Human Health Issues Related to Petting Zoos and Fairs: How to Manage the Inherent Risks

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Why Are We Here Today?

- Build relationships
- Corn maze, hayride, corn pit safety
- Working farm safety issues
- Human-animal interactions best practices
 - Discuss inherent risks
 - Managing those risks
 - Specific recommendations
- Provide resources
- Answer questions



MDH Minnesota Department of Health

Corn Maze Safety

- Signs posted indicating entrance & maze rules-- including no smoking!!
- Parking lots & roads ≥ 75 feet away
- Local fire department knows size & location of maze
- Method for guests to communicate with employees (i.e. flags/cell phones)
- Elevated platform for employees to monitor maze
- Kids <12 with an adult

www.safeagritourism.com



Hayride Safety

- Before each ride inspect:
 - Wagon for loose boards, sharp edges, exposed nails/screws
 - Harnesses, hitches, & chains
- Pull only one wagon at a time
- Routes should not cross public roads or highways
- Guests board only after wagon hitched
- No children riding up front with driver



Corn Pits

Are not recommended because...

- Corn and other small grains are a choking hazard for young children
- Potential allergy/asthma hazard
- Perfect size to stick up nose and in ears
- Provides habitat for rodents, snakes, and other animals



Farming is a High Risk Occupation

- Agriculture is one of the most dangerous U.S. industries
- Leading cause of death is tractor rollovers
- Agricultural injuries more severe than non-agricultural injuries



Working Farm Safety Issues: Farm Machinery & Environment

- Farm Machinery
 - Tractors, combines, front loaders, wagons, grain carts, trucks, ATVs, etc.
 - Falls
 - Pinch/crush injuries from moving parts
 - Entanglement in power take offs or drive belts
- Farm Environment
 - Electric fences
 - Grain bins
 - Silos
 - Manure pits
 - Haymows

Working Farm Safety Issues: Prevention

- Do not allow visitors to explore the farm unattended
- Do not operate farm machinery near visitors
- Buckets down & keys removed when machines not in use
- Unsafe equipment stored in locked area



www.safeagritourism.com

For more Information and Resources Please Visit the Integrating Safety into Agritourism Website at: <u>www.safeagritourism.com</u>



Will your operation have animals?



USDA Licensing- Do You Need a License?

You need a license if:

- Animals are part of the agritourism attraction
- Contact with animals is purposeful
- Petting or feeding of animals occurs

You <u>don't</u> need a license if:

- Animals are working or food animals
- Contact with animals is incidental and agriculture based, or
- Agricultural or veterinary skills taught

What Type of License Might You Need?

- USDA Animal Care is licensing agency
- Exhibitors license is required for:
 - Domestic and exotic animals
- Pre-license process can take several months- don't wait until the last minute!
- Yearly inspections
- Visit the USDA Animal Care website: <u>www.aphis.usda.gov</u>
 - Click on Animal Welfare
- Contact the Regional Office at: 919-855-7100



Situation

You own a dairy farm and occasionally give tours to school groups. When the students are in the calf rearing area learning about calf care, they sometimes reach out and pet a calf.

Do you need a USDA exhibitor's license?

Situation

You run a crop farm and have a pumpkin patch open in the fall with a corn maze, hot dog stand, 50 head of feeder cattle in a dry lot, and 10 goats. The goats are brought in from a friend's farm just for pumpkin season for the kids to play with. Do you need a USDA exhibitor's license?

Why Should we Interact with Farm Animals?

Today most people don't live on or visit farms. Agricultural exhibits that include animals teach people about farm life

People can learn about:

- Living or working on a farm
- Where their food comes from
- Animal behavior
- The human-animal bond



Contact with Animals Comes with Risks

• Injury risk

Animals can be unpredictable. Injuries more common in children because of their size and behavior. Injuries include being stepped on, pushed over, pinned, kicked, scratched, or bitten

• Disease risk

Zoonotic diseases are infectious diseases that people can get from animals, or that animals can get from people. Many of these may sound familiar, such as *Salmonella*, *E. coli*, influenza, ringworm



Diseases – How Do People Get Sick From Animals?

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shedding germs.

- Healthy animals can carry germs
- These germs are normal for the animal & don't cause illness
- We can't tell by looking which animals might have these germs

How Do People Get Sick From Animals?



- Germs are present in animal feces
- Germs spread to the animal's fur and skin & its environment

But I'm not!

Who can

tell??

