



# **BISON HANDLER**

## **TAILGATE TRAINING**

### **SAFETY MANUAL**



Support for this document provided by the National Institutes of Occupational Safety and Health grant 5U54OH010162-05



# Bison Handler Tailgate Training Manual

This bison handler tailgate training manual was produced as a collaborative project between the University of Nebraska Medical Center (UNMC)- College of Public Health, University of Nebraska - Lincoln, the InterTribal Buffalo Council (ITBC) and the Central States Center for Agricultural Safety and Health (CS-CASH). Special thanks to Kelsey Irvine for her contributions to the research and production of this document.

For questions regarding this document or to order free copies please contact:

*CS-CASH 402-552-3394 or visit the CS-CASH website: [www.unmc.edu/publichealth/cscash](http://www.unmc.edu/publichealth/cscash).*





# Bison Handler Tailgate Training Manual

## Table of Contents

Introduction	4
Instructions for Use	5
Effective Training	6
Teaching Strategies	7
The Working Environment	8
PPE and Safety Equipment	10
Low-Stress Bison Handling	12
Safe Use of Animal Medication	14
Safe ATV use	15
Lightning and Tornadoes	16
Cold Weather	17
Training Records	18-25

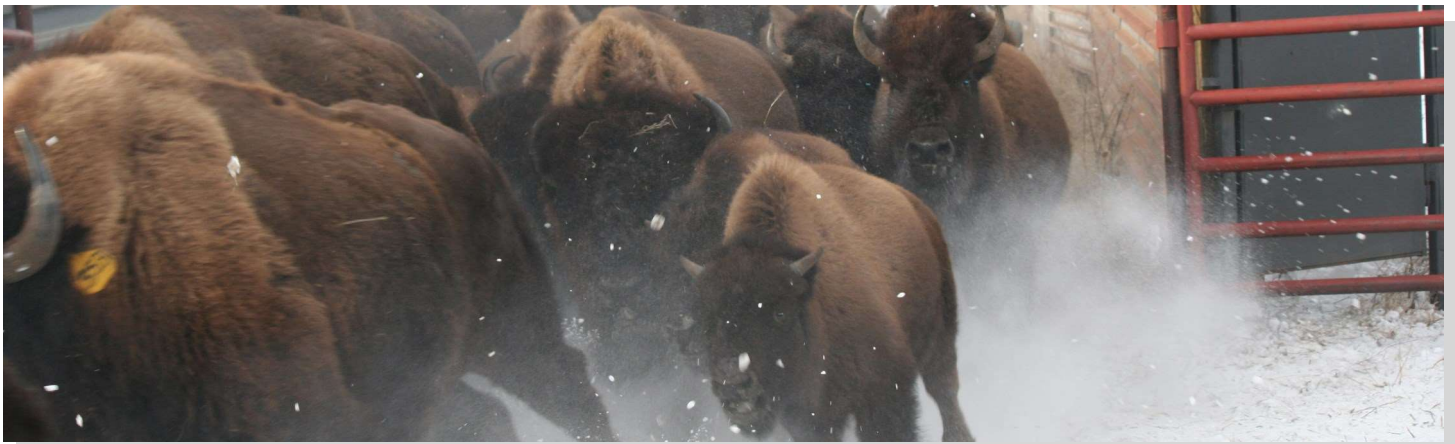
# Bison Handler Tailgate Training Manual

## Introduction

The tailgate training method, sometimes called a toolbox safety talk, is a training method in which on-the-job training sessions occur frequently and are conducted in 10-15 minute sessions.

Tailgate trainings are commonly used in the construction industry because of the dangerous nature of this occupation, but have also been used successfully in the agriculture sector.

The goal of this training manual is to provide bison handlers with basic safety and health information that can be reviewed immediately prior to working with bison. These trainings should become part of a worker's basic routine. The overall aim is to decrease the number of injuries to workers that occur while rounding up and handling bison.



