



Animal and
Plant Health
Inspection
Service

Veterinary
Services

National Animal Health
Monitoring System

2150 Centre Ave Bldg B
Fort Collins, CO 80526

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Poultry 2010 TURKEY QUESTIONNAIRE

Definitions:

Farm: A premises with one or more poultry house(s) under common management.

Flock: A group of birds housed together in one house and managed as a unit.

Affected turkey: Lesions present consistent with cellulitis/clostridial dermatitis (accumulation of gelatinous fluid under the skin, particularly along the thighs and breast).

Affected flock: Mortality greater than 0.5 per 1,000 for 2 consecutive days in a flock over 10 weeks of age, with affected turkeys.

Case farm: Farm with at least two-thirds of flocks affected within the previous 12 months.

Control farm: Farm with little or no problem with cellulitis/clostridial dermatitis during the previous 12 months.

Section A: Inventory

-
1. How many turkeys are on this farm today? _____ head
 2. How many turkeys were placed in the last 12 months? _____ head
 3. How many flocks were placed in the last 12 months?..... _____ flocks

Section B: Clostridial Dermatitis

-
1. Of those *turkeys* placed in the last 12 months, how many turkeys:
 - a. Died? _____ head
 2. Of those deaths, approximately how many (or what percent) were due to clostridial dermatitis? _____ head OR _____ percent

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3. Of those *flocks* placed in the last 12 months, how many flocks had no, mild, moderate, or severe clostridial dermatitis problems?
- a. No problem..... _____ flocks
- b. Mild (mortality < 10%) _____ flocks
- c. Moderate _____ flocks
- d. Severe (mortality > 30%) _____ flocks
- e. Total (*should equal Item 3, Section A*)..... _____ flocks
4. How would you rank the severity of clostridial dermatitis on this farm during:
- | | None | Mild | Moderate | Severe |
|--------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| a. Spring (Mar–May, 2009)? | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| b. Summer (June–Aug, 2009)? | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| c. Fall (Sep–Nov, 2009)? | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |
| d. Winter (Dec 2009–Feb 2010)? | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ |

Section C: Houses

1. How many bird houses are on this farm? _____ houses
2. Was the pH of the soil on the floor of the houses measured during the previous 12 months? ₁ Yes ₃ No ₄ NA

[If Item 2 = NO or NA, SKIP to Item 4.]

3. What was the most recent measurement of soil pH on this farm? _____
4. At the completion of a flock's growing cycle, is litter:
- a. Reused for another flock? ₁ Yes ₃ No
 If YES, how many flocks on same litter _____ flocks
- b. Stored on farm? ₁ Yes ₃ No
 If YES, distance to nearest poultry house _____ feet
- c. Composted? ₁ Yes ₃ No
 If YES, distance to nearest poultry house _____ feet
- d. Applied to land on this farm? ₁ Yes ₃ No
- e. Moved off farm? ₁ Yes ₃ No

5. Which of the following best describes this farm's carcass (daily mortality) disposal method? (*Check one only.*)

- ₁ Rendering
- ₂ Composting
- ₃ Burial
- ₄ Incineration
- ₅ Other (specify: _____)

If Item 9 = 2 (composting), distance from composter to nearest poultry house ... _____ feet

6. How often are mortalities removed from houses? (*Check one only.*)

- ₁ More than twice daily
- ₂ Twice daily
- ₃ Once daily
- ₄ Less than once daily

7. What is the usual down time between flocks? _____ days

8. How frequently are the following procedures performed?

(See supplemental sheet for disinfectant product codes.)

	After every flock	After two flocks	After three or more flocks	Never
a. Houses washed down and disinfected	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Primary disinfectant product used	_____ code			
b. Feeders, feed hoppers, water tanks washed/disinfected	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Primary disinfectant product used	_____ code			
c. Flush/disinfect water lines	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Primary disinfectant product used	_____ code			
d. Dry clean walls/ceilings	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e. Clean fans, ventilation system, cool cells	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

9. What procedure is used to clean and disinfect houses? (*Check one only.*)

- ₁ Single step (soap and disinfectant mixed)
- ₂ 2 step (water and soap followed by disinfectant)
- ₃ Other (specify _____)

10. How many days after birds are removed from the house is cleaning and disinfecting usually done? _____ days

11. Which of the following best describes the bird age grouping? (Check one only.)

- ₁ Multi-age, same house
- ₂ Different ages, different houses
- ₃ Whole farm one age

