilities need to be disconnected or inspected for damage. An updated inventory of all agricultural chemicals (fuels, medicine, fertilizer, pesticides, etc.) should be kept because they may be washed away during a disaster and put people and animals in danger of exposure through contaminated feed or water.

Disaster Supply Kit

A disaster supply kit should include the following items:

- Accurate, up-to-date records that are stored in a safe location
- Copies of building diagrams stored in a sealed plastic bag
- A readily-available source of emergency cash
- First aid supplies
- Emergency store of medication for livestock
- Enough food and water to last for 1-2 weeks
- Plastic trash cans with lids to store and transport water and feed
- Gas-powered generator
- Extra fuel for vehicles and other emergency equipment
- Portable livestock panels
- Leads and ropes to ease handling of animals
- Tools such as wire cutters and heavy gloves to help in preparing and recovering
- Lumber, plywood, wire and rope to help secure and protect buildings and equipment
- Contact information of relevant individuals and agencies including your local veterinarian, the state veterinarian, the local extension office, and emergency personnel.

Preparing the Animals and the Farm

The best way to prepare your animals for a disaster is to maintain them in a healthy state. Well-managed animals that are healthy and are fed a nutritionally balanced diet are stronger, more resistant to stress, and will be better able to survive a disaster. Be sure that your goat herd is regularly vaccinated for Clostridium C and D, and tetanus. A multivalent pneumonia vaccine is also suggested for herds during hurricane season. It is also important to practice good biosecurity and husbandry techniques that will reduce the spread of disease and stress experienced during disasters. Remember that stressed animals and animals that have commingled with animals from other farms are more

susceptible to disease. Try to avoid stressful situations and commingling. If it does occur, closely observe livestock after the disaster and quarantine, or isolate suspected disease carriers if possible.

Guidelines to prepare the farm may vary depending on the type of disaster. Nevertheless, there are some general actions that can be taken to minimize property damage and accelerate recovery of the farmstead. One of the first things that can be done is to gather and securely store plans to all of the buildings including utility systems. These plans are important to properly prepare the farm and safely perform an inspection of the property after the disaster. Regularly inspect and perform maintenance on all farm infrastructures. A lightning protection system for buildings, trees, and fences can also be installed to decrease the risk of fire and the death of animals and people caused by lightning strike. If a strong storm is approaching, it is a good idea to prepare the farm by boarding up windows, securing equipment, supplies, and chemicals to prevent damage, loss, and spillage. Be sure your address is clearly visible at the road so emergency personnel can easily locate your farm.

Types of Disaster

Although it is almost impossible to prepare for every type of disaster, you can increase your preparedness level by learning what types of disasters are likely to threaten your area and taking measures to prepare for them. In Florida, some of the most prevalent disasters are hurricane, flood, drought, and fire.

Hurricanes

Florida, because of its location, is naturally prone to hurricanes. Hurricanes are known to cause great damage in coastal areas and even up to hundreds of miles inland. They are characterized by heavy rain, heavy seas, hail, and at times may cause the occurrence of tornadoes. The hurricane season lasts from June 1 through November 30. Prior to the hurricane season, buildings on the property should be inspected and reinforced with hurricane straps. It is a good idea to consider constructing new buildings with hurricane resistant materials. During the hurricane season, regularly check weather conditions and pay attention to a hurricane watch or warning issued for your area. A *Hurricane Watch* usually means that hurricane conditions are possible for your area, while a *Hurricane Warning* indicates that hurricane conditions are expected in your area within the specified amount of time. If a watch or warning is issued for your area, begin preparing by boarding up windows and securing items that are likely to be carried away by wind or water. You may also want to make sure that animals have escape routes in case of flood. Stronger hurricanes may require evacuation of you, your family, and your livestock. Details including the procedures of loading the animals and evacuation routes should be evaluated, coordinated, and decided upon in advance. Remember to consider the availability of feed and water during evacuation. It may be possible to carry feed and water with you as you evacuate.

Flood

Floods are one of the most common types of natural disasters. They can be caused by excessive rainfall and hurricane storm surges. Damages from floods can be extensive and

severe. Therefore, it is necessary to prepare your farmstead for the possibility of floods especially if it lies in a floodplain. If your farm is prone to flooding, be sure that the animals have an escape route that will allow them to reach higher ground. It may also be a good idea to monitor rising water and try to decide early on if evacuation is necessary. Make sure the preplanned evacuation routes will not be cut off by flood waters. Keep the animals calm and try to avoid leading them through flood waters. The animals will be prone to ingesting contaminated flood waters and can become severely injured on hazards that are hidden beneath the water. In addition, there is a risk of electrical shock from downed power lines. Remove barbed wire from areas that may flood, as they can be submerged hazards to animals. Disconnect electric power to all buildings that may flood. Protect the feed from flood waters, and be sure to have an alternative supply of water as water supplies may be contaminated for days after the flood.