- The short sessions are designed hold the interest of your employees and use minimal time.
- The frequent trainings will keep safety on the mind of every person involved in your bison roundup and show your employees that you care about their health and safety,
- Through careful research, the topics in this manual were recognized as the primary safety concerns for range bison herd handlers.
- Managers are encouraged to personalize this training for their workers. Each herd and location may have unique safety and health risks associated with them.
- We look forward to improving this document, please provide feedback and suggestions for additional safety and health topics.

# Bison Handler Tailgate Training Manual

## Instructions for Use

Each section in this training manual contains four common elements: a topic, a goal, a background section, and a review section. At the end of the manual are attendance sheets to be used to document who attended each training.

**The topic** states what the section is about.

**The goal** states what is expected to be learned.

**The background section** states the information that is to be taught. The background section may be in various forms, such as paragraphs or bullet points, and may also contain pictures.

**The review section** highlights the most important points that were included in the training section. It is important to present these main points in the training, and they may be used as a guideline for the presentation.

**Attendance sheets** are at the end of the manual. These sheets should be used to document who has attended each training. The attendance sheet includes a spot for the training topic, the date training occurred, the participants, and any comments about each participant. For example, the trainer could note if a specific participant was able to demonstrate a safety technique well, or if a participant struggled with understanding a training and needs additional individual training.





# Bison Handler Tailgate Training Manual

## Effective Training

### Steps for holding effective training sessions:

1. Hold trainings on the jobsite.
2. Hold trainings at the start of a shift or after a break.
3. Demonstrate safety techniques.
4. Interact with workers by asking questions and having them demonstrate safety techniques.
5. Evaluate the impact of the training by asking questions to assess if the workers recognize hazards and watching them on the job to assess their application of the topic.
6. Document the meeting with an attendance sheet.

### Notes for effective training:

It is at the discretion of the trainer to determine how they want to run the training session. Each section in this manual provides the basic information to be presented.

Because bison roundups occur infrequently and there are occasionally new people assisting, we suggest that you go through the pertinent training topics at the start of each day.

There are many different ways to teach information. The following page summarizes six teaching strategies that might be used during a training session.

To prepare for a training session, the trainer should review each section and determine which teaching strategy to use during the training.

The trainer should make sure that all materials are ready to go before the training begins, and that they include all of the most important points from the review section in the training.



# Bison Handler Tailgate Training Manual

## Teaching Strategies

### **Lecture**

Lectures should be spaced with active learning strategies to energize workers. Lectures are useful for presenting new information and summarizing information from different sources.

### **Problem-based learning**

Problem-based learning is a strategy that encourages the use of problem-solving skills and critical thinking. You can use this strategy by asking workers about problems specific to the job and then asking them to find solutions. For instance if the worksite is icy with rough terrain workers could be asked to identify problem areas and discuss methods that could reduce slips, trips and falls. This process provides workers the opportunity to analyze the problem, propose solutions and ultimately feel that they have contributed to the solving the problem.

### **Case studies**

Case studies are narratives that can challenge workers to analyze a situation and express opinions about what should happen. Case studies bring real-world problems into the training. Case studies lead workers to actively participate and come up with innovative solutions. A manager could discuss an injury that occurred in the past and allow the workers to discuss how this could have been prevented.

### **Educational games**

Educational games involve creating competitions between workers to reach a goal. Games teach but are also fun. An example of a game would be challenging workers to be the first to come up with 3 worksite safety improvements. This game would provide an opportunity for workers to carefully examine the work environment, use critical thinking and have input into safety improvements.

### **Role playing**

Role playing can be used to help workers practice new skills. Situations can be written down, and a different role passed out to different people who can discuss the situation. They should be realistic and relevant to the job at hand.

### **Discussion**

Discussions encourage workers to think critically about situations. To use discussion, managers can talk about a problem, monitor the discussion, and summarize the discussion when complete.

# Bison Handler Tailgate Training Manual

## Topic: The Working Environment

**Goal:** To understand the elements of a safe working environment.

### Background:

The proper environment and facilities are needed for a safe, injury free roundup. Some things that contribute to a dangerous working environment are dust; trip, slip, and fall hazards; lighting; and lack of worker escape routes.

### Dust



N95 Respirator used to reduce workers' dust exposure.

