

Poultry Welfare Assessment

Team Scenario

November 2008

Questions to Address

- Assess the welfare of the 3 species observed and indicate which areas are strong and weak for each species. Which species has the best welfare overall?
- What is a critical need(s) for each species that is different from the needs of the other species in question? (The need should be important enough to be included in a welfare assessment of the species, but may be irrelevant or require a different set of assessment criteria for the other species.)

Quail: Overview

- Species = *Coturnix japonica* (Japanese quail)
- Males and females are present
- Birds are currently 11 weeks of age

Quail: Space and Physical Resources

- Birds are housed in 20" x 20" (50 cm x 50 cm) cages. Cage height is uniformly 8" (20 cm).
- 12 birds/cage (3 males and 9 females/cage).
- Cage sides, top, and floor are galvanized wire.
- 1 trough feeder per cage
- 1 trough waterer per cage. The water is located on opposite side of the cage from feeder.

Quail: Light, Ventilation, Humidity and Temperature

- Rooms are lit using compact fluorescent bulbs on a 16:8 light to dark lighting schedule at 20 lux.
- Ammonia levels in the rooms are ~ 5 ppm.
- Relative humidity levels in the rooms range from 40-60%.
- Temperature of the rooms range from 60-75°F (16-24°C). Rooms are ventilated using an automatic negative pressure ventilation system.
- Each room is equipped with sensors that monitor ammonia, dust, temperature and humidity levels. When sensors detect levels that are less than ideal, they signal the ventilation system or heating and cooling systems to respond and bring the room back into an ideal range.
- Generators are available on site to provide back up power for the quail rooms to enable ventilation, lights and monitoring to continue uninterrupted for 72 hours in the event of power failure.

Quail: Basic Husbandry

- Cages have individual numbers and male quail wear plastic tags on one wing for individual identification.
- Birds are inspected once per day.
- Eggs are collected following the daily inspection.
- Water troughs are filled as needed and cleaned once a week.
- Feed troughs are filled as needed and cleaned completely when a cage is depopulated.
- Birds are fed a commercial gamebird breeder diet.
 - The diet is composed of corn and soybeans with limestone and calcium phosphate and traces of other minerals added. Protein = 20%.
- Manure pans under the cages are cleaned twice a week.
- After depopulation the room is pressure washed and dusted.

Quail: Physical Modifications

- No physical modifications are performed on the quail.

Quail: Veterinary Procedures

- Breeding stock is on property, so no quarantine is implemented when new birds are introduced to rooms. Each cage is repopulated every 3-4 months.
- Birds do not receive any vaccines or parasite control.
- If individuals are injured or sick, they are typically culled from the population because treatment options are limited and expensive.
- Euthanasia
 - Birds are euthanized using CO₂ if a group of birds needs to be euthanized.
 - Cervical dislocation is used if individual or small numbers of birds need to be euthanized.

Quail: Handling and Responses to Humans

- When the caretaker approaches within 3' of the cage, all quail retreat to far side of cage. When the caretaker reaches toward the feeder or water or to collect eggs, all quail react with sudden vertical movements toward the top and rear of the cage.
- When birds must be caught and handled, birds are caught by reaching into the cage and removing 1 bird at a time. Birds are carried 1 bird/hand in an upright position with other hand over body to trap wings.

Laying Hens: Overview

- Species = *Gallus gallus* or *G. gallus domesticus*; Strain = Leghorns 36
- All birds are laying hens
- Birds are currently 37 weeks of age

Laying Hens: Space and Physical Resources

- Birds are housed in 16" x 20" (40 cm x 50 cm) cages. Cage height at the front is 14" (35 cm) while height at the rear 30% of the cage is 12" (30 cm).
- 4 birds/cage
- Cage sides, top, and floor are galvanized wire
- Trough feeders are present at the front of each row of cages
- A cup waterer is located at each side of the cage and is shared with the adjacent cage.

Laying Hens: Light, Ventilation, Humidity and Temperature

- Rooms are lit using incandescent bulbs on a 16:8 light to dark lighting schedule at 5 lux.
- Rooms are ventilated using an automatic negative pressure ventilation system.
- Ammonia levels in the rooms range from 5-10 ppm.
- Relative humidity levels in the rooms range from 40-70%.
- Temperature of the rooms range from 60-80°F (16-27°C). Temperature gauges are located in each room.
 - Heaters in winter maintain room temperatures at or above 60°F (16 °C).
 - Fans provide cooling in summer and no heat stress has been observed in the birds.
- There is an on-site generator of sufficient strength to power lights and ventilation for up to 24 hours in an emergency.

Laying Hens: Basic Husbandry

- Cages have individual numbers but no system of identifying individual birds within each cage is used.
- Birds are inspected once per day in the late morning.
- Eggs are collected following the daily inspection.
- Water lines and cup drinkers are inspected daily. Cups are cleaned out every other day.
- Feeders are filled as needed and emptied and wiped out every 6 weeks. Feeders are cleaned out completely and pressure washed upon depopulation.
- Birds are fed a commercially available diet for laying hens in early production.
 - The diet is composed primarily of wheat, peas, and soybeans with limestone and dicalcium phosphate and traces of other minerals added. Protein = 16%.
- Manure that falls under the cage frames is scraped out and removed daily.
- After depopulation the room is pressure washed and dusted thoroughly.

