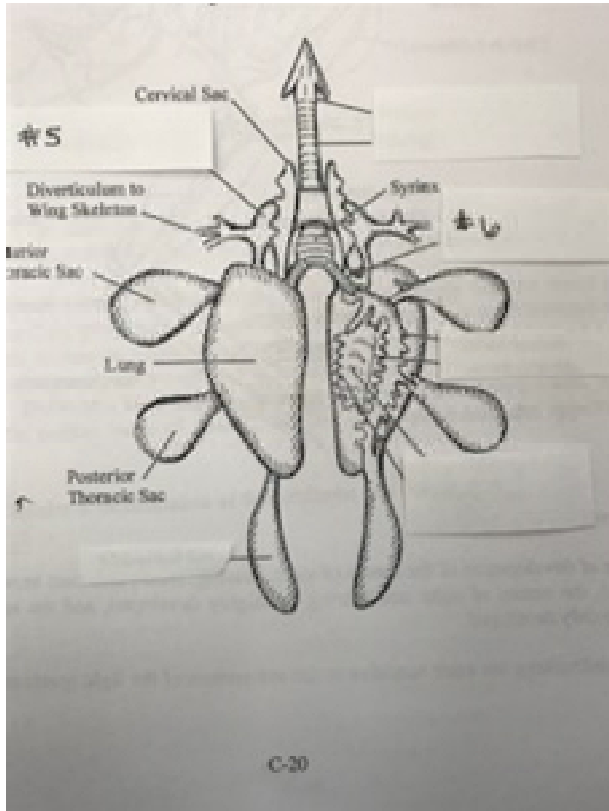




Poultry Evaluation Career Development Event

Created: Jan-20

POULTRY CDE TEAM ACTIVITY — 2019



1.) Identify part of respiratory tract marked #5.

- a. Pharynx
- b. Trachea
- c. Bronchus
- d. Abdominal sac
- e. Interclavicular sac

2.) Identify parts of respiratory tract marked #6.

- a. Bronchus
- b. Pharynx
- c. Trachea
- d. Parabronchus
- e. Ventrobrochus

- 3.) The major mode(s) of transmission for Fowl Pox _____. (C-45)
- a. Bird to Bird
 - b. Carriers such as mosquitos
 - c. Air
 - d. All the above
 - e. None of the above
- 4.) _____ are microscopic, single celled organisms that can be free-living or parasitic in nature. (C-39)
- a. Mycoplasma
 - b. Virus
 - c. Protozoa
 - d. Parasite
 - e. None of the above
- 5.) Which of the following would not be examples of indirect transmission of infectious agents? (C-40)
- a. Vehicle-born transmission
 - b. Vector-born transmission
 - c. Airborne transmission
 - d. All the above
 - e. None of the above
- 6.) _____ is a disease of chickens that is caused by herpesvirus.
- a. Newcastle disease
 - b. Avian influenza
 - c. Marek's disease
 - d. Infectious laryngotracheitis
 - e. Fowl pox
- 7.) A broiler breeder farm has recently been diagnosed with Newcastle disease. Typically, respiratory moisture output for this flock was 0.06 lb/bird/day. During this period of illness respiratory moisture output has doubled. Calculate the increase in respiratory moisture, in lb, for 1 house of 15,000 birds.
- Calculation:
- 15,000 birds per house x 0.06 lb/bird/day = 900 lb/bird/day respiratory moisture
- 900 lb/bird/day respiratory moisture x 2 = 1800 lb/bird/day
- a. 900 lb increase in respiratory moisture
 - b. 1020 lb increase in respiratory moisture
 - c. 2210 lb increase in respiratory moisture
 - d. 2355 lb increase in respiratory moisture
 - e. Not enough information available

- 8.) In the same house, referenced in question 8, egg production has dropped by 32%. Typically, in a given week they are at 96.5% productivity. As a result of this Newcastle diagnosis how many eggs, are now being produced per week?

Calculation:

$15,000 \text{ birds} \times 96.5\% \text{ productivity} = 14,475 \text{ eggs per day normally}$

$14,475 \times 32\% \text{ reduced productivity} = 4,632 \text{ reduction in eggs}$

$4632 \times 7 \text{ days per week} = 32,424 \text{ eggs reduction per week}$

$(14,475 \times 7) - 32,424 \text{ egg reduction} = 68,901 \text{ eggs now produced per week}$

- a. 14,475 eggs produced per week
 - b. 9,843 eggs produced per week
 - c. 50,568 eggs produced per week
 - d. 68,901 eggs produced per week
 - e. 70,653 eggs produced per week
- 9.) _____, a disinfectant commonly used in commercial hatcheries would be effective against bacteria, and partially effective against fungi and viruses. (C-55)
- a. Phenols
 - b. Quaternary ammonium compounds
 - c. Iodophors
 - d. Hypochlorites
 - e. Oxidizing agents
- 10.) _____ is the major mode of transmission of Pullorum? (C-59)
- a. Bird to bird via droppings
 - b. Bird to bird via feed
 - c. Bird to bird via contact or carriers
 - d. Oral contact with infected droppings
 - e. Egg transmission
- 11.) Chicks were recently placed on a 4-house broiler farm with 25,000 birds per house. Within the first 2 weeks there were high levels of mortality, anorexia, diarrhea, and they exhibited inflamed lymphoid tissue, specifically the bursa of fabricius. Of the birds placed on the entire farm there were approximately 10,000 dead chicks during this time. Calculate the % mortality for this farm.