Dangerous bacteria and molds exist in livestock dust. Breathing dust may lead to respiratory conditions like allergies or asthma in bison handlers. It is important to reduce the amount of dust that is inhaled during bison roundups. To reduce the amount of dust being inhaled, masks such as two strap NIOSH approved masks (N95 respirators) can be worn. Instructions for use on the packaging must be followed to ensure complete protection. Workers can decrease dust at roundups by spraying dusty areas with water.

### Trip, slip, and fall hazards

Many accidents involving livestock handling are the result of slips, trips, and falls. To avoid slips, trips, and falls:

- ◆ Keep the handling area neat.
- ◆ Remove debris from the work area before work starts.
- ◆ Fill in holes in the work area before starting the roundup.
- ◆ Ensure that all walking and working surface are free of slip, trip, and fall hazards—for both the worker and the animal.
- ◆ Workers should wear shoes with non-slip soles in all weather conditions.
- ◆ Clear ice and snow from the work area before starting work.





# Bison Handler Tailgate Training Manual

## Escape routes

To avoid injury, workers must always have an escape route planned when working in close quarters with an animal. Having a worker serve as a watch-out and gate-keeper for the worker in the corral adds a layer of safety.

*Moving bison into the head catch can be a dangerous task. Workers should always have an escape route planned.*



## Appropriate number of workers

Generally, 5 or 6 people are needed to carry out a successful bison roundup. The number of people needed may be lowered by using low-stress bison handling techniques, a topic that is covered in a later section. Inexperienced workers must be supervised to prevent over-stressing the animals. If there are individuals present who are not actively engaged in handling the animals, it may be an indication that too many workers are present.

## Chute width

Two options for lead up chutes are recommended. One version is approximately 6 feet wide allowing animals room to turn around. The other version is narrower, requiring that the animals move single file, providing no room for animals to turn around. In this instance, the size of the largest animal will determine the proper chute width. Wider chutes may lead to smaller animals being able to turn around in the chute. Using high-stress handling methods cause bison to rear up and turn around more frequently than using low-stress techniques.

### Review:

- ◆ Wear a mask (N95 approved respirator) to avoid inhaling dangerous dust.
- ◆ Eliminate trip, slip, and fall hazards by removing debris, filling holes, and removing sharp corners. Always wear shoes with non-slip soles.
- ◆ Always have an escape route when working in close quarters with bison.
- ◆ There are two recommended chute widths: 6 feet wide to allow bison to turn around or just wide enough for bison to move in single file.
- ◆ Low-stress handling techniques will prevent bison from rearing and turning around in chutes.

# Bison Handler Tailgate Training Manual

**Topic:** Personal Protective Equipment (PPE) and Safety Equipment

**Goal:** To understand and use the PPE and safety equipment needed at bison roundups.

## Background:

Use of personal protective equipment (PPE) and safety equipment, such as fire extinguishers and emergency communication devices, are important to preventing injuries and seeking help if needed.

Proper PPE is necessary when working with bison. Wearing proper PPE will increase worker safety. Proper PPE for bison roundups is:

- ◆ Safety glasses,
- ◆ Gloves
- ◆ Long pants
- ◆ Appropriate work boots (non-slip soles and crush proof toes)
- ◆ Dust masks (Approved N95 two strap respirators)

Apparel and conditions that **are not** appropriate for bison roundups include:

- ◆ Long hair
- ◆ Hanging jewelry
- ◆ Loose or baggy clothing

Loose items can get caught in machinery or disrupt the worker. Hair should always be pulled back, hanging jewelry should be removed, and loose or baggy clothing should not be worn.

