



TABLE OF CONTENTS

| | |
|--|-----------|
| 1.0 PURPOSE..... | 1 |
| 2.0 DEFINITIONS..... | 1 |
| 3.0 ZONOTIC DISEASES ASSOCIATED WITH PETTING ZOOS AND OPEN FARMS | 1 |
| 3.1 Outbreaks..... | 1 |
| 3.2 Modes of Transmission | 2 |
| 3.3 Risk Factors for Zoonotic Disease Transmission | 3 |
| 4.0 SUGGESTED ACTIONS FOR PUBLIC HEALTH OFFICIALS..... | 3 |
| 5.0 REFERENCES..... | 5 |
| 6.0 Appendix I: Petting Zoo and Open Farm Visits: Information for the Public.... | 7 |
| 7.0 Appendix II: Information for Operators of Permanent or Temporary Petting Zoos or Open Farms..... | 11 |
| 8.0 Appendix III: Inspection Checklist for Public Health Inspectors and Operators of Petting Zoos and Open Farms..... | 18 |
| 9.0 Appendix IV: Hand Washing Sign Templates | 22 |
| 10.0 Appendix V: Estimating the Number of Hand Washing Stations | 25 |



1.0 PURPOSE

Visiting a petting zoo or open farm is a fun and an educational event. However, rarely, serious diseases can be transmitted from animals to humans. For this reason, contact with animals must be made in a safe way.

This document aims to reduce the risk of zoonotic disease transmission, including enteric diseases and others, from farm animals to humans at petting zoos or open farms through the provision of:

- A framework for public health staff to assess proposed and existing petting zoos and open farms so as to minimize the risk to human health
- Educational materials for parents, child care facility operators, school teachers and caregivers, outlining how to reduce the risk of illness when visiting a petting zoo or open farm
- Educational materials for operators of petting zoos and open farms outlining how to reduce the risk of illness to their visitors

This policy was prepared by Charlene Wood, CPHIC, on March 31, 2006. This policy was reviewed and approved by the BC Enterics Policy Working Group consisting of representatives from the British Columbia Centre for Disease Control (BCCDC) and the Regional Health Authorities.

2.0 DEFINITIONS

Petting zoo: Any place where the public may have direct contact with animals and their environment such as animal exhibits, pumpkin farms, country fairs, amusement parks, shopping malls, children's parties and animal rides

Open farm: Farms where the public has the opportunity to have contact with farm animals

Zoonotic diseases: Diseases transmitted from animals to humans

3.0 ZONOTIC DISEASES ASSOCIATED WITH PETTING ZOOS AND OPEN FARMS

3.1 Outbreaks

Outbreaks of disease that have been transmitted from animals to humans in petting zoo and open farm settings are numerous (National Association of State Public Health Veterinarians, Inc. 2005, Varma 2003, Hurd 2002). *E. coli*, *Salmonella*, *Cryptosporidium*, *Giardia* and *Campylobacter* have been identified as common causative organisms in petting zoo and farm-based outbreaks.

In 2003 an *E. coli* outbreak occurred in BC among children from schools and child care facilities visiting a petting zoo at a pumpkin farm (David 2004). All children who became ill had contact with the farm animals. Adequate hand washing facilities were not available.



In 2000-01 in Minnesota, outbreaks at a farm day camp where children became ill after taking care of a sick calf, multiple organisms (*Cryptosporidium*, *E. coli*, *Salmonella* and *Campylobacter*) were isolated from the people who had contact with the animal (Smith 2004). Those washing their hands after animal contact and before going home were protected from infection.

In recent studies of public behaviour at petting zoos where outbreaks have occurred, 28 to 62% of people did not wash their hands after leaving the animal areas (Reinberg 2006).

E. coli O157:H7 survives for a prolonged period of time in the environment and has been isolated from bedding, soil, sawdust and accumulated dust on rafters in buildings that have previously housed animals (Centers for Disease Control and Prevention 2005, Varma 2003). In one outbreak, those infected visited a fair that took place in a building a week after animals were removed from the building. Forty-two weeks later *E. coli* was still present in the sawdust on the floor (Varma 2003).

3.2 Modes of Transmission

All animals can be potential sources of diseases for humans. Animals in petting zoos and on farms that have been the source of diseases include: cows, goats, sheep, horses, rabbits, pigs and chickens.

- **Fecal/oral transmission.** An animal's feces can contaminate the environment around it including the soil, bedding and the animal's hair or fur. This fecal matter can contain infectious organisms. When people touch an animal or its surroundings and do not wash their hands after, fecal matter can spread from hands to mouths (e.g. through eating, sucking fingers). An animal's saliva can also be contaminated with fecal organisms transmitting the organisms when an animal bites, scratches or licks a person. Infections can also occur when people take part in milking cows and get organisms on their hands that are then transferred to their mouths.

