



Purdue University Laboratory Animal Program Standards of Care

Title: Husbandry Care of Swine used in Biomedical Research and Non-Standard Agricultural Teaching

I. Purpose:

The purpose of this policy is to outline the minimum standards of care for swine used in biomedical research and non-standard agricultural teaching (i.e., human medical and veterinary student education).

II. Policy:

Swine used in biomedical research and non-standard agricultural teaching must meet or exceed these minimum requirements based on the requirements in the USDA Animal Welfare Regulations (*AWR*), the Guide for the Care and Use of Laboratory Animals (*Guide*), and the Guide for the Care and Use of Agricultural Animals Used in Research (*Ag Guide*). Deviations or exceptions must be approved by the Attending Veterinarian and the IACUC.

III. Procedure:

Daily (365 days a year without exception):

- Observe each animal and check for health and welfare concerns (*AWR* 2.33; *Guide* pg. 112; *Ag Guide* pg. 22). Upon completion, personnel will initial and date the daily observation sheet or log.
- Ensure adequate feed and potable water is available (*Guide* pg. 65-68).
- Record and report sick and dead animals to the Lab Animal Program (LAP) (*AWR* 2.33, *Ag Guide* pg. 10).
- For temperature-controlled housing, record minimum and maximum temperatures and humidity.
 - Temperature range for growing & adult swine: 61°F to 81°F (*Guide* p. 44)
 - Prenursery recommend 79°F to 90°F (*Ag Guide* pg. 128)
 - Nursery recommend 64°F to 79°F (*Ag Guide* pg. 128)
 - Humidity range: 30% to 70% (*Guide* pg. 44).
- When enclosures are cleaned by hosing or flushing, adequate measures shall be taken to protect the animals confined in such enclosures from being directly sprayed with the stream of water or wetted involuntarily. (*AWR* 3.131).
- Remove and replace any enrichment devices that are worn, damaged, or heavily soiled (*Guide* pg. 72)
- Clean footbaths, if applicable.



As needed:

- Disinfect the animal room including walls, floors, and ceilings (if possible) (*Guide* pg. 72).
- Remove and replace worn or damaged equipment from primary enclosures and surrounding facility (*Guide* pg. 72).
- Feed must be discarded after 6 months of the milling date unless manufacturer guidelines recommend a shorter or longer expiration date (*Guide* pg. 66).
- Clean and sanitize water troughs and feed bunks (*Guide* pg. 70).
- Clean and sanitize feed storage containers (*Guide* pg. 67).
- Clean and organize room, anterooms, and surrounding premises (*Guide* pg. 72).

Environmental Enrichment:

- Refer to the Social and Environmental Enrichment Program for Research and Teaching Animals (IACUC SOP #: 305).

Facilities:

- Temperature alarms should be installed in all temperature-controlled rooms (*Guide* pg. 143; *Ag Guide* pg. 19).
- In temperature-controlled facilities, adequate ventilation must be provided for the health and comfort of the animal at all times.
 - A minimum of 10-15 fresh room air exchanges per hour shall be provided in animal housing areas (*Guide* pg. 46).
- Floors shall be moisture-resistant, non-absorbent, impact-resistant, and relatively smooth (*Guide* pg. 137).

Housing:

- Social animals, such as swine, should be housed in stable pairs or groups of compatible individuals unless they must be housed alone for experimental reasons or because of social incompatibility (*Guide* pg. 51, 60).
- Floor space taken up by food bowls, water containers, and enrichment devices should not be considered part of the floor space (*Guide* pg. 56).
- See table below for minimum space recommendations for swine, based on the *Guide* (pg.62).

Recommended minimum space for agricultural animals: Swine

Species	Animals/Enclosure	Weight, kg	Floor Area/Animal, ft ² (m ²)
Swine	1	<15	8.0 (0.72)
		Up to 25	12.0 (1.08)
		Up to 50	15.0 (1.35)
		Up to 100	24.0 (2.16)
		Up to 200	48.0 (4.32)
		>200	≥60.0 (≥5.4)
	2-5	<25	6.0 (0.54)
		Up to 50	10.0 (0.9)
		Up to 100	20.0 (1.8)
		Up to 200	40.0 (3.6)
		>200	≥52.0 (≥4.68)
	>5	<25	6.0 (0.54)
		Up to 50	9.0 (0.81)
		Up to 100	18.0 (1.62)
		Up to 200	36.0 (3.24)
>200		≥48.0 (≥4.32)	