- People touch the animals or the environment & then accidently get germs in their mouths
- This is called the fecal-oral transmission route
- Accidental ingestion of an animal's germs can be direct or indirect

Direct Animal Contact

- Direct contact is exactly what it sounds like: people touch animals directly with their hands
- People then accidently transfer the germs to their mouths





Indirect Animal Contact

- Indirect contact occurs when hands or mouth come into contact with contaminated surfaces, such as railings or animal bedding
- People then accidently transfer the germs to their mouths









City Kids vs. Farm Kids

- Visitors may be misled by the close contact they see between operators and their animals
- Most don't realize they are more likely to get sick. Farmers have often built up some protection against germs animals have. City kids have less protection and are more at risk for illness
- Both city kids and farm kids can become sick

What Germs Make People Sick?

Pathogen	Animals that carry pathogen	Symptoms in people
<i>E. coli</i> O157:H7 and other Shiga toxin-producing E. coli (STEC)	Cattle, sheep, goats	Diarrhea, bloody stool, stomach cramps
Cryptosporidium	Cattle, sheep, goats, deer	Watery diarrhea, stomach cramps, vomiting, weight loss, loss of appetite
Salmonella	Poultry, cattle, sheep, pigs, reptiles	Diarrhea, stomach cramps, fever, vomiting
Campylobacter	Poultry, cattle, sheep, goats, pigs	Diarrhea, stomach cramps, fever

Why Should We Be Worried? Is This a Big Problem?

- E.coli O157:H7 infections cause Hemolytic Uremic Syndrome (HUS); a severe illness requiring hospitalization. 5% of HUS cases are fatal.
- Children <5 at higher risk of severe illness
- MDH investigates animal contact outbreaks every year; occur nationwide every year
- Little to no regulation or guidance for operators



What Do These Outbreaks Mean for You?

- For an owner, an outbreak can have a significant impact on both finances & reputation
- The average hospitalization cost of an HUS case is \$200,000 but can be over \$1 million. The liability can be devastating
- Outbreaks often make the news & social media.
 Lawyers recruit for lawsuits





Public Veterinary Medicine: **Public Health**

Compendium of Measures to Prevent Disease Associated with Animals in Public Settings, 2013

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ABBREVIATIONS

Animal Exhibit Facility Design

Every Venue Should Have Three Areas

1. Non-animal areas No animals are on display here





3. Animal areas Animal contact is possible or encouraged

2. Transition areas Located at the entrances and exits to animal areas



1. Non-animal Area

- Everything except animal area
- NO animals displayed
- Store, prepare, serve and consume foods <u>only</u> in this area
- Handwashing facilities & signs should be located where foods & beverages are served



2. Transition Areas

- Zones at entrance & exit of the animal contact area
- May seem unnecessary, but are critical in minimizing risk
- Transition zones help establish a 1-way flow of traffic; separate entrance and exit points
- Entrance zones:
 - Focus on education of visitors
 - Regulate traffic flow
- Exit zones:
 - Focus on handwashing





Exit Transition

- Main focus should be handwashing
- Signage to instruct visitors to wash hands & provide directions if sinks are not located within the transition zone
- Staff members should be present to encourage proper handwashing



3. Animal Areas

- Where animals are exhibited & visitors interact with them
- Contact with animals through a fence; no visitors in pens
- Prevent physical contact with higher risk animals
 - Calves, poultry, reptiles, amphibians
- Don't exhibit ill animals
 - Remove animals with scours immediately
- Keep food and beverages out
- Waste management considerations



Animal - Visitor Interactions

Visitors should pet animals only through or over barriers injury



This reduces the potential for contamination &

Animal - Visitor Interactions

People love to be inside the pen with animals, but it greatly increases the chance of getting manure on clothes, shoes, or hands. The risk of

injury increases as well



Animal Care and Management

Animal Care and Management

- Carefully choosing the types of animals at your venue can reduce the possibility of disease & injury
- Some species or ages of animals are more likely to carry germs. This means they are riskier for some people. Please see the table on the next slide



Different groups of people have different levels of risk

Human age and health status Animal species	Healthy adults and children 5-18 years old	Children under 5 years old, adults over 65 years old, pregnant women, and immunocompromised persons
Sheep, horses, ponies, alpacas, llamas, deer, pigs, goats	Normal levels of risks, use standard prevention measures	Increased level of risk, consider no contact or be extra-careful with prevention
Pre-weaned calves, chicks, other poultry, reptiles, amphibians	Increased level of risk, be extra-careful with prevention	Highest risk level, recommend NO CONTACT

Animal Care



- Don't include animals that have a known infection with a zoonotic disease
- Don't include animals from herds with a recent history of abortion, diarrhea, respiratory or skin disease
- Minimize stress and overcrowding
- Monitor animals daily for signs of illness or injury
- Remove sick or injured animals promptly, especially those with diarrhea/scours. These animals shed more germs

Cleaning and Disinfection

Cleaning & disinfection are two separate processes. Both must be done to remove germs What to clean & disinfect?