Animals in petting zoos may become stressed when they are crowded in their enclosures or when they are in contact with humans. Stressed animals can pass an increased numbers of pathogenic organisms in their feces, subsequently increasing the risk of transmission to humans (Hurd 2002, National Association of State Public Health Veterinarians, Inc. 2005).

Young children are especially at risk of serious illnesses because their immune systems are not fully developed. Children are also more likely to expose themselves to infection by putting their fingers in their mouths, thereby ingesting dirt and bacteria that were on their hands.

E. coli O157:H7, *Salmonella*, *Campylobacter*, *Giardia*, *Cryptosporidium*, and *Yersinia* can be spread through fecal/oral transmission from animals to humans.

- **Airborne transmission.** Some diseases such as Q fever and toxoplasmosis can be transmitted when organisms become airborne. This can occur when dust that has been contaminated by infected animal waste, including placental tissues and birth fluids, is stirred up.



For more information regarding disease transmission from animals to humans see the BC HealthFiles: The Role of Pets in Transmitting Infectious Diseases to Humans, Rabies: Early Treatment is Essential, Hantavirus Pulmonary Syndrome, Tick Bites and Disease, Hamburger Disease, Salmonellosis, Campylobacter Infection, Cryptosporidiosis, Yersiniosis and others at <http://www.bchealthguide.org/healthfiles/index.stm>

3.3 Risk Factors for Zoonotic Disease Transmission

- Contact with animals in the absence of hand washing
- Contact with the animals' environment including enclosures, bedding materials, fencing, feed, soil, feces
- Exposure to the birthing process and environment
- Contact with newborn or baby animals
- Contact with ill animals
- Feeding the animals
- Eating the animals' food
- Eating edible containers used to hold animal feed (e.g. ice cream cones)
- Sharing human food with animals
- Crowding of animals in their enclosures

4.0 SUGGESTED ACTIONS FOR PUBLIC HEALTH OFFICIALS

Document the locations of petting zoos and open farms operating in the Health Authority as and when they become known

Identify and prioritize bigger operations with high volumes of visitors, especially children.

When appropriate, educate operators of petting zoos and open farms

Distribute *Information for Operators of Petting Zoos and Open Farms* (Appendix II) to operators of permanent or temporary petting zoos and open farms.

When appropriate, educate parents, child care operators, caregivers and teachers

Distribute *Petting Zoos and Open Farms: Information for the Public* (Appendix I) to:

- Child Care Licensing Officers
- Petting zoo and open farm operators
- School districts
- Child care centres
- Preschool centres

Parents, school groups, etc. may be encouraged to contact public health prior to intended visit to determine whether the petting zoo/open farm is in compliance with the guidelines.



Inspect petting zoos or open farms

Pursuant to the Health Act, Sections 61 and 63, Medical Health Officers and Public Health Inspectors have the authority to conduct inspections of petting zoos and open farms, to determine if a health hazard exists and to issue orders if a health hazard exists or is imminent.

Health Authorities may conduct routine inspections of permanent or temporary petting zoos and open farms.

Inspections should be conducted:

- When complaints are received
- As part of the investigation of a case or cases of zoonotic diseases that may be associated with a petting zoo or open farm

Use the Inspection Checklist in Appendix III as a resource for inspections.

Enforcement Action

Any enforcement action will be conducted at the discretion of the Health Authority. Significant concerns which may warrant immediate enforcement or closure include:

- No or inadequate hand washing facilities
- Poor sanitation
- Reported zoonotic disease cases associated with a petting zoo or open farm
- Ill or distressed animals in public contact areas
- Any other condition that may put the public's health at risk



5.0 REFERENCES

Ashbolt RH, Coleman DJ, Misrachi A, Conti JM, Kirk MD. An outbreak of cryptosporidiosis associated with an animal nursery at a regional fair. *Commun Dis Intell.* 2003;27:244-9.

Avoiding ill health at open farms – Advice to farmers (with teachers' supplement). Agriculture Information Sheet No. 23 and Supplement (revised). Sudbury (Suffolk). Health & Safety Executive; 2002. [cited 2006 Mar 18]. Available from: <http://www.hse.gov.uk/pubns/ais23.pdf>.

Coia JE, Sharp JCM, Campbell DM, Curnow J, Ramsay CN. Environmental risk factors for sporadic *Escherichia coli* O157 infection in Scotland: results of a descriptive epidemiology study. *J of Infect.* 1998;36:317-21.

