



National FFA 2023 Poultry Career Development Event

TEAM ACTIVITY

Indianapolis Poultry Unlimited's operations include 2 complexes of chickens. At each of these complexes, they plan to slaughter 1,000,000 birds per week. These complexes have similar live production costs and overhead expenses. The primary difference in these complexes is the live weights at which the birds are processed, one complex has a target live weight at slaughter of 8.0 pounds, the other has a target live weight at slaughter of 4.5 pounds. Both complexes are deboning the breast fillet and tenderloin; however, they are only selling the leg quarter for export. The wings are sold to restaurants at market price.

Average carcass part yield in each of these complexes:

Product	8.0 lb % Live Weight	4.5 lb % Live Weight
Boneless Breast Fillet	21%	19%
Tenderloin	5%	5%
Wing	7%	8%
Leg Quarter	30%	35%
Thigh	11%	16%
Drumstick	10%	12%

Definition of Overhead Expense: Ongoing cost to operate a business excludes the direct costs associated with creating a product or service.

Carcass part yield calculation as % of Live weight: $\text{Weight of Part} / \text{Live Weight} \times 100 = \text{Carcass part yield}$

Market Prices for Carcass Parts:

Product	Price 8.0 lb Live Weight	Price 4.5 lb Live Weight
Boneless Breast Fillet	\$1.15	\$1.45
Tenderloin	\$1.65	\$2.00
Wing	\$1.00	\$0.90
Leg Quarter	\$0.30	\$0.25
Thigh	\$1.00	\$1.25
Drumstick	\$0.90	\$1.00

Prices expressed as \$/lb

Use this scenario and the samples provided in the Team Activity portion of the contest as indicated in the following questions.

1. From information provided in the scenario above, how many available pounds per week of boneless skinless breast fillet will be produced from the 8.0 lb live weight bird complex?
 - A. 1,530,000 lbs available breast meat
 - B. 1,680,000 lbs available breast meat
 - C. 1,850, 000 lbs available breast meat
 - D. 1,940, 000 lbs available breast meat
 - E. None of the above
2. From information provided in the scenario above, what is the calculated weekly value of the 8.0 lb complex boneless skinless breast fillet?
 - A. \$1,020,500
 - B. \$1,586,000
 - C. \$1,762,000
 - D. \$1,932,000
 - E. None of the above
3. From information provided in the scenario above, how many available pounds per week of boneless skinless breast fillet are expected for the 4.5 lb live weight bird complex?
 - A. 855,000 lbs available breast meat
 - B. 900,120 lbs available breast meat
 - C. 952,000 lbs available breast meat
 - D. 1,010, 200 lbs available breast meat
 - E. None of the above

4. From information provided in the scenario above, what is the calculated weekly value of the boneless skinless breast fillet from the 4.5 lb live weight complex?
- A. \$950,600
 - B. \$1,100,500
 - C. \$1,239,750
 - D. \$1,362,000
 - E. None of the above
5. Using the scenario and provided information above, what is the calculated total carcass value of the 8.0 lb live-weight bird?
- A. \$4,953,600
 - B. \$3,985,200
 - C. \$3,900,560
 - D. \$3,872,000
 - E. None of the above
6. Based on the scenario above. Which chicken has the highest total carcass value?
- A. 8.0 lb bird
 - B. 4.5 lb bird
7. Weigh and Calculate. What is the actual breast fillet to live yield if this was a 8.0 lb live weight?

Answer options available on the sample table

8. 8.) Weigh and Calculate. What is the average boneless skinless fillet weight in this sample?

Answer options available on the sample table

9. Weigh and Calculate. Uniformity is critical in the broiler industry. Which of the samples of boneless skinless breast fillet are more uniform?
- A. Sample A is more uniform
 - B. Sample B is more uniform

10. Review samples. Based on USDA grading criteria, what percentage of these drumsticks would be grade A?

Answer options available on the sample table

11. Review samples. Based on USDA grading criteria, what is the total value of this sample of drumsticks?

Market Prices for Graded Drumsticks:

Product	Price 8.0 lb Live Weight
A Grade	\$1.00
B Grade	\$0.50
C Grade	\$0.40
No Grade	\$0.20

Prices expressed as \$/lb

Answer options available on the sample table

12. For an “all white meat” product which muscles of the chicken can be utilized?

- A. Pectoralis major
- B. Gastrocnemius
- C. Pectoralis minor
- D. Iliotibialis
- E. Both a and c

13. Define USDA.

- A. United States Department of Animal production
- B. United States Inspection Service
- C. Food Safety Inspection Service
- D. United States Division of Agriculture
- E. United States Department of Agriculture

14. The USDA considers chicken products fully cooked at what minimum internal temperature?

- A. 145°F
- B. 150°F
- C. 155°F
- D. 160°F
- E. 165°F

Indianapolis Poultry Unlimited is considering buying processing equipment to begin deboning their thighs. There are pros and cons to this project. Their average bone in-skin on thigh weight is 7.16 ounces. They are estimating an approximately 65% boneless-skinless thigh fillet yield if they complete this project.

Boneless-skinless Thigh Yield Calculation: Boneless-skinless Thigh Weight / Bone in-skin on Thigh Weight X 100 = Boneless-skinless thigh yield

Market Prices for Carcass Parts:

Product	Price 8.0 lb Live Weight
Leg Quarter	\$0.30
Thigh	\$1.00
Boneless-skinless Thigh	\$1.30
Drumstick	\$0.25

Prices expressed as \$/lb

15. Calculate the pounds of boneless-skinless thigh meat available from the 8 lb live weight bird complex (Remember scenario provided above).

- A. 480,623 lbs available BS thigh
- B. 581,750 lbs available BS thigh
- C. 625,856 lbs available BS thigh
- D. Not enough information provided
- E. None of the above

16. Calculate the value of boneless skinless thigh meat from the 8.0 lb live weight bird.
- A. \$756,275
 - B. \$652,566
 - C. \$620,560
 - D. \$500,530
 - E. Not enough information provided
17. Assuming the total value of the drumsticks alone at this complex are \$200,000. Considering market values alone, would it be a more profitable choice for this company to begin making boneless skinless thighs?
- A. Yes, considering sales price alone, the company will be more profitable deboning thigh fillets
 - B. No, considering sales price alone, the company should only sale leg quarters
18. In the commercial poultry industry lighter weight chickens are used for _____and _____operations.
- A. Further processed and breaded products
 - B. Fast Food and breaded products
 - C. Fast food and whole bird
 - D. Retail and deli
 - E. Casual dining restaurants and retail
19. True or False – Hormones are never used in commercial poultry production.
- A. True
 - B. False
20. Grading of poultry products help define the product to the consumer. Grading is conducted at point of cut up or packaging by _____.
- A. Independent contractors
 - B. USDA Animal Management Service
 - C. USDA Agriculture Marketing Service
 - D. USDA Food Safety Inspection Service
 - E. None of the above