

# Team Assessment

From Farm to Slaughter:  
Husbandry and transportation of  
Broiler birds

# Background

- The following integrated production chain, from farm to slaughter, wishes to join an accredited welfare labeling scheme
- You have been hired as a consultant, based on your animal welfare expertise
- This is your third visit and you must now prepare a final assessment, indicating issues which should be addressed:
  - immediately (within days)
  - short-term (within a month)
  - longer term (within six months)in order to compete for accreditation

# Farms

- Contract growers supply the processing plant with broiler birds
- Farm owners provide land, labor, houses, equipment, taxes, utilities, and insurance
- Production company furnishes birds, feed, medication, supervision, and markets the product
- Farmers are paid 4.6¢ per pound (10.12¢ per kg)

# Farm

- Each farm site has 2-4 houses, each measuring 45ft X 490ft (22,000ft<sup>2</sup>) (13.7 X 149 m (2,045m<sup>2</sup>))
- Each house is stocked with approximately 30,000 birds (average liveability = 94.5%)
- Average weight at slaughter is 5 lb (2.3kg)



# Farm

- Birds are housed on deep litter
- Lighting is maintained at 5 lux
- Farmer reported that ventilation systems regularly require maintenance
- Records show that ammonia levels regularly exceed 35-45ppm
- Humidity was recorded at 80%



# Pre-catching

- All houses on a site are depopulated on the same day
- Birds are caught and loaded during the early hours of the morning
- Feeders are raised approximately 5-8 hrs prior to the arrival of the catching team
- Drinkers are raised 1 hour before depopulation of the houses



# Catching

- Catching crews are made up of 6-8 people
- Prior catching experience is not required for new employees
- New employees are given a training manual outlining procedures
- Catchers are paid \$25 per 1000 birds loaded
- Teams catch at an average rate of 7000-9000 birds per hour



# Catching / loading

- General catching method involves catching by one leg and carrying 3-4 inverted birds per hand
- Birds are loaded into stackable crates 2.3 x 4.3 x 0.8ft (1.3 x 0.7 x 0.25m)
- 21-23 birds per crate
- Average loading time is ½ - 1 hour per truck





# Transport

- Vehicles consist of truck and trailer components, both fitted with detachable curtain sides
- Each trailers is fitted with a temperature and humidity gauge, allowing the driver to monitor the environmental conditions of the birds
- Vehicle capacity is 320 crates
- Drivers are paid by the mile
- Drivers have limited knowledge of poultry welfare
- Journey time to processing plant is between 3-6 hours

# Holding

- Birds from 3-4 farms arrive every day to maintain constant supply to processing line
- Chickens remain in crates until slaughter
- Fans are provided to cool birds in lairage area
- Birds are misted with water during holding
- Average holding time prior to slaughter is 4.5 hours

- At least 2 workers were observed throwing birds during visit
- Some transport crates showed damage (~5-6% of crates observed in lairage)
- A small number of birds were observed with legs/wings caught in broken crates

# Slaughter procedure

- Plant operates 2 8-hr shifts a day, 5 days a week
- 4 evisceration lines running at a rate of 70 birds/min are supplied by 2 kill lines
- Kill line speed is 140 birds/min
- Average processing capacity of plant is 1,300,000 birds per week

- Birds are shackled on the line, then enter the waterbath stunner, where heads are immersed in a brine solution
- Current of 110 mA passed through birds
- Mechanized neck cutter with manual back-up bleeder
- Average time between stunner and neck cutter = 34 secs
- Interval between bleedline and scalding is approx. 45 secs



# Carcass measures

<i>Factors measured</i>	<i>Percentage (based on 5000 birds)</i>
<i>DOA's</i>	<i>0.46%</i>
<i>Hockburn</i>	<i>8%</i>
<i>Breast blisters</i>	<i>3%</i>
<i>Foot lesions</i>	<i>24%</i>
<i>Broken wings (feathers on)</i>	<i>5.4%</i>
<i>Bruised thighs/drumsticks</i>	<i>4.7%</i>
<i>Carcass downgrades</i>	<i>11-15%</i>

# Slaughter measures

<i>Factors measured</i>	<i>%</i>	<i># birds in 500</i>
<i>Stunning efficacy</i>	<i>92-98</i>	<i>460-488</i>
<i>Bleed machine efficacy</i>	<i>92-94</i>	<i>457-470</i>
<i>Birds missed by back-up bleeder</i>	<i>0-1</i>	<i>0-5</i>
<i>Uncut red birds</i>	<i>0.6-1</i>	<i>3-5</i>
<i>One-legged shackling</i>	<i>2-3</i>	<i>10-15</i>
<i>Birds entering waterbath in correct position</i>	<i>97</i>	<i>485</i>
<i>Stunned birds regain righting reflex</i>	<i>2-3</i>	<i>10-15</i>