

SOP #: 318.02Title: SOP - Bobwhite Quail (Colinus virginianus) - Care and Husbandry

Approvals:

Attending Veterinarian

Date:

Principal Investigator

Date:

1. Purpose

1.1 The purpose of this Standard Operating Procedure (SOP) is to outline the animal care and facility maintenance requirements associated with the daily husbandry of bobwhite quail (*Colinus virginianus*), to ensure consistent and uniform animal care.

2. Responsibility

2.1 It is the responsibility of the PI laboratory personnel to follow this procedure.

2.2 It is the responsibility of supervisory personnel to ensure compliance with this procedure and for employee training.

3. Definitions

3.1 ACF - Animal Care Facility

3.2 AV: Attending Veterinarian

3.3 PI: Principal Investigator

4. Guidelines

4.1 All activities outlined in this SOP are performed by PI laboratory personnel and recorded on the Quail Room Maintenance Form 920 current revision unless otherwise noted.

4.2 All personnel must use appropriate protective clothing.

4.3 Always observe written instructions if posted on animal room door and if necessary contact Laboratory Supervisor for additional instruction.

#### 4.4 Daily Health/Environmental Observations

4.4.1 In order to ensure optimal health of our animal subjects, proper animal husbandry is necessary. The birds are to be provided with fresh and adequate, feed and water.

##### 4.4.2 **Preparing the Rearing Room**

4.4.2.1 Upon hatch (and before transfer), the rearing room (RR) temperature should be at 97°F (36.1°C). If temperature is too low, adjust the temperature of each heater accordingly.

4.4.2.2 If the RR temperature is too high, prop the main RR door open until it lowers to the appropriate temperature and lower the temperature of the heater by 1-2°F. Simply press the button with a plus/minus sign next to them, near the bottom of the radiator control, to adjust the temperature up/down.

4.4.2.3 The shelves of the animal isolator should be wiped clean of any feed or water residue before new bins are set up and new chicks are transferred. This is usually completed just after the previous week's subjects have left.

4.4.2.4 If the shelves are to be wiped immediately before transfer, they should be wiped with a damp paper towel. Disinfectant wipes should only be used in the RR if there is to be at least 2 hours between cleaning and chick transfer, in order to allow the scent of the cleaning items to dissipate.

##### 4.4.3 **Setting Up Rearing Tubes**

4.4.3.1 Each bin is to be set up with one liner. Liners are made out of a grip material, usually purchased from Publix, and are located inside the bin labeled "liners" in the RR.

4.4.3.2 To set up a bin for transfer, place one liner inside the tub. Make sure the liner covers the entire area of the bottom of the bin. If chicks get underneath the liner and slip on the bottom of the bin, the chicks' legs will not develop properly, often resulting in split-legged deformities.

4.4.3.2.1 Chicks can develop with deformities due to various reasons, including inappropriate levels of humidity or temperature, inappropriate rearing conditions, and poor nutrition.

4.4.3.2.2 Sometimes a chick will have a dislocated hip or bad leg. With proper food and water, the chick should be okay.

- 4.4.3.2.3 Chicks can also develop splayed or spraddle legs. Usually these chicks cannot walk properly and will die unless they can correct them. It is best to euthanize those that are not able to reach food or water.
- 4.4.3.2.4 Another other deformity sometimes encountered is a sac protruding from the chick's bottom. This is a result of incomplete absorption of the yolk sac. These chicks will likely not survive. If the chick is observed to have trouble walking or is observed being pecked incessantly by other chicks, it should be euthanized as well.
- 4.4.3.3 Once a liner has been placed inside the bin, you are now ready to transfer chicks. The lab manager should designate how many chicks are to be delegated to each postnatal study.
- 4.4.3.4 Each bin should only have a maximum of 15 chicks.
- 4.4.3.5 If a bin has a specific set-up, refer to that experimenter's standard operating procedure (SOP) for further instructions.
- 4.4.3.6 Add 1/8th cup of feed towards the front of the tub. Make sure to leave space so the water bottle (added later) and feed do not make contact. If they do make contact, the bin and RR will start to have a foul odor.
- 4.4.3.7 You must first check the hatcher to see if enough birds have hatched for transfer. If a few birds prematurely hatch, transfer them into their own separate tub. If there are only a few birds that have hatched on hatch day, leave them to stimulate the other birds to hatch as well.
- 4.4.3.8 To transfer the newly hatched chicks into a tub, bring the tray from the hatcher into the RR, and separate the appropriate amount of birds into their new tubs (minimum 12 birds if not otherwise specified by studies).
- 4.4.3.9 If there are only 1-3 birds remaining, just transfer these by hand into the RR. Make sure that the hatched birds are of the same developmental ages. **DO NOT MIX BIRDS UNLESS SPECIFIED BY THE LAB MANAGER OR AN EXPERIMENTER.**
- 4.4.3.10 Make sure to return the hatcher tray back to the hatcher. After the birds have been placed into their respective tubs, make sure to fill out the hatch data sheet for this week. Each tub will have a sticker corresponding with its experiment as noted on the hatch data sheet. Make sure to set up any special directions for respective experiments by this point.
- 4.4.3.11 Once the tubs (now containing liner, feed, and chicks) are placed on the shelf, put a water bottle towards the center of the tub. Water bottles should not make

contact with the edges of the tub and should never be placed in corners. Be careful not to place the bottle on top of as chick, or on top of feed.

