

CLEVELAND COUNTY HEALTH DEPARTMENT

June 3, 2013

Recommendations of the Cleveland County Fair Working Group

Working Group Members:

Dorothea Wyant, Chairperson – Cleveland County Health Director
Greg Traywick – Cleveland County Cooperative Extension Service
Stacie Rhea – Cleveland County Environmental Health Program Coordinator
Calvin Hastings – Cleveland County Fair Association Manager
Chris Dobbins – Gaston County Health Director
Dr. Karen Beck - Surveillance Veterinarian, NC Department of Agriculture & Consumer Services (NCDA&CS)
Evelyn Foust – NC Division of Public Health (NCDPH) Communicable Disease Branch Director
Wanda Webber – Maintenance Manager, Cleveland County Fair Association
Dr. Carl Williams – NCDPH, State Public Health Veterinarian
Jennifer MacFarquhar – NCDPH, State Epidemiology Branch
Kim Crane – Cleveland County Health Department Adult Health Nursing Supervisor
Andy Elmore – Cleveland County Fair Association
Will Thompson – Livestock Director, Cleveland County Fair Association
Dr. Dino Nicopolus – Local Veterinarian
Chris Dobbins – Gaston County Health Director
Alisa Leonard – Cleveland County Health Department Nursing Director
DeShay Oliver – Cleveland County Health Department Public Information Officer

Background

An outbreak of Shiga Toxin producing *E. coli* (STEC) at the 2012 Cleveland County Fair resulted in a total of 106 cases, including 7 with HUS and one death. Epidemiologic analysis of the outbreak indicated that visiting the petting zoo was a significant risk factor in disease acquisition. Environmental analysis demonstrated soil contamination with the outbreak strain of *E. coli* and sites near and distant to animals intended for public contact. It is likely that acquisition of disease was associated with direct animal contact and contact with contaminated environments regardless of animal housing. For a full review of the outbreak please read the final report:

<http://epi.publichealth.nc.gov/cd/ecoli/figures/ClevelandCoFair2012FinalReport.pdf>

315 East Grover Street, Shelby, NC 28150-3998
704-484-5100

The Cleveland County Fair is a sanctioned agricultural fair and its animal contact exhibits were subject to inspections pursuant to Aedin's Law (NCGS 106-520.3A). In 2012 the animal contact exhibits were inspected and found to be in full compliance with the law. Control measures, including signage and hand-washing stations, were also in place in areas not required under Aedin's law. Despite compliance this outbreak demonstrates that outbreaks may occur even when thorough control measures have been implemented. As a result of the outbreak and thorough investigation, the Cleveland County Health Department initiated a comprehensive review of fair activities to further enhance health and safety at future editions of the Cleveland County Fair.

Goal of the Working group

As stated by the NASPHV Animal Contact Compendium "There are many positive benefits of human-animal contact; however, infectious disease outbreaks related to such contacts have been increasingly reported." The 2012 CCF STEC outbreak is the 3rd identified outbreak associated with animal contact at a NC fair since 2004. See the following reports for additional details

- <http://epi.publichealth.nc.gov/cd/ecoli/figures/EColiReportFinal062905.pdf>
- <http://epi.publichealth.nc.gov/cd/ecoli/figures/StateFairOutbreak2011FinalReport.pdf>

The goal of this study committee was to review prevention measures in place during the 2012 Cleveland County Fair (in addition to measures required by Aedin's law and recommended by NASPHV) and identify measures specific to the Cleveland County Fair where the risk of disease transmission might be mitigated further.

Key Points of the Working group

Cleveland County has a strong agricultural heritage and, since 1924, the Cleveland County Fair has provided an opportunity for the public to learn about and experience agriculture, including animal agriculture, in a personal way. We recognize that the interaction with animals at the fair is an educational and entertaining experience for many fair patrons and may be the only such opportunity some ever have.

It should be noted that the Working group has not recommended that petting zoos or animal contact exhibits be banned from the fair. Rather, the Working group has developed a set of recommendations designed to further separate fair patrons from animals not intended for public contact and from animal waste to the greatest extent possible. Should the Cleveland County Fair management choose to eliminate animal contact exhibits they may do so; that action would stand independent of these recommendations.

While petting zoos operate at a variety of venues (subject and not subject to Aedin's Law) most do not result in outbreaks of infectious disease among patrons. However the impact of the 2012 Cleveland County Fair STEC outbreak, with over 100 ill persons, including hospitalizations and a death, required an extensive review of fair practices and policies including risks of human disease with this annual event. While eliminating animal contact including petting zoos might prevent *E. coli* or other communicable disease outbreaks from occurring, most of these events

can and do occur safely when preventive measures are taken, the public is educated about what they can do to reduce their risk, and the public follows recommendations. While there is no guarantee that disease outbreaks will never occur, the committee believes that following the recommendations put forward in this document will further reduce the risks associated with illness acquisition and disease transmission at the CCF.

