

**Team Activity 1**  
**Kansas State University**  
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Because broiler production is increasing nation wide, the industry must expand in order to meet consumer demand. A poultry company plans to expand by starting a new facility in Kansas. As a graduate of Kansas State University with a degree in Animal Science, you have been hired to assist with equipment acquisition and constructing new broiler grow-out farms. These farms will be used to produce broilers that will be processed for the fast food industry.

Your houses must have the following specifications:

1. They must be highly efficient and as automated as possible.
2. All houses will be tunnel ventilated.
3. Each house will grow approximately 30,000 birds per house at winter density. A grower's house will be exactly 40 feet wide.
4. There will be 2 lines of drinkers that run the length of the house and 3 lines of feeders. One pan feeder will be required for each 50 birds.
5. All growers must install some type of evaporative cooling equipment.
6. Only artificial light will be used by the grower with no outside light coming into the building.
7. The grower must provide 0.7 square foot per bird growing space.
8. You will insist that all growers use composting to properly dispose of waste from the broilers.
9. You have decided the growers to must use a technique called "Whole House Brooding" to start the chicks.

Please circle the appropriate answer for each of the following questions on your team answer sheet.

1. Since you are growing broilers to produce meat for grocery stores and fast food markets, you will monitor body weight to decide when the bird should go to the processing plant. About how many pounds will each weigh?  
a. 2.1 lbs                      b. 4.5 lbs                      c. 7.3 lbs                      d. 8.5 lbs
2. When the chicks arrive at the grower farm, you should tell the growers that the optimum temperature for the chicks measured about 2" above the liter will be:  
a. 90° F                      b. 80° F                      c. 70° F                      d. 100° F
3. How long should you tell each of the growers to build their buildings, considering the number of birds placed per square foot and the number of birds per house?  
a. 350 ft                      b. 450 ft                      c. 525 ft                      d. 625 ft
4. Each grower must install an evaporative cooling system. Which of the following would **not** be considered an evaporative cooling system for grower production?

- a. reflective insulation in the roof      b. low pressure fogging system  
c. a pad or filter system      d. an ultra-high pressure mister
5. When giving the growers instructions on how to start chicks, which of the following do you recommend the growers provide to the chicks when they first reach the farm?
- a. water then feed      b. feed then water  
c. feed and water at the same time      d. none of these
6. Which of the following systems are not considered to be a type of watering system for growing broilers?
- a. nipple drinkers      b. cup drinkers  
c. bell drinkers      d. augers with pans
7. All the growers will have to vaccinate their own birds to keep the flocks healthy. Which of the following methods is more likely to be used to vaccinate the birds?
- a. evaporative condensation      b. through the water  
c. by injection      d. in the feed
8. When would you recommend limiting feed when producing the broilers?
- a. I would immediately start them on a reduced feed intake program.  
b. At three weeks of age, I would start a skip a day program.  
c. Never, I would feed full feed the entire life of the birds.  
d. Only after the birds are 6 weeks old would I implement a feed restriction program.
9. How many feed pans need to be installed in a single house for the birds?
- a. 600      b. 1,000      c. 2,500      d. 3,000
10. If the company you work for suddenly decided to grow turkeys instead of broilers, which of the following day old stock should you order?
- a. poults      b. turkey chicks      c. pullets      d. toms
11. If you had a grower who installed two of the houses according to your specifications and at the end of a typical growth cycle for the birds, the grower sent 92% of the birds to the processing plant, how many total birds were sent?
- a. 21,500      b. 27,600      c. 55,200      d. 60,300
12. You require all the growers to provide bulk feed bins so that feed delivery from the feed mill will last for about 4 to 6 days. You spend time with each grower to help them realize the importance of preventing feed from getting wet in the bins.

This is to reduce the possibility of \_\_\_\_\_ contamination.

- a. Salmonella                      b. E. coli                      c. aflatoxin                      d. none of these
13. At processing time a grower returned 25,000 birds from his single production house to the processing plant. The average body weight per bird was about 5 lbs. The grower calculated a feed conversion rate of 2.0 lbs of feed/lbs of gain for the flock. How many tons of feed were required to grow the birds?
- a. 62.5 tons                      b. 102.5 tons                      c. 31.25 tons                      d. 125 tons
14. Which of the following types of litter material would you **not** recommend a grower use to produce broilers?
- a. hard-wood shavings      b. soft-wood shavings
- c. corn cobs                      d. peanut hulls
15. Opposition to animal production today is mostly related to odor coming from a confined animal facility. However, as a broiler producer you know that offensive odors are generally not a problem with poultry production provided that proper management of the birds occurs. The amount of moisture in the litter will determine the amount of odor that arises from broiler production. In specifications for the farms you should require each grower to monitor the litter moisture and manage the facilities to have no more than \_\_\_\_\_ % moisture in the litter.
- a. 5%                      b. 10%                      c. 15%                      d. 25%