4.4.4 **Water:** Fresh tap water must be provided every day.

4.4.4.1 Take a mason jar from within a housing bin/above the sink and rinse it with water to ensure cleanliness.

4.4.4.2 Fill the mason jar with water between 200mL – 300mL.

4.4.4.3 Take a white jar cap from above the sink and seal the mason jar with water.

4.4.4.4 Keep the mason jar upright until the point of placing the mason jar inside a subject bin to avoid water spillage.

4.4.4.5 Once prepared and ready to be placed into a housing bin, turn the mason jar over carefully.

4.4.4.6 Place the turned over mason jar (white cap facing down) and place it at the very center of the housing bin.

4.4.4.7 It is very important that the mason jar with water is placed at the center of the bin. A mason jar too close to the corners/walls of the housing bin could result in birds drowning.

4.4.5 **Feed:** 1.1.1 Fresh feed (18% Manapro Chickstarter Gamebird Feed) must be provided everyday according to the age of the birds. Purchased at Velasco's Hardware and Animal Feed.

4.4.5.1 Amount of feed to be given, dependent on age:

4.4.5.1.1 Hatch Day: ½ Tablespoon

4.4.5.1.2 24 hours: 1 Tablespoon

4.4.5.1.3 48 hours: ⅓ Cup

4.4.5.1.4 72 hours: ⅓ Cup & 1 Tablespoon

4.4.5.1.5 96 hours: 2- ⅓ Cup

4.4.5.1.6 120 hours: 3- ⅓ Cup

4.4.5.2 Take the designated amount of feed for the current age of the birds.

4.4.5.3 Measurement spoons for the necessary amounts can be found directly above the feed storage bin.

- 4.4.5.4 Place half of the designated amount of feed and place it in a small heap at one end of the housing bin.
- 4.4.5.5 Take the remaining half of the designated amount of feed and place it in a small heap at the opposite end of the housing bin.
- 4.4.5.6 Feed will be used within six months post milling date. Expiration date will be marked on the bag of feed.
- 4.4.5.7 Feed stock will be rotated to ensure that it is used within the expiration date.
- 4.4.6 **Rearing Temperature:** they must also be housed in adequate temperatures, as they are highly sensitive to temperature fluctuations.
  - 4.4.6.1 Regardless of post-hatch location, birds must be kept at designated environmental temperature, dependent on birds' age.
  - 4.4.6.2 Environmental temperatures should be changed daily according to the following:
    - 4.4.6.2.1 Hatch Day: 97°F
    - 4.4.6.2.2 24 Hours: 94-96°F
    - 4.4.6.2.3 48 Hours: 93-94°F
    - 4.4.6.2.4 72 Hours: 92-93°F
    - 4.4.6.2.5 96 Hours: 91-92°F
    - 4.4.6.2.6 120 Hours: 90-91°F
  - 4.4.6.3 Take a thermometer and place it in the room in which the housing bins are located.
  - 4.4.6.4 Set up an appropriate heater by plugging it into an electrical outlet.
  - 4.4.6.5 Be aware of which electrical outlet the heater is being plugged into. Check to be sure that the circuit the electrical outlet is connected to is not being overpowered BEFORE plugging the heater in and turning it on.
  - 4.4.6.6 Set the heater to an appropriate temperature, depending on the current temperature in the room.
  - 4.4.6.7 Wait for 15-20 minutes and then check the temperature in the room the housing bins are in. Adjust the heater temperature accordingly.

4.4.6.8 Continue step 4 until the room temperature has consistently remained at the designated temperature for the birds' age.

4.4.6.9 Check the room temperature throughout the day to ensure it remains consistent and adjust it accordingly.

#### **4.4.7 Daily observations**

4.4.7.1 Observe all animals for signs of illness, injury, deaths.

4.4.7.2 Fecal materials are checked for presence and consistency.

4.4.7.3 Physical signs to assess are discharge from the eyes or nose, sneezing, anorexia, weight loss, not drinking and changes in behavior.

4.4.7.4 Document daily observations on the Form 920 current revision.

4.4.7.5 If a bird is found needing emergency attention or medical care, contact the AV immediately.

4.4.7.6 Report room/facility problems (plumbing, electrical, HVAC, burned out lights, etc.) to facility management.

#### **4.4.8 Daily Sanitation Duties**

4.4.8.1 Sweep floors and dispose of refuse in labeled trash can.

4.4.8.2 Check sinks, countertops and walls daily and clean as needed.

4.4.8.3 Restock room supplies (food, paper towels, bedding).

4.4.8.4 Clean floor with approved disinfectant, using designated mop.

4.4.8.5 Make sure there is no standing water.

4.4.8.6 Exit room and initial daily tasks completed— Bobwhite Quail Room Maintenance form 920 current revision.

#### **4.4.9 Laundry Procedures**

4.4.9.1 Soiled lab coats and liners of the testing apparatus are laundered in the ACF laundry facility. No items will be laundered offsite.

### **5. References**

5.1 Paragraph 4.4.9 4.4.9 Laundry Procedures has been added to address an SFI from 2013 AAALAC site visit.