Communicable Disease Control Branch and Environmental Health Branch, Department of Human Services, Government of South Australia. Petting Zoo Infection Control Guideline for Petting Zoo Operators, Education and Childcare Services and Environmental Health Officers. Adelaide, South Australia: The National Library of Australia Cataloguing-in-Publication; February 2002. Available from: <http://www.dh.sa.gov.au/pehs/PDF-files/petting-zoos-guidelines.pdf>

Crampin M, Willshaw G, Hancock R, Djuretic T, Elstob C, Rouse A. Outbreak of *Escherichia coli* O157 infection associated with a music festival. *Eur J Clin Microbiol Infect Dis.* 1999;18:286-8.

David ST, MacDougall L, Louie K, McIntyre L, Paccagnella AM, Schleicher S, Hamade A. Petting zoo-associated *Escherichia coli* O157:H7 – secondary transmission, asymptomatic infection, and prolonged shedding in the classroom. *Can Commun Dis Rep.* 2004;30(20):173-80. [cited 2006 Mar 18]. Available from: <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/04vol30/dr3020ea.html>.

Davies M, Engel J, Griffin D, Ginzl D, Hopkins R, Blackmore C, et al. Outbreaks of *Escherichia coli* O157:H7 associated with petting zoos – North Carolina, Florida and Arizona, 2004 and 2005. *MMWR Morb Mortal Wkly Rep.* 2005;54(50):1277-80. [cited 2006 Mar 18]. Available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5450a1.htm>.

Dawson A, Griffin R, Fleetwood A, Barrett NJ. Farm visits and zoonoses. *Comm Dis Rep CDR Review.* 1995;5(6):R81-6.

Fraser Health Authority. Let children enjoy your petting zoo or farm: a public health message to zoo operators and farm owners.

Gage R, Crielly A, Baysinger M, Chernak E, Herbert G, Johnson-Entsuaah A, et al. Outbreaks of *Escherichia coli* O157:H7 infections among children associated with farm visits – Pennsylvania and Washington, 2000. *MMWR Morb Mortal Wkly Rep.* 2001;50(15):293-7. [cited 2006 Mar 22]. Available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5015a5.htm>.

Hurd HS, McKean JD, Griffith RW, Wesley IV, Rostagno MH. *Salmonella enterica* infections in market swine with and without transport and holding. *Appl Environ Microbiol.* 2002;68(5):2376-81.

National Association of State Public Health Veterinarians, Inc. Compendium of Measures to Prevent Disease Associated with Animals in Public Settings, 2005. *MMWR* 2005; 54 (No. RR-4): 1-13. [cited 2006 Mar 18]. Available from: <http://www.cdc.gov/mmwr/PDF/rr/rr5404.pdf>.

O'Brien SJ, Goutam KA, Gilham C. Contact with farming environment as a major risk factor for shiga toxin (vero cytotoxin)-producing *Escherichia coli* O157 infection in humans. *Emerg Infect Dis.* 2001;7(6):1049-51.



Parry SM, Salmon RL, Willshaw GA, Cheasty T, Lund LJ, Wearden P, et al. Haemorrhagic colitis in child after visit to farm visitor centre. *Lancet*. 1995;346:572.

Payne CJI, Petrovic M, Roberts RJ, Paul A, Linnane E, Walker M. Vero cytotoxin-producing *Escherichia coli* O157 gastroenteritis in farm visitors, North Wales. *Emerg Infect Dis*. 2003;9(5):526-30. [cited 2006 Mar 22]. Available from: <http://www.cdc.gov/ncidod/EID/vol9no5/02-0237.htm>

Regional Public Health, Environmental Health Services, Capital Health. Enjoy your trip to the petting zoo. January 2005. Edmonton (Alberta). EHR-01-003.

Reinberg S. Petting zoos can breed illness: 3 studies show bacterial infections from animal-to-human contact. *HealthDay News for Healthier Living*. [cited 2006 Mar 22]. Available from: <http://www.healthday.com/view.cfm?id=531619>.

Shukla R, Slack R, George A, Cheasty T, Rowe B, Scutter J. *Escherichia coli* O157 infection associated with a farm visitor centre. *Comm Dis Rep CDR Review*. 1995;5(6):R86-90.

Shutske J. Simple hand washing can curtail dangerous 'petting zoo' illnesses. University of Minnesota Extension Services, News and information. 2005 Apr 19. [cited 2006 Mar 22]. Available from: <http://www.extension.umn.edu/extensionnews/2005/handwashing.html>.

Smith KE, Stenzel SA, Bender JB, Wagstrom E, Soderlund D, Leano FT, et al. Outbreaks of enteric infections caused by multiple pathogens associated with calves at a farm day camp. *Pediatr Infect Dis J*. 2004;23(12):1098-104.

