



Cornell University
Cornell Center for Animal Resources and Education

CARE550.01 Duck Husbandry and Preventative Health Program

The purpose of this standard operating procedure (SOP) is to describe the routine husbandry and preventative health procedures at Cornell University Duck Research Laboratory. This SOP is intended for trained personnel using or caring for ducks at the Duck Research Laboratory. This SOP is approved by the Cornell Institutional Animal Care and Use Committee (IACUC) and the Cornell Center for Animal Resources and Education (CARE). Any exemption must be approved by the IACUC prior to its application.

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1. Introduction

The purpose of this SOP is to describe the basic procedures required for routine duck care.

2. Materials and Methods N/A

3. Procedures

Animal Care

- a. Observe and care for animals daily, including weekends and holidays.
Note: Emergency veterinary care is available at all times through the veterinary staff of the Duck Research Laboratory
- b. Animal identification methods
 - Identify ducks by building and pen numbers. For experimental ducks, use web cutting to identify individual animals.
- c. Records and documentation
 - Refer to CARE SOP 542.01 ([Maintaining Clinical Records for Animal Research Models](#)) for record keeping requirements at Cornell animal facilities.
- d. Feeding Routine

- Feed ducks to meet current National Research Council recommendations for duck nutrition. Store and deliver feed ingredients and finished feeds so that contamination or spoilage is minimized.
 - Ensure that water is available at all times, and check daily for cleanliness.
 - Ensure that permanent watering devices are available and in working order.
 - Monitor water regularly to ensure that it is free of contaminants that could potentially expose animals to chemicals or infectious agents. Refer to CARE SOP 543.01 ([Water Quality Monitoring in Agricultural Facilities](#)) for water quality monitoring requirements.
- f. Breeding program
- Breed ducks naturally by placing ducks in the breeding pens so that the sex ratio is one drake to five hens.
- g. Social and environmental enrichment
- Ensure that ducks are in visual and physical contact with one another and with animal care personnel.

Animal Health

- a. Vaccination program

Animal	Time	Vaccine
Duckling	13 days	<i>E. coli</i> – <i>Riemerella anatipestifer</i> bacterin
Duckling	21 days	<i>E. coli</i> – <i>Riemerella anatipestifer</i> bacterin
Breeders	Annual	Duck Virus Enteritis

NOTE: Treatments are routinely administered by professional caretakers in consultation with veterinary staff.

- b. Quarantine procedures
- Keep animals that are brought in together, separated by source.
Note: Birds are seldom obtained from outside sources.
- c. Potentially painful or distressful procedures
- Web Cutting – Web cutting is done in ducklings at 3 to 10 days of age. Restrain the duckling gently by hand while a 0.5- to 1-cm cut is made in the web between two digits. Take care to avoid blood vessels to minimize bleeding.
 - Bill Heat Treatment – Trim the nail of the upper bill in ducklings at 1 day of age. Hold the duckling gently in one hand while the nail of the bill is pushed into contact with the surface of the heated blade of an electric beak trimmer.
 - Forced Molting – Induce molting a maximum of one time per bird by discontinuing all artificial light and preventing access to feed for approximately 3 days. **Do not** restrict access to water.

Remove and euthanize sick or emaciated birds prior to forced molting.

Note: Use trained professional staff to conduct these procedures .

- d. Euthanasia and disposal of dead animals
 - Euthanize ducks by CO₂ inhalation. See CARE SOP 308.1 (Avian Euthanasia).
Note: Conduct euthanasia with trained and experienced staff only. Neonatal and diving birds are tolerant of high concentrations of CO₂. Prolonged exposure to high concentrations of CO₂ will be required to produce death (e.g., up to 5 minutes in 60–70% CO₂ for 1-day old chicks).
 - Dispose of dead animals by rendering through a commercial source.
- e. Pest control
 - Refer to CARE SOP 538.01 ([Vermin Program](#)) for a description of the vermin control program in agricultural facilities.
 - Do not use chemicals or pesticides. Use mechanical means (trapping) and visual observation of vermin activity.

Facilities

- a. Housing
 - House ducks in barns with bedded pens, indoor/outdoor pens or in suspended floor cages.
- b. Space requirements
 - Use pens and cages that are appropriate for the size and number of birds housed in them, meeting or exceeding recommendations set in Tables 8-5 and 8-6 (pg. 61) of the *Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching*.
- c. Cleaning and sanitation pens and cages
 - Suspended cages – Flush non-bedded pens and cages daily.
 - Bedded pens - Remove wet litter twice weekly or as needed and add clean straw. At the end of each laying cycle, completely remove all litter.
- d. Cleaning and sanitation of equipment
 - Clean equipment as needed.
 - Clean and sanitize equipment at the end of each cycle (6–7 months) as part of the sanitization of the barns.
 - Use ammonium chloride, sodium hypochlorite, or iodine for sanitization.
- e. On-site transportation
 - Coordinate transportation during best weather conditions available.
 - Use ramps to walk ducks into open trailer
 - Transport birds in trailer.

- f. Waste management
- Compost soiled litter. Flush non-bedded pens and cages either into a septic tank or into a manure handling system that consists of a settling pit and an open-air sump.

4. References

- *Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching*. Federation of Animal Science Societies, Savoy, IL. 1999.
- *Nutrient Requirements of Poultry*. Ninth Revised Edition. National Research Council, National Academy Press, Washington, D.C. 1994.
- CARE SOP 308.01. Avian Euthanasia
<http://www.research.cornell.edu/care/documents/SOPs/CARE308.pdf>
(Accessed 8/26/08)
- CARE SOP 538.01 Vermin Program
<http://www.research.cornell.edu/care/documents/SOPs/CARE538.pdf>
(Accessed 8/26/08)
- CARE SOP 542.01 Maintaining Clinical Records for Animal Research Models
<http://www.research.cornell.edu/care/documents/SOPs/CARE542.pdf>
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- CARE SOP 543.01 Water Quality Monitoring in Agricultural Facilities
<http://www.research.cornell.edu/care/documents/SOPs/CARE543.pdf>

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