• Surfaces in the animal area that visitors can touch, such as railings & barriers

When to clean & disinfect?

- Daily
- When manure or visible debris is noticed







Cleaning and Disinfection

How to clean & disinfect?

- For cleaning, use water and a good detergent
- For disinfection after cleaning:
 - Bleach, in a 1:32 dilution, is very good. (Use 1/2 cup bleach to 1 gallon of water.)
 - or
 - Disinfection products, such as quaternary ammonium
- First surfaces should be cleaned to remove visible debris/feces.
- Then apply disinfectant & allow to dry rather than wipe off
- Consider your animals! You don't want them to inhale strong fumes





Animal Feed and Water

- If allowing feeding be creative to minimize human-animal contact!
- One Minnesota exhibitor created PVC pipes that extend from visitor side to animal side



Waste Management

- Remove manure & soiled bedding as soon as it is noticed
- Store animal manure away from the public. Consider rainfall, and prevent run-off from seeping into foot traffic areas
- Store pitchforks, shovels, front-loaders in areas not accessible to the public
- Avoid moving manure & soiled bedding through the <u>non</u>-animal area & transition areas. If not possible, use methods that prevent spillage
- Remember, we don't want the public to have contact with manure!



Walkways and Floors

- Walkways and floors should be kept free of manure and bedding
- <u>Use solid bottom barriers</u> to keep manure and bedding from spreading into the walkways





 When no barriers are present, bedding & manure can easily contaminate shoes & clothing & be tracked home or grabbed by children

Education of Staff and Visitors

Staff Training

You should know about illnesses & injuries that could result from the animals you work with



Reminders:

- Most germs from animals cause vomiting & diarrhea. People usually recover, but some may need hospitalization
- There are other diseases people can get, like influenza or ringworm
- Injuries, like bites or being knocked over, can happen easily

Main Messages You Should Understand

- Healthy animals can carry germs that may make people sick; these illnesses are sometimes very serious
- Visitors can get germs on their hands, clothes, bags, or strollers through direct or indirect contact with animals or their environment
- People accidently put these germs in their mouth, via eating, drinking or hand-to-mouth contact
- Handwashing is the best prevention; most germs can be removed
- Visitors should wash & dry hands even if they didn't touch animals



The two best ways to educate people



Verbal education from your staff



Well placed and effective signs

Verbal Education from Staff to Visitors

 Staff should be actively engaged with visitors.
Education becomes a natural conversation and is much more effective than signs alone



Partnership Between Staff and Visitors

Both parents and staff should supervise children to prevent potentially dangerous behaviors

- Watch interactions between children and animals to make sure they are safe. Remind visitors that animals can cause injuries
- Prevent children from sitting or playing on the ground within the animal area
- Discourage hand-to-mouth activities such as thumb-sucking or pacifiers
- Limit contact with manure or soiled bedding

Remember, Visitors Don't Understand the Risks



Your responsibility is to educate as much as possible

What is the Number One Way to Prevent Illness?

Handwashing!

Handwashing

- Handwashing is the best prevention step visitors can take to reduce their risk of getting sick!
- Key points to improve hand hygiene:
- Verbal reminders from staff
- Large signs with prominent messages
- Staff at the exit area
- Convenient, clean & close facilities
- Adequate running water with soap & paper towels



Location of Handwashing Stations

- Position handwashing stations at exit within traffic flow to maximize usage
- Also have stations located in food concession areas
- Independent handwashing stations that are located away from bathrooms can help families supervise children washing



Type and Design

- Stations should be accessible to children, adults & those with disabilities
- They should be low enough to reach or equipped with a stool





Type and Design

- Easy to use sinks or stations are best. Complex or mysterious stations cause people to quickly give up without washing
- Stations should allow both hands to be free to wash. Don't use stations that require one hand holding a pump to get water



Hand pump!

Needs instructions!

Notes About Hand Sanitizer

- Sanitizer has a place & can quickly eliminate some germs, but it is <u>not</u> effective against all germs
 - Doesn't work against Cryptosporidium
- Doesn't work if hands are visibly dirty
- Needs to contain 60% (or more) alcohol
- May be used until soap & water are available doesn't replace soap & water!



Help with Handwashing Stations

- AGRI Minnesota Value Added Grant Program from MDA
 - Offers grants to individual farmers or businesses for improvements to their agritourism operation. Handwashing stations, construction costs for expansion, or season-extending facilities
 - Also available for other items that will add value to an agricultural operation
 - There are two application periods per year
 - Grant program





MDH's Upcoming Voluntary Certification Program

- New online program in development
- Can become a certified venue
- Will be live in 2017
- Voluntary; any venue encouraging human-animal interaction
- Stay tuned







UMASH Link