Subcommittee of the PHLS Advisory Committee on Gastrointestinal Infections. Guidelines for the control of infection with vero cytotoxin producing *Escherichia coli* (VTEC). *Commun Dis Public Health*. 2000;3(1):14-23. [cited 2006 Mar 22]. Available from: <http://www.hpa.org.uk/cdph/issues/CDPHvol3/No1/vtec.pdf>.

Trevena WB, Willshaw GA, Cheasty T, Domingue G, Wray C. Transmission of vero cytotoxin producing *Escherichia coli* O157 infection from farm animals to humans in Cornwall and West Devon. *Commun Dis Public Health*. 1999;2:263-8.

Trevena WB, Willshaw GA, Cheasty T, Wray C, Gallagher J. Vero cytotoxin-producing *E coli* O157 infection associated with farms. *Lancet*. 1996;347:60-1.

Varma JK, Greene KD, Reller ME, DeLong SM, Trottier J, Nowicki SF, et al. An outbreak of *Escherichia coli* O157 infection following exposure to a contaminated building. *JAMA*. 2003;290(20):2709-12.

Washington State Department of Health, Office of Environmental Health & Safety. Recommendations to Reduce the Risk of Disease Transmission from Animals to Humans at Petting Zoos, Fairs and Other Animal Exhibits. July 2001. [cited 2006 Mar 18]. Available from: <http://www.doh.wa.gov/ehp/ts/Zoo/RecommendationsPettingZoo.pdf>.



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6.0 Appendix I: Petting Zoo and Open Farm Visits: Information for the Public



Petting Zoo and Open Farm Visits: Information for the Public

- What you can do BEFORE you or your children visit a petting zoo or open farm.
 - What you can do at the petting zoo or open farm to decrease the risk of disease.
 - Which animals spread diseases to humans?
 - How are diseases spread from animals to people?
 - Which diseases are spread from animals to people?
 - What are the symptoms of diseases spread from animals to people?
-

Visiting a petting zoo or open farm is a fun and an educational event. However, contact with animals must be made in a safe way as rarely, serious diseases can be spread from animals to people. People at most risk of serious illness include children, pregnant women, the frail elderly, and persons with weakened immune systems.

What you can do BEFORE you or your children visit a petting zoo or open farm.

- Read this information and give it to the people who are supervising your children.
- **Call ahead** to the petting zoo or open farm for the following information. You may want to visit the site before bringing a large group of children.
 - Are hand washing facilities available? Do they have liquid soap and paper towels?
 - Are there toilet facilities? Are they clean?
 - Will there be on-site supervision?
 - Are the animals on display healthy?
 - Is the eating area separate from the animal area?
- **Be prepared:**
 - Bring wipes and alcohol hand sanitizing gel with you. Use a hand sanitizer with 60% to 95% ethanol or isopropanol alcohol.
 - If possible, eat before you get to the petting zoo or open farm, and not while you are there.
 - Bring sturdy boots or shoes for the children to wear while in the petting zoo. This will help to prevent children from slipping and falling. If possible, at the end of the visit, children should change into a clean pair of shoes and then wash their hands to remove any dirt from their hands. Bag the dirty shoes and clean them at home.
 - Make sure there is an adequate number of adults to supervise your children.



- **Teach children how to wash their hands properly:**
 1. Wet hands well with running water, and lather with soap.
 2. Rub hands together briskly for at least *20 seconds*, or the time it takes to sing Happy Birthday twice. Don't forget the palms, backs of hands, fingers, finger tips and nails.
 3. Rinse hands well under running water.
 4. Dry hands completely with paper towels. Do not dry hands on clothes.
 5. Turn off the taps with paper towel.

What you can do at the petting zoo or open farm to decrease the risk of disease.

Supervise children and make sure they wash their hands.

- **When you and your children are in the animal areas:**
 - Do not eat, drink, chew gum or smoke.
 - Do not let children lick their fingers or bite their nails.
 - Do not let children suck on fingers, crayons, etc.
 - Do not let children touch their faces or mouths.
 - Do not give children bottles, pacifiers or soothers.
 - Do not let children pick up things off the ground.
 - Do not let children kiss the animals.
 - Do not let children eat the animals' food.
 - Do not let children eat edible containers used to hold animal feed (e.g. ice cream cones).
 - Do not share human food with animals.
 - Do not participate in the birthing of an animal.
- **When you and your children are in the eating areas:**
 - Eat in designated eating areas that are away from animals and their areas.
 - Wash your hands before eating.
 - If animals such as dogs, cats or ducks are in the eating area, do not pet them. If you touch an animal, wash your hands again before eating.
- **Wash your hands and your children's hands:**
 - After touching or feeding the animals;
 - After touching an animal's cage;
 - After touching the ground or falling;
 - Right after leaving animal areas;
 - Before eating or drinking;
 - After cleaning and/or removing boots or shoes.