Safety equipment needed at bison roundups:

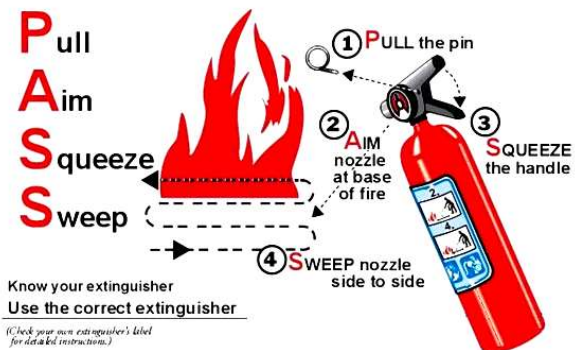
- ◆ **Fire extinguishers.** A fire extinguisher is an important piece of safety equipment that can manage or put out a fire until professional help arrives. Bison roundups may occur in isolated areas, so it is important to have a fire extinguisher on hand. It is also important that all personnel know how to use the fire extinguisher and that it is inspected regularly to ensure that it is working properly. Review the correct operation of a fire extinguisher often with workers.

# Bison Handler Tailgate Training Manual

- ◆ **Cell phone or other communication device.** Because of the isolated nature of bison roundups, it is vital that a cell phone or other communication device is available in case of emergency. In the event of an emergency, professional help should be called immediately.
- ◆ **Transportation and Emergency Contact Numbers.** Transportation should be available and emergency contact numbers should be easily accessible. Numbers for emergency medical services, hospitals or health care clinic should be readily available.
- ◆ **First Aid Kit.** A well stocked first aid kit should be on hand to treat minor injuries.



To operate an extinguisher:



## Review:

- ◆ Proper PPE for bison handling is:
  - ◆ Safety glasses
  - ◆ Gloves
  - ◆ Long pants
  - ◆ Work boots with non-slip soles and crush proof toes
  - ◆ Mask (N95 approved respirator)
  - ◆ Long hair pulled back
  - ◆ Hanging jewelry removed
  - ◆ No loose or baggy clothing
- ◆ A fire extinguisher should always be present in case of fire.
- ◆ A telephone or other communication device must be present in case of emergency.
- ◆ Transportation and emergency contact numbers need to be accessible.
- ◆ A well stocked first aid kit should be kept on hand.

## Topic: Low-Stress Bison Handling

**Goal:** To understand and use low-stress bison handling techniques.

### Background:

Bison handling can be stressful for the handlers and the animals. To reduce injuries to both bison and handlers, it is important to keep bison calm while working with them. This section goes over several areas important to low-stress bison handling: fear indicating behaviors, animal behaviors, noise, lighting, novel objects, and bison calves.

### Fear indicating behaviors

Bison show fear behaviors as the result of being in a stressful situation. Not all animals react to stress the same. Some displays of fear in bison are:

#### Low fear:

- ◆ Licking
- ◆ Blinking
- ◆ Huddling
- ◆ A raised tail
- ◆ Circular movement (milling)
- ◆ Backing up
- ◆ Balking

#### Increased fear:

- ◆ Labored breathing
- ◆ Frothing at the mouth
- ◆ Vocalizing
- ◆ Bulging eyes
- ◆ Running
- ◆ Pushing
- ◆ Goring
- ◆ Attacking
- ◆ Sitting
- ◆ Jumping
- ◆ Climbing out of enclosure



# Bison Handler Tailgate Training Manual

## **Animal behavior**

Similar to cattle, bison have panoramic vision. They can see everywhere but directly behind them. Bison must be approached slowly from the side or front to avoid startling them. It is ideal to move bison forward by starting with the lowest amount of pressure to begin forward movement and to gradually increase pressure as needed. Starting with the lowest amount of pressure creates a calm experience for the animal. If movement is initiated with a large amount of pressure—for example, electric shock via cattle prod—the animal will immediately become increasingly fearful and display fearful behaviors.

## **Noise and movement**

Bison are able to hear more sounds than humans. Subtle sounds, such as rustling papers or plastic bags, snapping fingers, pennies in a can, or a “shh, shh” sound are effective in moving animals forward. The handler should start with the least amount of pressure and increase as needed. The handler should pause between each attempt at increasing pressure so the bison can move calmly forward. The handler should use slow and deliberate movements.

## **Lighting and novel objects**

Shadows can frighten bison. Lighting must be evenly diffused to avoid shadows. Novel objects like moving and flapping objects, such as coats hanging off of the fence flapping in the wind, can also frighten bison. Avoid hanging coats or other objects in the presence of the animals.

