



IACUC Guidance:	TAMU-G-019	Title:	Guidelines on Feed and Bedding Storage	
	Location	Effective Date	Review By	
	College Station/Dallas/Galveston/Kingsville	02/15/2024	01/31/2027	
	Houston	04/01/2024	01/31/2027	

1. PURPOSE

- 1.1. To provide guidelines for food and bedding storage in teaching, service, and research units.

2. SCOPE

- 2.1. Federal and institutional regulations require proper storage and handling of animal feed and bedding to prevent contamination or loss of food nutrient quality.
- 2.2. Exposure to elevated storage temperatures, extremes in relative humidity, unsanitary conditions, and insects and other vermin hastens food and bedding deterioration.
- 2.3. For experimental diets, the PI or staff must provide facility managers with applicable storage conditions and expiration dates for these diets.
- 2.4. Applies to both animal facilities and PI satellite locations.
- 2.5. Excludes hay and other fodder.

3. RESPONSIBILITY

- 3.1. The PI and animal care staff should follow these guidelines for storage of feed and bedding. Exceptions will be considered when requested in writing and reviewed by the IACUC.
- 3.2. The PI or facility manager is responsible for assuring that teaching, research, and animal husbandry personnel involved in feeding animals receive appropriate training.
- 3.3. IACUC members are required to evaluate feed/bedding storage conditions at semi-annual inspections.

4. DEFINITIONS AND/OR ACRONYMS

- 4.1. Centrally administered support service for animal research and teaching programs at Texas A&M University:
 - 4.1.1. **ARU:** Animal Resource Unit supports the School of Dentistry vivarium
 - 4.1.2. **CMP:** Comparative Medicine Program supports the Texas A&M College Station campus
 - 4.1.3. **PAR:** Program for Animal Resources supports the Institute of Biosciences and Technology vivarium
 - 4.1.4. **PRF:** Pharmaceutical Research Facility supports the Kingsville Pharmaceutical Science Facility vivarium
 - 4.1.5. **Sea Life:** The Sea Life Facility supports the Galveston campus
- 4.2. **Fomite:** An object that may be contaminated with infectious organisms and serve in their transmission.
- 4.3. **IACUC:** Institutional Animal Care and Use Committee. Institutional body responsible for ensuring adherence to federal regulation and institutional policy relating to the care and use of animals in teaching, testing and research. Appointed by the Institutional Official.
- 4.4. **Indoor:** Means an enclosure, such as a building, created by the continuous connection of a roof, floor, and walls.
- 4.5. **PI:** Principal Investigator. The individual who has ultimate administrative and programmatic responsibility for the design, execution, and management of a project utilizing vertebrate animals.
- 4.6. **Satellite Location:** PI managed building, room, area, enclosure, or other containment where animals are housed or held outside of the primary housing location for over 12 hours (USDA regulated species) or 24 hours (non-USDA regulated species).



- 4.7. **SOP:** Standard Operating Procedure.
- 4.8. **USDA:** United States Department of Agriculture. USDA Animal Care, a unit under the Animal and Plant Health Inspection Service, administers the Animal Welfare Act (AWA) and associated Animal Welfare Act Regulations (AWAR).
- 4.9. **USDA Regulated:** Species or activities which fall under the AWA/AWAR.

5. GUIDELINES OR PROCEDURE

Inspection, Expiration and Labelling

- 5.1. All feed should be inspected for damage, spoilage, and signs of pest infestation and discarded when found to be contaminated with appropriate sanitation, decontamination and/or pest control of storage containers/room.
- 5.2. Feed should be rotated so that the oldest stock is used first.
- 5.3. All feed, including feed removed from the original bag or container should be minimal labeled with:
 - 5.3.1. Name/type of the feed
 - 5.3.2. Date of milling, manufacture, or preparation **and/or** date of receipt
 - 5.3.3. Expiration date when established by the manufacturer
- 5.4. If the manufacturer guarantees a longer shelf life based on storage conditions, this can be included in facility/unit/lab SOP, which can be provided for review upon request (include documentation from manufacturer).
- 5.5. Storage life may be increased by refrigeration or freezing; however, manufacturer's guidelines for expiration must be followed.
- 5.6. All milled or bagged dry feed (e.g.: rodent chow, milk replacer, calf starter, fish pellets, chicken mash) must be used or discarded within 6 months of milling date or by the manufacturer's expiration date.
- 5.7. Feed supplemented with Vitamin C (for guinea pigs, certain fish, some bats, non-poultry birds and nonhuman primate chow) must be used within 3 months of milling date unless food is micro-encapsulated for Vitamin C which may extend the shelf life to 6 months (follow manufacturer's guidelines).
- 5.8. Canned/wet food must be used or discarded by the manufacturer's expiration or "use by" date. Adhere to manufacturer's guidelines for storage and expiration of opened cans or packages of diet.
- 5.9. Dry flake fish food must be used or discarded within 12 months of opening or by the "use by" date on label.
- 5.10. Frozen fish food must be used within 30 days after defrosting.
- 5.11. For bagged feed received with no milling/manufacture or expiration date, indicate date received on each bag then use/discard within 6 months of arrival date (unless otherwise stated above).
- 5.12. For fresh produce and other perishable, non-processed feed stuff, the food must be properly stored and labeled:
 - 5.12.1. An acquisition date and discard date should be noted. Produce and feedstuff must be stored in such a manner that it does not attract pests. Example: store in plastic bins/bags that are closed/tied.
 - 5.12.2. Produce must be disposed when spoiled or otherwise not generally considered suitable for human consumption; one week is a general "shelf life" for fresh produce.