Calculation:

$25000 \text{ birds} \times 4 \text{ houses} = 100,000 \text{ chicks on farm}$

$10,000 \text{ mortality} / 100,000 \text{ placed chicks} = 10\% \text{ mortality}$

- a. 40% mortality
- b. 35% mortality
- c. 20% mortality
- d. 10% mortality
- e. 3.5% mortality

12.) True or False: Based on mortality calculated in Question 12, would this strain of Infectious Bursal Disease (Gumboro) be considered highly, or more virulent? (C-51)

- a. Yes, this would be a more virulent strain
- b. No, this would not be a more virulent strain

13.) For a complex that will slaughter 1,000,000 birds per week, a robust vaccination plan is important. At this complex, vaccination for Infectious Bursal Disease and Infection Bronchitis are delivered through the water, one time for each flock, at 14-21 d post placement. Average farm size for this complex is 3 houses, with a stocking density of 0.71 ft² per bird. The average mortality for this complex is 3.7 %. The vaccine arrives in gallon-jug form and approximately 4,500 doses of vaccine are in each gallon. How many gallons of vaccine need to be planned for, for this 1 complex, each week?

14.)

Calculation:

1,000,000 birds processed / 96.3% make it to the plant = 1038421.6 birds placed

Check - $1038421.6 - 1,000,000 = 38421$ / $1038421 = 3.7\%$ mortality

Assuming you would need enough vaccine for all placed:

$1038421.6 / 4500$ doses per gallon = 231 gallons of vaccine needed.

- a. 222 gallons
- b. 231 gallons
- c. 1205 gallons
- d. 5502 gallons
- e. 6006 gallons

Answer the following questions based on the article “Biosecurity – A Practical Approach.” This article was provided during the Team meeting, and with your Team Activity handout.

15.) Many acute diseases will run their course in _____ weeks, therefore all new herd additions should be quarantined for a minimum of this time period.

- a. 2 – 3 days
- b. 1 – 2 weeks
- c. 2 – 3 weeks
- d. 4 – 5 weeks
- e. Fowl pox

16.) Which of the following factor (s) would affect an animal's ability to resist disease?

- a. Antibiotic treatment
- b. Natural immunity
- c. Nutrition
- d. Genetic disposition
- e. All of the above

17.) Which of the following would be an example of a “high risk area” on a typical broiler farm?

- a. Farm office
- b. Litter shed
- c. Broiler house during 1st week of chicks being on farm
- d. Broiler house during loading for transportation to processing plant
- e. All of the above

18.) True or False: Boots and soiled clothing can serve as important mechanical vectors of disease.

- a. True
- b. False

Use scenario below for questions 18-25, and as talking points in presentation.

For your presentation you will need to discuss key elements of a biosecurity program. Use elements of this scenario to describe the importance biosecurity and how this farm’s practices could have been improved. Please feel free to use additional information provided in “Biosecurity – A Practical Approach” to build out your presentation.

Don is a farmer in Northwest Arkansas with 5 broiler houses. Recently, he was at his neighbor’s house for a cook out, and his friend Tim was complaining that his backyard flock of laying hens were producing more and more rough, thin shelled eggs. Don didn’t realize it, but Tim had a coop of his laying hens in the back of his truck, across the road from Don’s broiler houses.

Don didn’t have any experience with laying hens and just assumed that it was a nutrition deficiency causing the thin shelled eggs. When Don arrived home from the cookout, an alarm was going off in his broiler houses. Since he had been away, he was very concerned that something was wrong and so he quickly rushed up to the barn, without changing his clothes and shoes to check on the alarm. Two to three days later, Don noticed the young broilers in several of his houses were huddled under the brooders. He checked the house temperatures, and everything was as it should be for 1-week-old broilers.

A few days later, Don’s service technician came to visit his farm. Don mentioned his concerns about huddling under brooders. Furthermore, it seems that feed intake was also reduced.

TABLE 1:

18.) Evaluate the sample of Tim’s eggs. What % of eggs would be considered rough and/or thin shelled?

See table for multiple-choice answers

TABLE 2:

19.) The diagram on the table represents Don’s flock densities and floor space usage, based on this, what is what is the % morbidity for this flock?

See table for multiple-choice answers

TABLE 3:

Weigh this sample. This sample is representative of Don's flock. *Please pay attention to additional information provided on Table 3:*

20.) What is the average weight for this Don's flock?

See table for multiple-choice answers

21.) Would weights of this flock indicate that the birds are performing as they should be?

- a. Yes, this flock is performing as it should be
- b. No, this flock is under-performing

TABLE 4:

VERY CAREFULLY - Check the heart and respiratory rate of the bird on Table 4. This can be discussed in presentation – would you consider this bird to be unhealthy based on appearance, heart and respiratory rate?

22.) What is the typical pulse rate for a healthy broiler while at rest? (C-13)

- a. 150 beats per minute
- b. 200 beats per minute
- c. 250 beats per minute
- d. 300 beats per minute
- e. 350 beats per minute

23.) What is the typical respiratory rate for a healthy broiler while at rest? (C-13)

- a. 14-22 exchanges per minute
- b. 25-30 exchanges per minute
- c. 35-45 exchanges per minute
- d. 50-60 exchanges per minute
- e. 120-130 exchanges per minute

24.) Based on the scenario and samples analysis, what disease do you think has affected Don's flock? (C-45)

- a. Infectious bursal disease
- b. Infectious bronchitis
- c. Avian influenza
- d. Fowl pox
- e. Fowl cholera

25.) What pathogen causes this disease? (C-45)

- a. Virus
- b. Bacteria
- c. Protozoa
- d. Mycoplasma
- e. Parasite