

National FFA 2022
Poultry CDE
Team Activity Reference Material

Welcome to the 2022 National FFA Poultry CDE team activity. This activity will first include a few questions about the hen's reproductive tract, and then will proceed on a journey through a hatchery that produces egg-strain pullets, an egg-strain pullet farm, and a table egg farm (which produces table eggs for consumption).

Some of this team activity is based on your knowledge from the anatomy and physiology, hatchery management, and egg-strain pullet and hen management sections of the manual. The activity also requires use of the information below, and information that will be made available during the activity.

Make sure you review the guidance on the following page as you prepare for your presentation.

Information pertaining to the egg-strain hatchery:

- Assume 50% of the eggs that hatch are male, and 50% are female
- Average hatching egg storage time prior to incubation is 12 days
- Eggs are typically moved directly from the storage room to the incubator
- Incubator temperatures average 102 F, and the relative humidity averages 80%

Information pertaining to the egg-strain pullet farm:

- On this farm, egg-strain pullets are raised on the floor
- There are 6 houses on the farm, and each house is 500 feet long
- Each house contains 25,000 egg-strain pullets
- For this farm, the recommended space per bird = 0.9 square feet per bird
- Feeders:
 - Each house contains 3 lines of pan feeders, with each line containing 150 pan feeders
 - The recommended number of pan feeders = 1 pan/50 birds
- Waterers:
 - Each house contains 3 lines of nipple waterers, with each line containing 600 nipple waterers
 - The recommended number of nipple waterers = 1 nipple/15 birds
- At 14 weeks of age, the target body weight for the pullets = 1,100 grams

Information pertaining to the table egg farm (which is a conventional cage layer facility):

- All of the live birds from the egg-strain pullet farm were placed on the table egg farm; total number of hens placed = 147,000 birds
- This flock of laying hens reached peak egg production at 33 weeks of age; at this point 2.5% of the laying hens had died since being placed in the laying facility
- The laying cycle lasted 70 weeks (ending when the birds were 88 weeks of age); the average number of eggs produced (per hen housed) was 350

Information pertaining to cost analysis:

- Cost of raising a pullet to production age (includes chick costs and all pullet production costs, and accounts for mortality during the growing phase): \$5/bird placed at the layer farm
- Average cost of egg production (does not include pullet costs): \$0.70/dozen eggs produced
- Value of eggs (price paid to the layer farm for the eggs): \$1/dozen eggs
- Feed cost during the laying period: \$15.80 per hen housed

Team Activity Presentation

Address the following items during your presentation:

- Given the total number of egg-strain birds placed on the pullet farm, how many eggs would have to be set to supply all of the pullets that were placed on the farm?
- Based on the provided information and your calculations and answers to the questions, evaluate the performance of the breeder farm, hatchery, pullet farm, and layer farm.
 - Are there areas in which performance appears to be satisfactory?
 - Are there issues to address or opportunities for improvement?
 - As you discuss performance, consider including some of your calculated answers as evidence.
- The table egg farm in the scenario is a conventional cage layer facility. Discuss the factors that should be considered when deciding whether to convert to egg production using aviaries. In other words, what are some of the advantages and disadvantages of egg production in cage layer facilities and aviaries?