12. Which of the following best describes the birds' drinking water supply? (Check one only.)

- ₁ Well less than 300 ft deep
- ₂ Well 300 ft deep or more
- ₃ Municipal water system
- ₄ Other (specify: _____)

13. Does this farm perform any of the following treatments on the birds' drinking water?

- a. Acidification ₁ Yes ₃ No
If YES, to what target pH? _____
- b. Chlorine ₁ Yes ₃ No
- c. Hydrogen peroxide ₁ Yes ₃ No
- d. Iodine ₁ Yes ₃ No
If YES, to what target concentration? _____ ppm free iodine
How many days is iodine in the water? _____ days
- e. Water softening ₁ Yes ₃ No

14. Was the pH of the birds' drinking water measured during the previous 12 months? ₁ Yes ₃ No

[If Item 14 = NO, SKIP to Section D.]

15. What was the most recent measurement of bird drinking water pH on this farm? _____

Section D: Biosecurity

1. During the previous 12 months, did poults come from the following sources?

- a. Hatchery belonging to this company ₁ Yes ₃ No
- b. Hatchery belonging to a different company ₁ Yes ₃ No
- c. Brooder farm belonging to this company ₁ Yes ₃ No
- d. Brooder farm belonging to a different company ₁ Yes ₃ No
- e. Other (specify: _____) ₁ Yes ₃ No

2. Which of the following describes the bird flow on this farm?
(Check one only.)

- ₁ All-in/all-out for entire farm
- ₂ All-in/all-out by house
- ₃ Continuous flow

3. Are the following measures always, sometimes, or never required for employees, catch/vaccination crews, and visitors?

	Producer/Employees	Catch/ Vaccination Crews	Visitors
Shower	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never
Different personnel for different houses	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	NA
Change of clothing (disposable)	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never
Change of clothing (washable)	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never
Change shoes or foot cover	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never
Foot bath (liquid)	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never
Foot bath (dry)	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never
Scrub footwear (bucket and brush)	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never
Not be around other poultry (at least 24 hours)	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never
Cannot own poultry or birds	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never	<input type="checkbox"/> ₁ Always <input type="checkbox"/> ₂ Sometimes <input type="checkbox"/> ₃ Never

4. Do catch crews and vaccination crews catch birds for other companies?

- a. Catch crews ₁ Yes ₃ No ₄ NA (no catch crews)
- b. Vaccination crews ₁ Yes ₃ No ₄ NA (no vaccination crews)

5. Are the following types of animals on this farm?
- a. Cattle ₁ Yes ₃ No
- b. Pigs ₁ Yes ₃ No
- c. Other livestock ₁ Yes ₃ No
- d. Chickens ₁ Yes ₃ No
- e. Other poultry ₁ Yes ₃ No
- f. Pet birds ₁ Yes ₃ No
- g. Other pets (dogs, cats, etc.)..... ₁ Yes ₃ No
6. Have free-ranging backyard poultry been seen within 100 ft of this farm? ₁ Yes ₃ No
7. Is feed stored in such a way as to prevent access to:
- a. Rodents? ₁ Yes ₃ No
- b. Wild birds? ₁ Yes ₃ No
- c. Cats?..... ₁ Yes ₃ No
- d. Dogs? ₁ Yes ₃ No
- e. Wild mammals such as raccoon, opossum, etc.? ₁ Yes ₃ No
8. How great a problem were the following pests on this farm during the previous 12 months?
- a. Mice ₁ Severe ₂ Moderate ₃ Slight ₄ None
- b. Rats ₁ Severe ₂ Moderate ₃ Slight ₄ None
- b. Beetles ₁ Severe ₂ Moderate ₃ Slight ₄ None
9. During the previous 12 months, were any of the following rodent control methods used on this farm?
- a. Chemicals or bait ₁ Yes ₃ No
- b. Traps or sticky tape..... ₁ Yes ₃ No
- c. Cats ₁ Yes ₃ No
- d. Exterminator ₁ Yes ₃ No
- e. Other (specify: _____) ₁ Yes ₃ No
10. During the previous 12 months, did you share any equipment (e.g., tractors, feeding equipment, litter spreaders, trailers, egg crates) with:
- a. Another farm, same company? ₁ Yes ₃ No
- b. Another farm, different company?..... ₁ Yes ₃ No
11. Which of the following **best** describes the vehicle **most often** used to transport shavings to this farm during the previous 12 months? (*Check one only.*)
- ₁ Vehicle dedicated to this farm only
- ₂ Vehicle dedicated to this company only
- ₃ Vehicle also used on other company farms or independent farms
- ₄ Other (specify: _____)

12. Is litter/manure from another farm applied to land on this farm?
- a. Litter/manure from another farm, same company..... ₁ Yes ₃ No
- b. Litter/manure from another farm, different company ₁ Yes ₃ No

Section E: Flock Questions

For this section, the questions will refer to one flock, and the house that contained this flock.