Regulation of animal contact exhibits at agriculturally sanctioned events.

Animal contact exhibits at sanctioned agricultural fairs (such as the CCF) must adhere to the requirements set forth in Aedin's Law. Additionally, operators of animal contact exhibits at any venue (including the CCF) should review and implement the recommendations of the NASPHV animal contact compendium as appropriate for the venue.

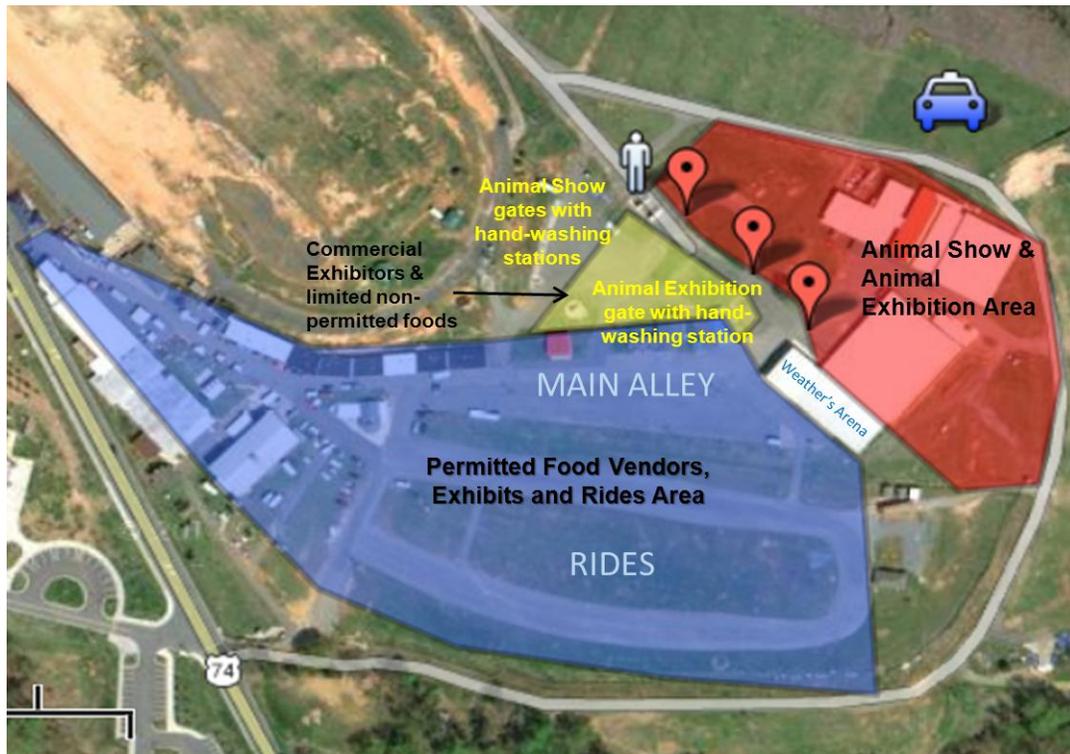
Implementation of the working group recommendations and those in the NASPHV animal contact compendium, as appropriate, along with continued compliance with Aedin's Law will not guarantee the absence of outbreaks in the future, but should make the CCF as safe as is reasonably possible.

Recommendations of the Cleveland County Fair Working group Set Up and Separation

- Provide a clear separation between all food vending and animal exhibits and animal entertainment. Most food vendors will be located along the main alley with the last food vendor location at the Weather's Arena. Other food vendors will be located along the carnival ride locations. No animal exhibits will be placed outside of the designated animal areas.
- Provide marked entranceways into the animal exhibit areas by some type of banners/gates, etc with signage notifying fair patrons they are entering animal exhibit areas.
- Provide hand washing-stations at the marked entrance and exits of the animal exhibit area so that the funneled traffic will be encouraged to wash their hands upon exiting.
- Commercial vendors may have displays within the animal areas.
- Locate hand-washing stations on each side of the food vendor 'strip'.
- Recommend to all food vendors that they provide pre-packaged, pre-portioned condiments, or make other arrangements to avoid public contact with hand pump devices, i.e. ketchup, mustard, vinegar, etc.
- The following verbiage may be posted at the Main Entrance to the Fair, at all secondary entrances, and at all entrances to any contact and non-contact animal areas. This signage would be at least 4' X 6'. All necessary parties related to the Cleveland County Fair have approved this language.

