Course Objectives

By the end of this presentation, you should be able to, as appropriate for guinea pigs, hamsters or rabbits:

1. Describe minimum food and water requirements
2. Describe access and cleaning for food receptacles
3. Describe the frequency and types of cleaning and sanitization methods for primary enclosures
4. Explain general housekeeping and pest control requirements
5. Explain staffing and employee training requirements
6. Describe the requirements for compatible grouping

Food and Water Requirements

At a minimum, animals must be fed at least once a day. Some animals’ conditions may require additional feedings in order to provide for adequate veterinary care. Consult your attending veterinarian for information regarding proper feeding and nutrition and document your program in the plan of veterinary care.

Feeding Requirements:
- Must feed animals at least once a day
- Except as otherwise required to provide adequate veterinary care
- Document in Plan of Veterinary Care

Food must be:
- Wholesome
- Uncontaminated:
  - Store food to prevent access by rodents, insects and other vermin and in a location that prevents contamination from medications or other chemicals
  - Food in bowls should be free of feces and other waste
- Palatable
- Appropriate size and consistency for the animal
- Digestible
- Nutritious:
  - Must be appropriate for the condition and size of animal

A best practice is for licensees to find a veterinarian with experience in appropriate food and nutrition for the particular species.
Hamsters and Guinea Pigs 3.29 (b,c) Feeding complete instructions: (b) Food comprising the basic diet shall be at least equivalent in quality and content to pelleted rations produced commercially and commonly available from feed suppliers (c) The basic diet of guinea pigs and hamsters may be supplemented with good quality fruits or vegetables consistent with their dietary requirements. This is an especially useful practice to provide guinea pigs with sufficient amounts of Vitamin C in their diets.

Food and water receptacles (bowls, dishes, pans, etc.) must be:
Readily accessible to all placed in a location to minimize contamination by excreta and pests
Kept clean and sanitary
Maintained to prevent molding, caking, deterioration or wetting of the food

NOTE: when switching type of food or watering mechanisms, (ie from water bowls to sippers or lixits) monitor the animals carefully to be sure they are acclimating to the switch and receiving sufficient food and water.

At a minimum, animals must have access to potable water at least once a day. Some animals’ conditions may require additional water in order to provide for adequate veterinary care.

This next section provides a brief overview of cleaning and sanitization requirements.

Cleaning Definitions
- Cleaning
  - Removes visible waste and dirt
    - Physical removal (scooping up) of fecal material is better than hosing it away
      - Prevents distribution of microscopic particles of feces in the air
      - Helps prevent transmission of fecal-borne germs
    - Visible waste and dirt may inactivate disinfectants
  - Remove as much as possible before disinfecting
Cleaning Primary Enclosures: Guinea Pigs and Hamsters

• Clean often enough to prevent accumulation of excreta and debris
• Transfer animals to another primary enclosure when
  – Enclosure becomes soiled or wet to a degree that may be harmful or uncomfortable
  – There is water system leakage, dead/dying animal discharge, spoiled food, or condensation

Cleaning Primary Enclosures: Rabbits

• Periodically clean to keep reasonably free of:
  – Excreta
  – Hair
  – Cobwebs
  – Other debris
• Do not allow rabbits to become wet during cleaning

Cleaning Primary Enclosures: Rabbits

• For primary enclosures with:
  – Solid floors:
    • Remove and replace litter at least once each week
  – Wire or mesh floors:
    • Clean troughs or pans at least once a week
    • Maintain worm bins, if used, in a sanitary condition

Sanitization Definitions

Sanitization is a process using chemicals or other means to make surfaces physically clean. It helps remove dirt and germs which are not visible to the unaided eye.

This process is used to remove and destroy germs which may make animals ill including bacteria, viruses, fungi, protozoa and worms. No cleaning and disinfecting process can remove 100% of germs or infectious agents. It is important to carefully follow directions and procedures for the method you use in order to achieve the highest level of effectiveness.

Sanitization Methods

Must use one of these methods for primary enclosures:

1. Wash in hot (180° F) water and soap/detergent
   • May use a mechanical cage washer
2. Wash with detergent followed by disinfectant solutions or combination disinfectant/detergent product
   • Followed with clean water rinse
3. Clean all soiled surfaces with live steam

The Animal Welfare regulations and standards require that one of the following methods be used to sanitize food receptacles and primary enclosures.