Control farms: Select the most recently completed flock (birds already gone to slaughter), and answer for the house that contained this flock.

Case farms: Select the last completed flock affected with cellulitis (birds already gone to slaughter), and answer for the house that contained this flock.

For the selected house/flock:

1. What are the dimensions of the house? _____ feet X _____ feet
2. What is the age of the house? _____ years
3. What type of flooring does the house have? (*Check one only.*)
 - ₁ Slatted flooring over dirt/clay
 - ₂ Slatted flooring over concrete
 - ₃ Litter over dirt/clay
 - ₄ Litter over concrete
 - ₅ Combination of slats and litter over dirt/clay
 - ₆ Combination of slats and litter over concrete
 - ₇ Other flooring type (specify: _____)
4. At the time the flock of interest was placed, how long had it been since:
 - a. The house was washed down and disinfected? _____ months
 - b. The feeders, feed hoppers, and water tanks for the house were washed/disinfected? _____ months
 - c. The water lines were flushed/disinfected? _____ months
 - d. The walls/ceilings were dry cleaned? _____ months
 - e. Fans, ventilation system, cool cells were cleaned? _____ months
5. How many turkeys were placed in the house? _____ head

6. What type of turkeys were placed for the flock? *(Check one only.)*
- ₁ Brood hens and toms together
 - ₂ Grower hens and toms together
 - ₃ Brood hens
 - ₄ Brood toms
 - ₅ Grower toms
 - ₆ Grower hens
7. What was the strain of the turkeys placed for the flock? *(Check one only.)*
- ₁ Hybrid
 - ₂ Nicholas
 - ₃ Mixed
 - ₄ Other (specify: _____)
8. What was the season when the flock was placed? *(Check one only.)*
- ₁ Spring (Mar–May, 2009)
 - ₂ Summer (June–Aug, 2009)
 - ₃ Fall (Sep–Nov, 2009)
 - ₄ Winter (Dec 2009–Feb 2010)
9. What was the growth rate for this flock? *(Check one only.)*
- ₁ Above average
 - ₂ Average
 - ₃ Below average
10. What was the average barn temperature when the turkeys in this flock were 10 weeks old? _____ °F
11. What was the humidity level in the barn when turkeys in this flock were 10 weeks old? _____ % humidity
12. During the life of the flock, how many times was litter tilled? _____ times
13. Were the following **floor** (pad) treatments done prior to placing new bedding in this house during the previous 12 months?
- a. Acidify (e.g., alum, sodium bisulfate) ₁ Yes ₃ No
 - b. Salt ₁ Yes ₃ No
 - c. Other (specify: _____) ₁ Yes ₃ No

14. What type of litter was used for this flock? (Check one only.)

- ₁ Wood shavings
- ₂ Rice hulls
- ₃ Peanut hulls
- ₄ Litter not used
- ₅ Other (specify: _____)

[If Item 14 = 4, SKIP to Item 16.]

15. Were any of the following **litter** treatments used for this flock?

- a. Acidifier (e.g., alum, sodium bisulfate, PLT, Poultry Guard) ₁ Yes ₃ No
- b. Alkalinizer between flocks (e.g., lime) ₁ Yes ₃ No
- c. Absorbers (e.g., clinoptilolite clay, peat) ₁ Yes ₃ No
- d. Other (specify: _____) ₁ Yes ₃ No

16. Was this flock vaccinated for

- a. *Clostridium perfringens*? ₁ Yes ₃ No
- b. *Clostridium septicum*? ₁ Yes ₃ No