## **Mothers**

Bison with their young have strong maternal instincts. The safest way to deal with this is to allow the young to stay close to their mother during handling. Workers should always move slowly and with caution when working with a cow and her calf.

### **Review:**

- ◆ Low-stress handling techniques are important to reduce injuries in humans and animals.
- ◆ Labored breathing, frothing at the mouth, vocalizing, running, and pushing are all signs that the animal is frightened, and lower stress techniques should be used.
- ◆ Bison should be moved using gentle pressure that gradually increases as needed.
- ◆ Bison have a panoramic field of vision.
- ◆ Bison are sensitive to noise.
- ◆ Bison can be startled by new objects and frighten easily.
- ◆ Bison are startled by shadows.
- ◆ Bison have strong maternal instincts.

# Bison Handler Tailgate Training Manual

## **Topic:** Safe Use of Animal Medications

**Goal:** To understand how to use medication safely at bison roundups.

### **Background:**

Using syringes or needles is always a hazard because of the risk for needle sticks. It is important to handle syringes and needles correctly, and to dispose of them properly so that needle stick injuries do not occur.

To use animal medications safely:

- ◆ All medication, syringes, vaccines, and needles should be stored in a locked box or cabinet.
- ◆ Medications that require refrigeration should not be stored in the same container as food.
- ◆ Sharp objects, such as needles and syringes, should be disposed of in sturdy plastic containers as per EPA guidelines. This container does not necessarily need to be sharps box, but can be a container like a laundry detergent bottle or two liter soda container.
- ◆ Needles and syringes should never be recapped as this increases the risk of needle sticks. Used needles and syringes should be disposed of immediately into the designated container without recapping.
- ◆ If a needle stick occurs, the wound should be cleaned and bandaged, and medical care should be sought immediately.

### **Review:**

- ◆ Store all medication, syringes, vaccines, and needles in a locked box or cabinet.
- ◆ Refrigerated medications and food should not be stored in the same container.
- ◆ Sharp objects should be disposed of in a sharps box or other appropriate container.
- ◆ Never recap needles or syringes.

# Bison Handler Tailgate Training Manual

## **Topic:** Safe ATV Use

**Goal:** To understand how to use ATVs safely at bison roundups.

### **Background:**

All-terrain vehicles (ATVs) are commonly used in bison roundups to herd bison. ATVs can be extremely dangerous when not handled safely. Many people die each year while using ATVs for agricultural purposes.

Using ATVs to herd animals is particularly dangerous. This is often done by driving the ATV over uneven terrain at high speeds. This may lead to the front end of the ATV falling into a hole or hitting a rock. Turning quickly at high speeds can result in roll overs. Rolling over or flipping ATVs can result in injuries and even death.

### Safety Suggestions:

- ◆ ATVs are not built for multiple people. ATVs require the driver to shift on the seat to control the vehicle. Extra riders decrease the driver's ability to control the ATV.
- ◆ People under 16 years of age should not operate adult-sized ATVs.
- ◆ ATVs are not built for use on public roads. Hard surfaces may increase the risk of rolling the ATV.
- ◆ Never use an ATV while under the influence of alcohol or drugs.
- ◆ Always wear a helmet, gloves, and long pants when driving an ATV.

### **Review:**

- ◆ Driving an ATV at high speeds can increase the risk of injury.
- ◆ Do not ride with a passenger.
- ◆ Use extra caution when driving on hard surfaces, avoid public roadways.
- ◆ Never drive an ATV when under the influence of alcohol or drugs.
- ◆ Always wear a helmet, gloves, and long pants when driving an ATV.

# Bison Handler Tailgate Training Manual

## **Topic:** Lightning, and Tornadoes

**Goal:** To understand the risks posed to bison workers by lightning and tornados.

### **Background:**

Bison roundups may occur during dangerous weather including thunderstorms. Lightning and tornados accompany thunderstorms. Dark, greenish sky, large hail, a cloud that looks like a wall and a loud roaring sound are signs of an impending tornado.