- **If you or your children are injured:**
 - Wash and bandage bites, cuts or scrapes.
 - Report injuries to the operator of the petting zoo or open farm.
 - Seek medical attention if the injury is serious or a wound gets infected or if your tetanus vaccination is not up to date.

Which animals spread diseases to people?

Most animals in petting zoos and on open farms can spread disease to people including cows, goats, sheep, horses, rabbits, pigs and chickens.

How are diseases spread from animals to people?

Animals carry many types of germs in their intestines. These germs can spread from animals to people in the following ways:

- An animal's feces can get onto the soil, bedding and the animal's hair or fur. The feces can contain germs that can make people sick when people touch an animal or the area around the animal, and do not wash their hands after. Fecal matter can spread from hands to mouths through eating or sucking fingers.
- An animal's saliva or spit can also carry germs that can be spread when an animal bites, scratches or licks a person.
- Germs can be found in raw milk and on cow udders. People who milk cows can get germs on their hands which can then spread to their mouths.

Young children are most at risk of infection because they are more likely to put their fingers in their mouths, ingesting dirt and bacteria from their hands.

- Rarely, diseases including Q fever and toxoplasmosis can be spread when germs get into the air. This can occur when dust is stirred up that has been spoiled by infected animal waste, including birth fluids. For this reason, the public should not be involved in the birthing process.

Which diseases are spread from animals to people?

Some of the most common diseases that can be spread from farm animals to people are *E. coli*, [*Salmonella*](#), [*Campylobacter*](#), [*Giardia*](#), [*Cryptosporidium*](#), and [*Yersinia*](#). For more information, visit the BC HealthFiles at <http://www.bchealthguide.org/healthfiles/index.stm>.

What are the symptoms of diseases spread from animals to people?

Possible symptoms include diarrhea, bloody diarrhea, stomach cramps, nausea, vomiting, fever, bloating, and gas. If you or your children experience any of these symptoms following a visit to a petting zoo or open farm, see your doctor.



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**7.0 Appendix II: Information for Operators of Permanent or Temporary Petting Zoos or
Open Farms**



Information for Operators of Permanent or Temporary Petting Zoos or Open Farms

- **Information on diseases that can be spread from animals to humans**
 - Which animals spread diseases to humans?
 - Which diseases do animals spread to humans?
 - How are diseases spread from animals to humans?
 - What are the risk factors for disease transmission?
 - What are the symptoms of diseases spread from animals to humans?
 - **Site preparation: set up of a petting zoo in order to minimize the risk of disease transmission**
 - **Site operations and maintenance**
-

Visiting a petting zoo or open farm is a fun and an educational event. However, contact with animals must be made in a safe way as rarely, serious diseases can be spread from animals to people. People at most risk of serious illness include children, pregnant women, the frail elderly, and persons with weakened immune systems.

INFORMATION ON DISEASES THAT CAN BE SPREAD FROM ANIMALS TO HUMANS

Which animals spread diseases to humans?

All animals can be potential sources of diseases. Animals in petting zoos and on farms that can spread diseases to people include cows, goats, sheep, horses, rabbits, pigs and chickens. Depending on the disease, young animals such as chicks, calves, and lambs may be more likely to be infected than older animals.

How are diseases spread from animals to humans?

Diseases can be spread in places where the public has contact with animals and their environment such as petting zoos, open farms, animal exhibits, pumpkin farms, country fairs, amusement parks, shopping malls, children's parties and animal rides. Outbreaks of disease related to petting zoos have occurred. In 2003, an *E. coli* outbreak occurred in BC as a result of children from schools and day cares visiting a petting zoo at a farm. All children who became ill had contact with the farm animals. Adequate hand washing facilities were not available.



Animals carry many types of germs in their intestines. These germs can spread from animals to people in the following ways:

- An animal's feces can get onto the soil, bedding and the animal's hair or fur. The feces can contain germs that can make people sick when people touch an animal or the area around the animal, and do not wash their hands after. Fecal matter can spread from hands to mouths through eating or sucking fingers.
- An animal's saliva or spit can also carry germs that can be spread when an animal bites, scratches or licks a person.
- Germs can be found in raw milk and on cow udders. People who milk cows can get germs on their hands which can then spread to their mouths.

Young children are most at risk of infection because they are more likely to put their fingers in their mouths, ingesting dirt and bacteria from their hands.

