National FFA 2014 Poultry Evaluation CDE
Team Activity

Scenario #1

A single 40×500 foot house contained broiler at a density of 1.10 square feet/bird. This flock produced 31,200 pounds of fillets, which represented 21% of final live weight of the birds. The birds consumed a total of $13,000 worth of feed valued at $110/ton. **(Use this information for questions 1-4)**

1. Based on the square feet provided per bird in the scenario above and recommended stocking densities for market broilers what will be the final live weight per bird for this flock?

a. Between 4 and 5 lbs.
b. Between 5 and 6 lbs.
c. Between 6 and 7 lbs.
d. Between 7 and 8 lbs. (page C-117)
e. Between 8 and 9 lbs.

2. How many birds did the house contain?

a. 16,667
b. 18,200
c. 19,560
d. 20,000
e. 20,200
(40x500) x (1bird/1.10 square feet) = 18,200 birds

3. What was the final live weight of the birds expressed in pounds per bird?

a. 6.23
b. 6.52
c. 7.43
d. 7.95
e. 8.16
(31,200 pounds of fillets) / (21% fillet yield) = 148,571 pounds of live weight

148,571 pounds of live weight / 18,200 birds = 8.163 lbs. per bird

4. What was the final density of birds expressed in pounds per square foot?

a. 7.43
b. 7.98
c. 8.16
d. 8.50
e. 8.64
148,571 pounds of live weight / 20,000 square feet = 7.43 lbs. per square foot

Scenario #2

A single 50×500 ft. broiler house containing 25,000 birds produced a total of 137,500 lbs. live weight. Assume a total of 294,250 lb. of feed was consumed by this flock. **(Use this information for questions 5-7,as well as information provided in the PowerPoint.)**

5. Of the feed consumed for this flock, how many lbs. was finisher diet? (page C-121)

a. 73,562.5
b. 102,987.5
c. 108,872.5
d. 117,700
e. None of the above

137,500 lbs live weight / 25,000 birds per house = 5.5 lbs / bird
294,250 lbs of feed consumed * 35% feed consumed during finisher period (provided on C-121)
= 102,987.5 lb. of feed consumed in finisher period

6. What was the FCR for this house?

a. 2.00
b. 2.08
c. 2.14
d. 2.50
e. Not enough information provided
294,250 lb. of feed/137,500 lbs of live weight = 2.14 FCR

7. How many pan/tube type feeders should be provided for this flock?

a. 1250 – 1389 pan/tube type feeders
b. 1300 – 1400 pan/tube type feeders
c. 1325 – 1477 pan/tube type feeders
d. 1426 – 1523 pan/tube type feeders
e. 1618 – 1745 pan/tube type feeders
25,000 birds in house / 18 low recommendation = 1389 pan/tube type feeders
25,000 birds in house / 20 high recommendation = 1250 pan/tube type feeders

Scenario #3

A flock of broilers was loaded at 12:00 pm to transport to a processing facility. A total of 100,000 broilers were loaded with an average live weight of 6.5 lbs. On the trip, tragically all of the trucks had 2 flat tires and were unable to reach the processing plant until 5:00 pm that afternoon. (page C-126)

8. How many pounds were lost to shrink for this flock?

a. 975 lbs.
b. 15,600 lbs.
c. 4,290 lbs.
d. 15,458 lbs.
e. 24375 lbs.

100,000 x 6.5 lbs = 650,000 initial flock weight
650,000 x 99.25% = 645,125 flock weight after 1 hour – shrink 0.75%
645,125 x 99.25% = 640,286.6 flock weight after 2 hour – shrink 0.75%
640,286.6 x 99.7% = 638,365.7 flock weight after hour 3 – shrink 0.3%
638,365.7 x 99.7% = 636,450.6 flock weight after hour 4 – 0.3% shrink
636450.6 x 99.7% = 634,541.2 flock weight after hour 5 – 0.3% shrink
650,000 – 634,541.2 = 15,458.8 lbs shrink.

Use information provided in the PowerPoint for answering questions 9, 10, and 11.

9. Feed expense plays a significant role in the cost to produce broilers. **Considering feed cost alone**, which broiler strain would cost the most to produce?

a. Strain A
b. Strain B
c. Strain C
d. Strain D
e. All of the above

10. If the feed for a flock cost approximately $110/ton, considering feed cost alone, what would be the difference in cost between 125,000 lb flock of Strain A broilers compared to the same weight of Strain D broilers?

a. $657.58
b. $893.75
c. $913.21
d. $993.65
e. $1,056.45

Strain A – 125,000 lb. x 2.14 FCR = 267,500 lb of feed / 2000 = 133.75 tons of feed x $110/ton = $14,712.5 feed cost.

Strain D – 125,000 lb. x 2.01 FCR = 251,250 lbs feed / 2000 lbs. = 125.62 tons of feed x $110/ton = $13,818.75 feed cost.
Strain A 14,712.5 – Strain D 13,818.75 = $893.75 difference in feed cost alone.

11. If top producing broiler companies are slaughtering approximately 34 million broilers a week, what will be the difference in pounds of fillets produced between strains C and D?

a. 5,564,200 lbs.
b. 4,560,890 lbs.
c. 2,120,100 lbs.
d. 1,562,456 lbs.
e. 6,296,800 lbs.

Strain C – 34,000,000 broilers x 7.16 lb live weight/bird = 243,440,000 lbs. live weight
243,440,000 lbs. live weight x 22.2% fillet yield = 54,043,680 lbs of fillets
Strain D – 34,000,000 broilers x 7.52 lb live weight/bird = 255,680,000 lbs. live weight
255,680,000 lbs. live weight x 23.6% fillet yield = 60,340,480 lbs of fillets
Strain D 60,340,480 lbs of fillets – Strain C 54,043,680 lbs of fillets = 6,296,800 more lbs fillets for Strain D.

12. Prevention is the most economical method of disease control. Which of the following is NOT a recommended method of disease control? (page C-126)

a. Isolation
b. Sanitation
c. Effective management
d. Quality vaccination program
e. Use of antibiotics by the grower

13. On a cool fall day, with an ambient temperature of 63°F and a relative humidity of 20%, the environment of a commercial broiler house was easily maintained at 65°F. The following day warmed considerably and temperatures reached 80°F with 60% relative humidity. Evaporative cooling pads were used to decrease the house temperature. Based on the given ambient temperature, relative humidity, and the use of evaporative cooling pads what is the expected internal temperature of the broiler house? (page C-125)

a. 60°F
b. 65°F
c. 70°F
d. 75°F
e. 80°F

14. Brooding is commonly the term used for the first period of market broiler production. After the chicks are placed in the house, during the first 3 days, how many hours of darkness in each 24 hour period are allotted to the birds? (page C-???)

a. 0 hours of dark
b. 4 hours of dark
c. 6 hours of dark
d. 8 hours of dark
e. Greater than 8 hours of dark

15. Refer to the provided PowerPoint presentation, based on this information it could be determined that the housing environment is _____.

a. Too hot
b. Temperature in house is appropriate
c. Too cold
d. Drafty (page C-119)
e. Not enough information provided