Precautions to take:

- ◆ Check the weather forecast before starting work. If possible, keep a weather radio tuned in while working.
- ◆ Observe threatening clouds and increasing winds that begin to develop.
- ◆ Use the “30-30” rule. If the time delay between seeing a flash of lightning and hearing the bang of thunder is less than 30 seconds, you should move to shelter immediately.
- ◆ In the case of lightning strikes - if you are in an open field, seek low spots for shelter, away from hilltops, trees and utility lines. Use closed buildings or vehicles for shelter.
- ◆ In the case of a tornado - do not try to outrun a tornado, seek a ditch or low spot for protection. Lie face down with your hands over your head. If you find shelter in a building, go to the basement or inner room. Stay away from windows that may shatter.

***Lightning fatalities rank second to floods in weather-related deaths.***

### **Review:**

- ◆ Know the weather forecast prior to starting to work.
- ◆ Increasing dark clouds and high winds may indicate that a thunderstorm is developing.
- ◆ Use the 30-30 rule to determine the threat of lightning strikes.
- ◆ Seek shelter in low spots, vehicles or buildings in case of lightning strikes.
- ◆ Seek shelter in low spots or the basement or inner rooms of buildings in case of tornados.



# Bison Handler Tailgate Training Manual

## **Topic:** Cold Weather

**Goal:** To understand bison worker hazards related to working in cold weather.

### **Background:**

Bison roundups may occur during cold weather. Frostbite, hypothermia, slips and falls pose hazards which bison workers must understand. Frostbite occurs when body tissue becomes frozen. Workers should be aware that skin that feels numb is too cold and in danger of further damage. Hypothermia occurs as the body's temperature drops below 96 degrees. Extreme cold can produce weakness, drowsiness or confusion. Winter weather creates icy and muddy conditions. Footing is more difficult for workers and livestock. Animals being moved on slippery surfaces can injure themselves or fall on workers.

### **Safety Suggestions:**

- ◆ Pay attention to low temperatures and how your skin is reacting. If you develop frostbite seek shelter and use warming towels or lukewarm water to warm the skin. Severe cases of frostbite require emergency medical treatment.
- ◆ To prevent hypothermia, dress in layers to help trap air between the clothing. Air has insulation properties. Wear a head covering. Proper winter dress should keep you warm, not hot, and also fit well for safe work around equipment and bison.
- ◆ Footwear must have treads that will provide traction.
- ◆ Use low stress handling techniques to move bison slowly. This will help to prevent the animals from falling or sliding into you.
- ◆ Use slower and more deliberate movements to prevent injury.

### **Review:**

- ◆ Be aware of numb or tingling skin, these may be signs of frostbite. Immediately begin to warm your skin slowly.
- ◆ Wear layers that are not baggy, head protection and footwear that has tread designed for winter weather.
- ◆ Move animals and yourself slowly and deliberately to avoid falls.



# Bison Handler Tailgate Training Manual

<b>Training Topic:</b>	<b>Date:</b>	<b>Comments:</b>												
			<b>Participants:</b>											



# Bison Handler Tailgate Training Manual

<b>Training Topic:</b>	<b>Date:</b>	<b>Comments:</b>												
		<b>Participants:</b>												



# Bison Handler Tailgate Training Manual

<b>Training Topic:</b>	<b>Date:</b>	<b>Comments:</b>											
			<b>Participants:</b>										



# Bison Handler Tailgate Training Manual

<b>Training Topic:</b>	<b>Date:</b>	<b>Comments:</b>												
		<b>Participants:</b>												



# Bison Handler Tailgate Training Manual

<b>Training Topic:</b>	<b>Date:</b>	<b>Comments:</b>												
		<b>Participants:</b>												



# Bison Handler Tailgate Training Manual

<b>Training Topic:</b>	<b>Date:</b>	<b>Comments:</b>												
		<b>Participants:</b>												



# Bison Handler Tailgate Training Manual

<b>Training Topic:</b>	<b>Date:</b>	<b>Comments:</b>												
		<b>Participants:</b>												





# Bison Handler Tailgate Training Manual

<b>Training Topic:</b>	<b>Date:</b>	<b>Comments:</b>												
		<b>Participants:</b>												