“Under North Carolina law, there is no liability for an **injury to or death of a participant in an agritourism activity** conducted at this agritourism location **if such injury or death results from the inherent risks of the agritourism activity**. Inherent risks of agritourism activities include, among others, risks of injury inherent to land, equipment, and animals, as well as the potential for you to act in a negligent manner that may contribute to your injury or death. The transmission of bacteria such as *E. coli* O157:H7 from animals on this site is an inherent risk of this agritourism event. **You are assuming the risk of participating in this agritourism activity.**”

Figure 1



Hand Washing, Pedestrian Traffic Flow, and Signage

➤ Hand washing

1. Consider installing motion sensor, hands-free paper towel and soap dispensers in all restrooms.
2. Place adequate hand-washing stations based on regulatory requirements and patron volume with large, visible signage at the exits of all animal exhibits.
3. Consider using volunteers (FFA members, LHD staff, etc.) to better staff hand-washing stations so they may verbally remind the public to wash their hands prior to exiting all animal exhibits.
4. Develop an audio CD (such as the sample provided by *Circle C Petting Zoo*) containing audio cues on proper hand washing and safety precautions that may be played at all animal exhibits.
5. Ensure adequate supply of paper towels and hand soap at hand-washing stations and in restrooms.
6. Consult with NCDA&CS to develop an educational hand-washing exhibit through the use of *Glo Germ* educational materials.

➤ Pedestrian Traffic Flow

1. All animal exhibits should have a designated entrance and exit so that pedestrian traffic must pass by hand washing stations upon exit. An example is indicated in figure 2 below.
2. Restrict the restroom located nearest the Livestock Competition Barn for animal exhibitors only and not for public use. This could be accomplished by placing a barricade between the Livestock Competition Barn and Horse Barn. Additional hand-washing stations could be added inside the barricade to accommodate for loss of public access to the restroom. Follow local regulations for large gatherings to ensure adequate access to portable bathrooms.
3. Consider restricting the number of participants allowed at one time in animal contact exhibits such as petting zoos and milking booths.
4. Place runs of “bike rack” to separate animals not intended for public contact from public areas. The front entrance of the barn would also serve as the exit with a minimum of two staffed hand-washing stations at the exit.

➤ Signage

1. Consider posting larger, more visible (i.e. flashing lights) signs at animal exhibit exits where hand-washing stations are located with succinct, targeted messages such as, “Stop! Please wash your hands before exiting.”
2. Consider placing large, well-lit signs at entrance of display or competition animal exhibits warning public of the potential health risks associated with animal contact, “Animals carry germs that can make people sick. Never eat, drink, or put things in your mouth in animal areas. Wash your hands with soap and water right after visiting the animal area.” Signs at animal contact exhibits should be consistent with Aedin’s Law (G.S. 106-520.3A)
3. Signage should be posted on the gate behind the Livestock Competition Barn that is used for livestock loading and unloading. This signage should remind carnival workers that the gate is for Cleveland County Fair Employees ONLY, and is NOT for use by carnival workers.

➤ Education

1. Partner with the Cleveland County Health Department to develop a media campaign in weeks leading up to the fair to promote public health messages addressing the importance of hand washing, proper hand-washing techniques, and other safety precautions that should be taken into account—“How to be Safe at the Fair and Still Have Fun.”
2. Provide Cleveland County Fair Employee Training prior to fair to review specific procedures for preventing the spread of disease such as the proper procedures

for cleaning animal exhibits, removing animal excrement, and maintaining the cleanliness of and supplies in restrooms and hand-washing stations.

3. Evaluate environmental/fair conditions (weather observations, animal exhibit and restroom cleanliness, staff adherence to new procedures, etc.) mid-way through fair and hold a follow-up staff training/meeting to discuss assessments and what measures should be taken to continue to ensure public safety.

Traffic Flow and Run-Off Control

1. Unloading areas for exhibition animals
 - Designate animal unloading areas with signage
 - Restrict public access from such areas
 - See Figure 2 and notes
2. Location of livestock scales
 - Relocate livestock weighing scale to an area where animal/fair patron traffic do not cross
 - See Figure 3 and notes
3. Farm Adventures and FFA Milking Booth waste disposal
 - Remove animal waste from rear of buildings
 - See Figures 2 and 4 and notes
4. Foot traffic through barn areas
 - Limit public access to barn areas where exhibition animals are housed
 - Install barriers to restrict access; however, do not impede visitors from viewing livestock
 - See Figure 2
5. Restrooms in barn area
 - Restrict public access to restrooms utilized by livestock exhibitors
 - See Figure 2
 - Waste storage
 - Evaluate and revise, as needed, run-off prevention strategies for temporary waste storage areas (large dumpsters, dump truck, etc.)
 - See Figures 2, 3 and 4
 - Run-off in parking area
 - Install underground drainage piping to handle surface water and any run-off from animal areas
 - See Figure 3

Figure 3



- A = Install underground drainage piping to handle surface water and any run-off from animal areas

- B = access point for carnival workers and public
- * = location for livestock scales in restricted area

Figure 4



A = Waste from livestock competition barn emptied into a large container that will be routed through back exit for disposal

F = Rented covered vehicle containing containers for disposal of waste from all other animal exhibits including the milking booth, farm adventures, pig racing and dog show.