Sanitization methods: (must use one of these)

Washing in hot (180 degree F) water and soap or detergent OR
Removing all organic materials and mineral buildup and washing all surfaces with appropriate detergent and disinfectant solutions or by using a combination of detergent/disinfectant product to provide sanitization OR
Live steam cleaning
Sanitization of Primary Enclosures: How Often?

- Guinea pigs and hamsters
  - Must clean and sanitize at least once every 2 weeks or more often as needed
- Rabbits
  - Must clean and sanitize at least once every 30 days or more often as needed

All primary enclosures and food and water receptacles must be sanitized at least once every 2 weeks (30 days for rabbits) or more often as needed to prevent accumulation of dirt, debris, food waste, excreta, algae, mineral deposits, other disease hazards.

Sanitization of Primary Enclosures

- Guinea pigs, hamsters, rabbits: Must sanitize a primary enclosure that has housed animals previously before any animal can be re-introduced to the enclosure.

Premises (building and grounds) shall be kept clean and in good repair in order to protect the animals from injury and to facilitate the prescribed husbandry practices required. This protects the animals from injury, makes good husbandry practices easier and helps reduce or eliminate breeding and living areas for rodents, pests or other vermin.

Photos: D. Ausen, ISU

General Housekeeping

- Buildings and Grounds:
  - Clean, good repair
  - No trash, waste, weeds, etc.

Premises (building and grounds) shall be kept clean and in good repair in order to protect the animals from injury and to facilitate the prescribed husbandry practices required. This protects the animals from injury, makes good husbandry practices easier and helps reduce or eliminate breeding and living areas for rodents, pests or other vermin.

Photos: D. Ausen, ISU

Pest Control

The regulations require that a licensee establish and maintain an effective program for controlling insects and external parasites, and birds and mammals that are pests. Examples here are rodent traps and screening to keep out animals. Such a program aids in promoting the overall health and well-being of the animals. Be sure that the pest control programs do not adversely affect the animals being protected.

Discuss the program to control insects and ectoparasites with your attending veterinarian.

Photo: D. Ausen, ISU
Types of Pests

- Mammals: rats, mice, moles
- Birds: starlings, pigeons, sparrows
- Ectoparasites: fleas, ticks, mites, lice
- Arthropods (insects): flies, mosquitoes, gnats
- Arachnids: spiders, scorpions

Illustrations; Andrew Kingsbury: CFSPH

Observe your animals and facilities for signs of pests. Common signs include:

- Seeing the pest: mammals, birds, insects (flies, ticks), arachnids (spiders, scorpions)
- Seeing droppings: mammals, birds, insects (fleas)
- Physical evidence: chewed surfaces (rodents), feathers or nests (birds), egg packets (insects, arachnids)
- Effects on animals: Animals scratching, twitching, swatting (fleas, flies); open sores, hair loss

How Many Employees?

The number of employees needed for a facility will depend on a number of factors, including:
- The number of animals
- Maintenance requirements for the animals
- Facility design and construction – some types of facilities (e.g., all wood) require more maintenance than others
- Facility condition
- Employee responsibilities

What responsibility and how much is given to a particular employee? Do employees have enough time to perform all their assigned tasks to the required level? Do employees have the training to perform the tasks to the required standard?
Hint
• If repeatedly out of compliance on husbandry issues, ask, are there enough people to get everything done?

Classification and Separation

Compatible Grouping
• Animals housed together in primary enclosures must be compatible
• Guinea pigs, hamsters and rabbits must only be housed with their own species

Photo: D. Ausen, ISU

Specific Requirements
• Guinea Pigs – except for harem breeding, pre-weanling guinea pigs may be housed only with their parents
• Hamsters – females with nursing litters must be housed alone
  – Licensee must apply to APHIS Administrator for approval of harem breeding
• Rabbits – may be housed in an enclosure with other species when specifically required for scientific purposes and approved by IACUC

Approval for harem breeding of hamsters is covered in Regulations Section 3.28 (c)(3)

IACUC is the Institutional Animal Care and Use Committee appointed at each research facility

Quarantine Requirements
• Guinea pigs, hamsters and rabbits
  – Animals under quarantine or treatment for a communicable disease must be separated from their own species or other susceptible species in order to minimize spread of the disease
You should now be able to, as appropriate for guinea pigs, hamsters or rabbits:
1. Describe minimum food and water requirements for the species
2. Describe access and cleaning for food receptacles
3. Describe the frequency and types of cleaning and sanitization methods for primary enclosures
4. Explain general housekeeping and pest control requirements
5. Explain staffing and employee training requirements
6. Describe how to classify and separate animals