- Rarely, diseases including Q fever and toxoplasmosis can be spread when germs get into the air. This can occur when dust is stirred up that has been spoiled by infected animal waste, including birth fluids. For this reason, the public should not be involved in the birthing process.

Which diseases are spread from animals to humans?

Some of the most common diseases that can be spread from animals to people are [E. coli O157](#), [Salmonella](#), [Campylobacter](#), [Giardia](#), [Cryptosporidium](#), and [Yersinia](#). For more information, visit the BC HealthFiles at <http://www.bchealthguide.org/healthfiles/index.stm>.

What are the risk factors for disease transmission?

- Contact with farm animals in the absence of hand washing facilities.
- Contact with the animals' environment including enclosures, bedding materials, fencing, feed, soil, feces.
- Exposure to the birthing process and environment.
- Contact with newborn or baby animals.
- Contact with ill animals.
- Feeding the animals.
- Eating the animals' food.
- Eating edible containers used to hold animal feed (e.g. ice cream cones).
- Sharing human food with animals.
- Crowding of animals in their enclosures.

What are the symptoms of diseases spread from animals to humans?

- Possible symptoms include diarrhea, bloody diarrhea, stomach cramps, nausea, vomiting, fever, bloating, and gas.
- Some diseases can result in serious complications like kidney failure.
- People at most risk of serious complications from infections include children, pregnant women, the frail elderly, and persons whose immune systems are compromised.



SITE PREPARATION: SET UP OF A PETTING ZOO OR OPEN FARM IN ORDER TO MINIMIZE THE RISK OF DISEASE TRANSMISSION

HANDOUTS

- Have a supply of the Health File *Petting Zoos and Open Farm Visits: Information for the Public* to hand out to visitors when they arrive at your facility.
- If visitors book ahead, send out the Health File *Petting Zoos and Open Farms: Information for the Public*.

SIGNS

Signs should include direction regarding:

- How, when and where to wash hands (See Appendix IV for sign template);
- Where designated eating areas are located;
- How to handle the animals safely.

Post hand washing signs:

- At the entrance to the petting zoo or farm;
- At the entrances and exits of the animal enclosures or petting areas;
- At the entrance to designated eating areas;
- On the outside of temporary food service booths;
- In the toilet areas;
- At the exit of the petting zoo or farm where visitors are changing their boots or shoes.

HAND WASHING STATIONS

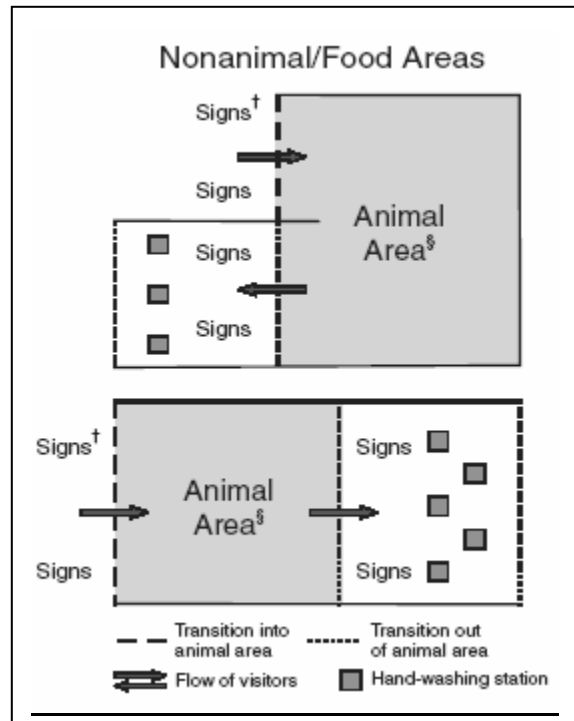
Number of hand washing stations

Provide enough hand washing stations so that visitors do not have to wait in line for a prolonged period of time. Consider how many people leave the animal areas and how long it takes people to wash their hands. The Environmental Health Officer at your local health department can help you estimate the number of hand washing stations required.

Hand washing stations should be set up at the following locations:

- Animal areas: separate entrances and exits to and from the animal areas are preferable, with hand washing stations located directly outside of the animal areas. See Figure 1.
- At the entrance to eating areas;
- In the toilet areas;
- At the exit of the petting zoo or farm where visitors are changing their boots or shoes.

Figure 1. Location of hand washing stations



† Signs should be in different formats depending on the audience (e.g., children and people who do not speak English).

§ Animal area – Areas in which animal contact is possible.