Storage

- 5.13. All bagged or bulk feed and bedding should be stored in designated rooms or areas within the facility separate from the animal housing spaces.

- 5.14. Substances that are toxic to animals but are required for normal husbandry practices must not be stored in the food storage or preparation areas.
- 5.15. All refrigerators/freezers that are used for animal food storage should not contain toxic chemicals or human food and be labeled accordingly.
- 5.16. Manufacturer's recommendations should be followed for feed requiring refrigeration/freezing.
- 5.17. Unopened bagged feed and bedding should be stored off the floor on pallets, racks or carts and away from walls for access to promote sanitation and avoid harboring of pests.
- 5.18. Exterior surfaces of feed and bedding bags should be considered dirty. Facility managers should establish written SOPs, which can be provided for review upon request, for handling bags to maintain biosecurity.
- 5.19. Open bags of feed and bedding must be contained in sanitizable vermin-proof containers with tight, sealable lids.
 - 5.19.1. Food storage containers should not be transferred between areas of differing health status to avoid fomite transmission unless appropriately sanitized prior to placement.
 - 5.19.2. Food storage containers and lids must be cleaned (and documented) at least every 6 months.
 - 5.19.3. Food storage containers and lids must be replaced when damaged or cracked.
- ~~5.20.~~ Indoor bulk feed rooms or storage areas must be climate controlled.
 - 5.20.1. Temperature and humidity of bulk feed rooms and storage areas should be monitored and recorded daily.
 - 5.20.2. Conditions consistently above set points should be reported to the facility manager and prompt maintenance/repair.
 - 5.20.3. If thermostat adjustment doesn't return temperature/humidity to set point in a timely manner, facility manager should be notified.
 - 5.20.4. Facilities used for food storage that cannot maintain recommended temperatures or humidity should consider suitability of the storage location and alternative storage locations. The facility may request an IACUC exemption and adjust feed expiration dates as appropriate using information such as manufacturer's or supplier's recommendations.
 - 5.20.5. The TAMU IACUC follows parameters set by the *Guide for Care and Use of Laboratory Animals* as the standard for animal feed storage for non-agricultural setting-maintained animals, i.e. less than or equal to 70°F and 50% humidity.
 - 5.20.5.1. Minor excursions up to 3°F for no more than four (4) hours are acceptable programmatically based on published literature and historically expected temperature excursions at TAMU feed storage areas.
 - 5.20.5.2. Expected excursions of over 3°F for more than four (4) hours require submission of a feed storage exemption to be reviewed by the IACUC (see Section 6).
 - 5.20.5.3. In general, feed that cannot be stored at guideline temperatures should be kept for the minimum period possible (ideally one month or less) and opened bags used within 7 days after opening.
- 5.21. Bulk feed storage such as bins, totes, bunks, etc. utilized for agricultural setting-maintained animals should minimize entry of pests, chemical and weather contamination, moisture, and microbial growth.
 - 5.21.1. Facility managers should establish written SOPs, which can be provided for review upon request, for vermin control and regular cleaning of bulk feed storage areas and containers to decrease transmission of microbial or contaminant associated disease.
- 5.22. Feed for agricultural setting-maintained animals and stored in outdoor areas such as barns does not require daily monitoring for temperature and humidity.

- 5.23. Carcasses not intended for research animal consumption (e.g., dead animals or animal parts) and animal waste must not be kept in food storage or food preparation areas, food freezers, food refrigerators or animal areas.
- 5.24. Only food and bedding that is currently being used may be kept in the animal housing areas or rooms.
 - 5.24.1. An exception would be bedding used in an agricultural setting which should allow room for animals and people to safely bypass.
- 5.25. For experimental diets, the PI or staff must provide facility managers with applicable storage conditions and expiration dates for these diets.
 - 5.25.1. The minimal labelling required includes: PI name, name of diet, mill/manufacture/preparation and/or expiration date.