17. Were any of the following fed to this flock?

- a. Ionophores ₁ Yes ₃ No
- b. Vitamin E ₁ Yes ₃ No
- c. Selenium ₁ Yes ₃ No
- d. Other vitamins (specify: _____) ₁ Yes ₃ No
- e. Probiotics ₁ Yes ₃ No
- f. Direct-fed microbials ₁ Yes ₃ No
If YES, at what age were direct-fed microbials:
 - i. Started? _____ days of age
 - ii. Discontinued? _____ days of age
- g. Antibiotics for growth promotion..... ₁ Yes ₃ No
- h. Antibiotics for disease treatment..... ₁ Yes ₃ No
- i. Bakery meal ₁ Yes ₃ No
- j. Dried grains ₁ Yes ₃ No
- k. MBM ₁ Yes ₃ No

18. What type of coccidiosis control was used for this flock?
- a. Coccidiostats in feed ₁ Yes ₃ No
 If YES, at what age were coccidiostats:
- i. Started? _____ days of age
 ii. Discontinued? _____ days of age
- b. Rotating coccidiostats during the same growout ₁ Yes ₃ No
- c. Coccidia vaccination ₁ Yes ₃ No
19. Were any of the following diseases present in this flock?
- a. PEMS ₁ Yes ₃ No
- b. Coccidiosis ₁ Yes ₃ No
- c. Necrotic enteritis ₁ Yes ₃ No
- d. *Mycoplasma* ₁ Yes ₃ No
- e. Blackhead ₁ Yes ₃ No
- f. Avian influenza ₁ Yes ₃ No
20. Of those *turkeys* placed in this flock, how many turkeys (or what percentage):
- a. Died of all causes? _____ head OR _____ percent
- b. Died due to clostridial dermatitis? _____ head OR _____ percent

Control Farms – Skip to End

21. What was the age (in weeks) of onset for the clostridial dermatitis in this flock? _____ weeks
22. Was the previous flock in the same house affected with clostridial dermatitis? ₁ Yes ₃ No
- If YES, what percentage of turkeys from the previous flock died due to clostridial dermatitis? _____ percent
- What was the age (in weeks) of onset for the clostridial dermatitis in the previous flock? _____ weeks

Thank you for completing this survey!

Section F: pH Testing

It has been suggested that the pH level in turkey litter and drinking water may have an association with clostridial dermatitis. In this section we will ask you to measure the pH of water and litter using the provided kit.

If this is a CASE FARM:

Select one turkey house that contains turkeys between 7 and 16 weeks of age, and has a history of clostridial dermatitis. This can be a different house from the one selected for the questionnaire above.

If this is a CONTROL FARM:

Select one turkey house that contains turkeys between 7 and 16 weeks of age, and has NOT had a history of clostridial dermatitis. This can be a different house from the one selected for the questionnaire above.

Complete the information below for the selected house:

1. What is the age of the turkeys in this house today? _____ weeks
2. How many turkeys are in this house? _____ head
3. What is the age of this house? _____ years
4. What are the dimensions of this house? _____ feet X _____ feet
5. Does this house contain: (*Check one only.*)
₁ Toms only?
₂ Hens only?
₃ Toms and hens?
6. Are turkeys in this house currently experiencing symptoms consistent with clostridial dermatitis? ₁ Yes ₃ No
If YES, on what date did symptoms begin? _____ date
7. When was the last outbreak of clostridial dermatitis in this house? _____ date **OR** ₁ Never

Kit Contents:

Two 50-mL plastic jars
One roll of pH paper
Deionized water
Stir stick

Instructions for pH Measurement

Water collection:

Fill the first plastic jar at least three-fourths full of water. Take equal amounts of water (1/4 jar per location) from three waterers throughout the house—one on each end of the barn and one in the middle. Use care to not get any foreign material in the water. Dip a 2-inch piece of pH paper into the water for 5 seconds.

Remove the pH paper from the water and immediately read the pH by comparing the color of the paper to the color guide on the packaging. Discard the water.

Record the water pH level here: _____

Litter collection:

Wearing gloves, dig through the upper layer of litter and collect a golf ball-sized amount of material from close to the floor. Take three samples from throughout the house—one from near the feeders, one from the middle of the barn, and one away from the feeders. Place all three samples in the second plastic jar. Add the bottle of deionized water to the litter and mix well with the stir stick. Press a 2-inch strip of pH paper onto the surface of the litter slurry and hold in place for 5 seconds. Remove the pH paper from the slurry and immediately read the pH by comparing the color of the paper to the color guide on the packaging.

Record the litter pH level here: _____