Modified from the National Association of State Public Health Veterinarians, Inc. Compendium of Measures to Prevent Disease Associated with Animals in Public Settings, 2005. MMWR 2005; 54 (No. RR-4): 1-13. [cited 2006 Mar 18]. Available from: <http://www.cdc.gov/mmwr/PDF/rr/rr5404.pdf>.



What you need to set up a hand washing station*:

- Potable running water (preferably warm water);
- Sinks (preferably that small children, adults and people with disabilities can access);
- Liquid soap;
- Paper towels;
- Garbage containers;
- Adequate space for people who are waiting in line.

Liquid soap and single use paper towels should be in dispensers.

Do not use containers of standing water for hand washing because reusing water can spread bacteria from one person to the next. Adding a disinfectant to the water does not make the practice acceptable.

Hand sanitizing gels are not a substitute for proper hand washing and are not effective if hands are heavily soiled. They can be used after hand washing.

***Hand washing stations at temporary events:**

All requirements are the same as listed above, except:

- Potable running water may be supplied from large water containers (minimum 5 gallons) with spigots (that do not need to be held down to operate).
- There must be a potable water source nearby to refill the containers as needed.
- Buckets may be used to collect waste water and emptied into the sanitary sewer.

EATING AREAS

It is good practice to provide visitors with a designated area to eat and rest.

- Separate the eating area from the animal and petting areas.
- Post visible signs directing the public to hand washing stations, i.e. on the way into the food service and/or eating area.
- Only pasteurized products (milk, milk products, juices and ciders) should be offered for consumption. The sale of unpasteurized milk is illegal.
- Do not allow pets or domesticated animals and birds in the eating area.
- Provide adequate garbage containers with lids.
- Remove food debris from the eating area so that animals and birds are not attracted to the area.



SITE OPERATIONS AND MAINTENANCE

SUPERVISION

Offer visitors an orientation to the petting zoo or open farm. Supervisory staff should be prepared to:

- Demonstrate good hand washing techniques to visitors.
- Remind visitors to wash their hands when they leave the enclosures.
- Remind visitors that there is no eating or drinking in the animal areas.
- Advise visitors on proper petting techniques and how to behave around the animals.
- Advise visitors on proper feeding techniques to avoid bites.

Supervisory staff should be in or near the animal area and prepared to offer assistance if needed.

ANIMAL HEALTH

- Have a veterinarian administer a comprehensive animal health program including: examination of ill animals, vaccination and parasite control.
- Animals must be in good health. Ill animals must not be put on display.
- Do not crowd animals in their enclosures. Crowding can stress animals and result in increased shedding of germs.
- Preferably, animals should not give birth in public areas. If animals do give birth in public areas, ensure the public does not have contact with birthing animals.

SITE MAINTENANCE

- Remove manure and any soiled materials as soon as possible from animal enclosures and areas that visitors have access to.
- Keep bedding (straw, shavings) clean and dry and replace it as needed.
- Ensure that the enclosure, including all hand rails and fencing, is kept as clean as possible.
- Pick up garbage on a regular basis.
- Check hand washing stations throughout the day to restock supplies such as soap and paper towels.

ACCIDENTAL INJURY

- Have a first aid kit available in the event that a visitor is bitten, scratched or injured.
- Have staff trained in first aid.
- Advise injured visitors to seek medical attention.



8.0 Appendix III: Inspection Checklist for Public Health Inspectors and Operators of Petting Zoos and Open Farms



Inspection Checklist for Public Health Inspectors and Operators of Petting Zoos and Open Farms

Premises Name:

Operator Name:

Inspector:

Date of Inspection:

Operators: You can use this checklist to determine if you are ready to operate. If the following critical items occur, it is not safe to open your facility to the public.

- **No hand washing facilities**
 - **Inadequate hand washing facilities**
 - **Poor sanitation**
 - **Diseases in humans associated with visits to your petting zoo or open farm**
 - **Ill or distressed animals in public contact areas**
 - **Any other condition that may put the public at risk**
-

SIGNS

Are there signs regarding:

Yes

No

- How and where to wash hands? _____
- Where designated eating areas (if any) are located? _____
- How to handle the animals safely? _____

Are hand washing signs posted:

Yes

No

- At the entrance to the petting zoo or farm? _____
- Just outside the exit from the animal contact areas? _____
- At the entrance to designated eating areas? _____
- In the toilet areas? _____
- On the outside of temporary food service booths? _____
- At the exit of the petting zoo or farm where visitors are changing their boots or shoes? _____

Comments: _____



HAND WASHING STATIONS

Yes **No**

Is there an adequate number of hand washing stations? _____

Are the hand washing stations properly equipped with:

- Running water? _____
- Sinks that small children, adults and people with disabilities can access? _____
- Liquid soap? _____
- Paper towels? _____
- Garbage containers? _____