Laying Hens: Physical Modifications

- All layers are beak-remodeled to remove 1/3 upper beak.
- Beak-remodeling is done when birds are 7 days old by using a hot-blade precision cut trimmer.

Laying Hens: Veterinary Procedures

- All pullets are obtained from facilities that test for common infectious diseases such as Marek's, Newcastle, infectious bronchitis, and infectious avian encephalomyelitis.
- All birds are vaccinated as pullets prior to being moved into the laying facility.
- Birds are monitored for the presence of mites, and typically no parasite control is used due to low levels of external parasites observed.
- Disease outbreaks in house may be handled by administering vaccines to slow the spread.
- If individuals are injured or sick, they are typically culled from the population because treatment options are limited and expensive.
- Euthanasia
 - Birds are euthanized using CO₂ if a group of birds needs to be euthanized.
 - Cervical dislocation is used if individual or small numbers of birds need to be euthanized.

Laying Hens: Handling and Responses to Humans

- When the caretaker approaches the cage bank to check feeders and waterers, hens do not withdraw from the cage front. When the caretaker reaches toward the feeders or waterers or collects eggs, the hens pull their heads back into their cage and withdraw slightly from the cage front.
- When birds must be caught and handled, the lights are dimmed and birds are caught by slowly reaching into the cage and removing one bird at a time. Birds are carried 1 per hand in an upside down position during movement.

Turkeys: Overview

- Species = *Meleagris gallopavo*; Strains = Nicholas & Hybrid
- All birds are toms
- Birds are currently 14-15 weeks of age

Turkeys: Space and Physical Resources

- 8' x 10' (2.4 m x 3.05 m) pens
- 18 birds/pen
- Concrete floor covered by 3" (7.6 cm) of wood shavings
- 1 tube feeder per pen
- 1 self-filling bell drinker per pen

Turkeys: Light, Ventilation, Humidity and Temperature

- Rooms are lit using incandescent bulbs on a 16:8 Light to dark lighting schedule at 10 lux.
- Rooms are ventilated using an automatic negative pressure ventilation system.
- Ammonia levels in the rooms range from 10-20 ppm.
- Relative humidity levels in the rooms range from 40-90%.
- Temperature of the rooms range from 55-85°F (13-29°C). Heaters are used in winter to try to keep temperatures above 60°F (16 °C).
- There is no back up power on site, but the producer can bring in off-site generators within 2 hours if needed.

Turkeys: Basic Husbandry

- Pens have individual numbers but no system of identifying individual birds is used.
- Birds are inspected once per day.
- The waterer is visually checked on a daily basis for problems and cleaned out twice a week.
- Feed is topped as needed. The feeder is cleaned out completely and pressure washed upon depopulation.
- Birds are fed a custom-blended grower diet.
 - The diet is composed primarily of corn, celite, soybean meal, and wheat midds with limestone, dicalcium phosphate, lysine, copper sulfate, and traces of other minerals added. Protein = 13%, Ca = 2.79%, Phos = 0.86%
- A top dressing of shavings is added to the room 2-3 times during the entire growing phase.
- After de-population, all shavings are removed and pens are pressure washed and allowed to dry thoroughly.

Turkeys: Physical Modifications

- Beak-remodeled is performed using infrared energy to remove 1/4 of upper beak.
- Toe conditioned is performed using microwave energy to remove each toe to the distal joint.
- De-snooded is performed using microwave energy to completely remove the snood.
- All procedures are done when birds are 1 day old.

Turkeys: Veterinary Procedures

- No quarantine is used when introducing new birds because birds are introduced all at once.
- Poults come from a breeder who routinely tests for salmonella
- A sample of birds is tested for avian influenza at the end of the growing phase
- A coccidiostat is given to birds from 5-6 weeks of age
- During grow out, wormer is administered at 10, 14 and 18 weeks of age
- Treatment of sick/injured birds:
 - If individuals are injured or sick, they are typically culled from the population because treatment options are limited and expensive.
 - If a disease outbreak occurs, the severity of the outbreak and stage will be evaluated prior to determining if treatment, vaccination or euthanasia is the appropriate option.
- Euthanasia
 - Birds are euthanized using CO₂ if a group of birds needs to be euthanized.
 - Cervical dislocation is used if individual or small numbers of birds need to be euthanized.

Turkeys: Handling and Responses to Humans

- When the caretaker enters the pen to check the feeder and waterer, birds move slowly away to maintain a 1' distance from the caretaker.
- When birds must be caught and handled, they are slowly approached and caught one at a time.
- Birds are held with their legs in one hand and wings in the other with the bird in an upright position (i.e., their backs are held parallel to the floor).