6. EXCEPTIONS

- 6.1. The PI may request an exception to the above standards by describing the departure in the AUP.
- 6.2. For programmatic exceptions, the facility director or manager may submit a request for the exception using TAMU-F-013.
- 6.3. Considerations for exemption will be based on robust justification of need and should include:
 - 6.3.1. Two (2) months of temperature humidity recordings,
 - 6.3.2. Description of mitigations attempted by facility to remedy temperature and humidity excursions such as spot coolers and dehumidifiers,
 - 6.3.3. Length of time feed will be stored prior to use and process of inventory rotation,
 - 6.3.4. And any additional measures facility will establish to ensure feed stability such as type of container opened bags may be stored in or refrigeration of opened food containers.

7. REFERENCES, MATERIALS, AND/OR ADDITIONAL INFORMATION

- 7.1. References:
 - 7.1.1. [Animal Welfare Regulations](#), 9 CFR Chapter 1, Part 3, Subpart A, Section 3.1e
 - 7.1.2. [Guide for the Care and Use of Laboratory Animals](#) (National Academies Press, 2011), pages 66, 69
 - 7.1.3. [Guide for the Care and Use of Agricultural Animals in Research and Teaching](#), page 21
 - 7.1.4. Coelho, Michael B. "Vitamin Stability in Premixes and Feeds: A Practical Approach." *Feedstuff*: vol. 68(6). 1995.
 - 7.1.5. [FoodKeeper App | FoodSafety.gov](#)
 - 7.1.6. Evaluation of Rodent Diet Stability when Stored in Conditions that Diverge from *Guide* Parameters, JAALAS, Vol 62 no. 5, September 2023.
 - 7.1.7. Effects of Temperature and Humidity on Diet Stability During Transit to the United Kingdom followed by 18 Months of Storage at IPS , Lab Diet internal document Melanie Hoar-Phillips, Ph.D.
- 7.2. For more information on feed/bedding storage, please contact:
 - 7.2.1. [CMP](#) at (979) 845-7433, or see facility SOP for additional guidelines in CMP-managed facilities
 - 7.2.2. ARU: at (214) 828-8149
 - 7.2.3. [PAR](#): at (713) 677-7471
 - 7.2.4. PRF: at (361) 221-0770
- 7.3. [IACUC/AWO Referenced Documents](#): (requires TAMU NetID authentication)
 - 7.3.1. TAMU-F-013 Request for Programmatic Exception from Animal Welfare Standards
- 7.4. Acknowledgement:
 - 7.4.1. This document was partially adapted using materials from the University of California, Davis, University of Wisconsin-Madison and Washington State University.



8. HISTORY

Effective Date	Version #	Description
11/21/2019	000	College Station/Galveston: New document
10/1/2020	001	Houston/Kingsville: New document. Reviewed and approved via email.
10/20/2020	002	Dallas: New document.
10/21/2020	003	Administrative Update of Location-specific definitions in Sections 4 and 6. Per TAMU-S-001, no additional review needed.
03/24/2022	004	College Station/Dallas/Galveston: Merging of Dallas animal care and use program with College Station/Galveston
06/01/2022	005	College Station/Dallas/Galveston: Renewal; updated definitions and references. Updated Procedures to include labelling of secondary containers and clarification of storage of animal carcasses utilized for food. Addition of Exceptions section. Reviewed and approved via email.
07/01/2022	006	Houston/Kingsville: Renewal; updated definitions and references. Updated Procedures to include labelling of secondary containers and clarification of storage of animal carcasses utilized for food. Addition of Exceptions section. Reviewed and approved via email.
10/20/2022	007	College Station/Dallas/Galveston/Kingsville: Merging of Kingsville animal care and use program with College Station/Dallas/Galveston.
02/15/2024	008	College Station/Dallas/Galveston/Kingsville: Renewal; updated scope, definitions and reference sections. Reorganization of procedures section and expansion in requirements for food quality inspection, expiration, labelling and storage. Inclusion of performance standards for temperature/humidity of indoor food storage locations. Expansion of exception section to include specific expectations.
04/01/2024	009	Houston: Renewal; updated scope, definitions and reference sections. Reorganization of procedures section and expansion in requirements for food quality inspection, expiration, labelling and storage. Inclusion of performance standards for temperature/humidity of indoor food storage locations. Expansion of exception section to include specific expectations. Reviewed and approved via TEAMs.