Are there hand washing stations located:

Yes **No**

- Just outside the exit from the animal contact areas? _____
- At the entrance to designated eating areas? _____
- In the toilet areas? _____
- At the exit of the petting zoo or farm where visitors change their boots or shoes? _____

Comments: _____

EATING AREAS

Yes **No**

- Is there an eating area? _____
- Is it totally separate from the animal contact areas? _____
- Are milk, milk products, juices and ciders for sale pasteurized? _____
- Are pets, farm animals or large birds prohibited from accessing the eating area? _____
- Is there an adequate number of garbage containers with lids? _____
- Is food debris removed from the eating area regularly? _____

Comments: _____



ANIMAL CONTACT AREAS

Yes **No**

- Are animals clean? _____
- Are animal contact areas free of large amounts of fecal matter? _____
- Are animals uncrowded in the contact areas? _____
- Is manure put in an area that is not accessible to visitors? _____

Note: Ask operator about the general health of the animals and the procedures the operator follows if animals are ill.

Comments: _____

SUPERVISION

Yes **No**

- Are there supervisory staff? _____
- Are they knowledgeable about zoonotic diseases (e.g. sources, transmission, importance of hand washing)? _____

Do the supervisory staff:

- Demonstrate good hand washing technique to visitors? _____
- Remind visitors to wash their hands when they leave the enclosures? _____
- Remind child care givers that there is no eating or drinking in the animal areas? _____
- Advise visitors how to behave around the animals? _____
- Advise visitors on proper petting techniques? _____
- Advise visitors on proper feeding techniques to avoid bites? _____

Comments: _____



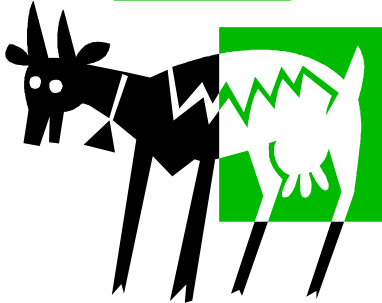
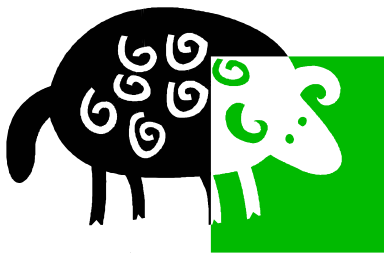
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9.0 Appendix IV: Hand Washing Sign Templates



Hand Washing Sign Templates

HAND WASHING HAND WASHING HAND
WASHING



Wet hands with running water

Wash hands with liquid soap for *20 seconds**

Rinse hands well under running water

Dry hands with disposable paper
towels

Turn off the taps with
paper towel

* *20 seconds* is the time it takes to sing Happy
Birthday twice



HAND WASHING HAND WASHING



1. **Wet hands with running water**
2. **Wash hands with liquid soap for *20 seconds****
3. **Rinse hands well under running water**
4. **Dry hands with disposable paper towels**
5. **Turn off the taps with paper towel**

*** *20 seconds* is the time it takes to sing Happy Birthday twice**



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10.0 Appendix V: Estimating the Number of Hand Washing Stations



Estimating the Number of Hand Washing Stations

Number of hand washing stations

Provide enough hand washing stations so that visitors do not have to wait in line for a prolonged period of time. Consider how many people leave the animal areas (e.g. large school groups) and how long it takes people to wash their hands.

Suggested guidelines for estimating an adequate number of hand washing stations:

$$\frac{\text{Maximum \# people in animal area} \times \text{time required for hand washing}}{\text{Average time spent in animal area}}$$

For example, if you estimate that a maximum of 30 people will be in the animal area at any given time, that they spend 15 minutes in the animal area on average and that each person will take one minute to wash their hands, you should provide enough hand washing facilities for two people to use at one time.

More examples:

$$\frac{15 \text{ people} \times 1 \text{ minute}}{15 \text{ minutes}} = 1 \text{ hand washing station}$$

$$\frac{30 \text{ people} \times 1 \text{ minute}}{15 \text{ minutes}} = 2 \text{ hand washing stations}$$

$$\frac{60 \text{ people} \times 1 \text{ minute}}{15 \text{ minutes}} = 4 \text{ hand washing stations}$$

Similar calculations can also be made for main exits, entrances to eating areas or other recommended locations.

Adapted from: Health & Safety Executive. Avoiding ill health at open farms – Advice to farmers (with teachers' supplement). Agriculture Information Sheet No. 23 and Supplement (revised). [cited 2006 Mar 18]. Available from: <http://www.hse.gov.uk/pubns/ais23.pdf>.