Drought

Drought is extreme and prolonged dryness that is significant enough to have an effect on flora and fauna over a lengthy area. Typically, low rainfall, dry soil, and low reservoirs are observed during drought. One of the most important preparatory measures is to be sure that the animals are supplied with adequate feed and water. Hot, dry weather increases the livestock's requirement for water, which only augments the problem as water supplies usually become an issue during drought. Livestock must have access to fresh, clean water at all times because a lack of water may cause a decrease in feed consumption, a decrease in growth rates, sickness and possibly death. Water sources like shallow wells and streams may dry up and necessitate the need for alternate water sources. Alternatives include: 1) drilling deeper wells; 2) bringing water into the farm in tanks or other containers; 3) collecting and storing rainwater; or 4) piping in water from neighboring farms. It may be a good idea to work with neighbors to develop a communal system to collect, store, and distribute water specifically for livestock. The availability of graze will also decrease during droughts, which may require you to stockpile hay and grain to feed your animals through the drought. The ability to supply your herd with feed and water will allow you to avoid most if not all losses of livestock because of drought.

Fire

Fire inflicts great losses on livestock and property. The most common are barn fires and wildfires. During times of low rainfall, wildfires are of particular concern. During these times, it is suggested that firebreaks be installed around your farm particular around areas where livestock are kept. Be sure that flammable materials such as wood and chemicals like paint and fuel are securely stored away from houses and barns. Do not allow smoking in the areas where these materials are stored. It is also a good idea to install fire doors and regularly inspect them. Always try to keep the farm tidy by regularly removing rubbish, leaves, weeds, cobwebs, and dust from around and inside buildings. Strategically install fire alarms and fire extinguishers. Keep a ladder and hoses near buildings to allow roof access. Check the water supply to these areas routinely. If there is no water delivery system in these areas, it may be necessary to purchase a high pressure pump. Other cautionary measures include keeping wires and other electrical devices like heating lamps out of reach of livestock and away from flammable materials. Also, regularly inspect these items for damage. If it is possible, try to store hay away from the barn in a dry,

covered area. Be sure that pre-planned evacuation routes including aisles and gates are always free from obstructions. During a fire, the most important objective is to get people and animals to safety. Animals may become panicky during these types of emergencies, which will make them difficult to evacuate. Move them to a fenced area away from the fire and hose them down with water to cool them if possible. Do not enter any building that is engulfed in flames. Evacuate the area as quickly as possible and call emergency personnel.

AGENCIES

There are many agencies that are available to assist producers during a disaster. Be knowledgeable about these agencies and have the contact information of local branches in your disaster supply kit.

- The Farm Service Agency (www.fsa.usda.gov) offers various disaster-related programs such as the Emergency Conservation Program, the Emergency Loan Assistance Program, and the Emergency Haying and Grazing Assistance Program for eligible producers.
- The Federal Emergency Management Agency (www.fema.gov) is a part of the Department of Homeland Security and offers many programs and services to assist in preparation and recovery from disasters.
- The American Red Cross (www.redcross.org) is a non-governmental organization that provides disaster-related services.
- The United States Department of Agriculture (www.usda.gov) also offers support for disaster preparedness and recovery.
- The Florida State Agriculture Response Team (www.flart.org) is a cooperative effort among various agencies in Florida that provides assistance in preparing and responding to agricultural disasters.

There are a lot of resources and information to help you prepare and effectively respond to emergencies that may affect your farm. However, your level of preparation depends on you and how much time, effort, and money you are willing to devote to preparation. No matter your level of preparation, losses of livestock are still possible. Destroy or bury the bodies of dead animals as quickly as possible in order to decrease the spread of disease. By diligently preparing your farm and animals for an emergency, you can minimize the amount of loss that is experienced, accelerate recovery, and decrease the amount of time that it will take to resume normal production.

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For more information, please contact the FAMU Cooperative Extension Program by phone at (850) 599-3546. Also, visit the Herd Health Program website at <http://www.famu.edu/herds> and the Statewide Goat Program website at <http://www.famu.edu/goats>.

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