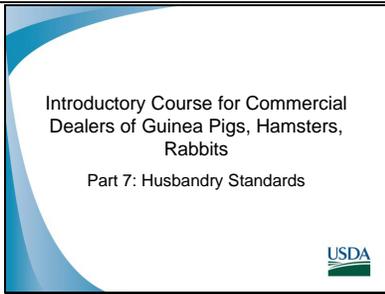
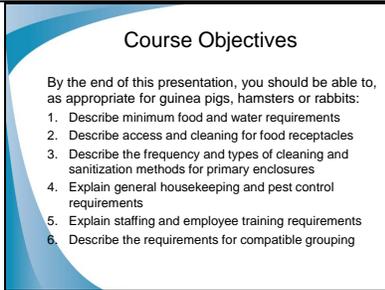


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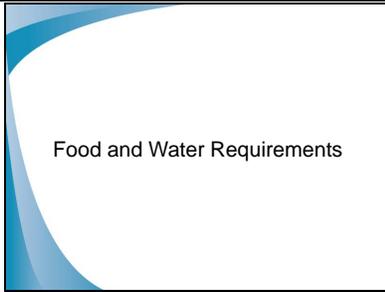
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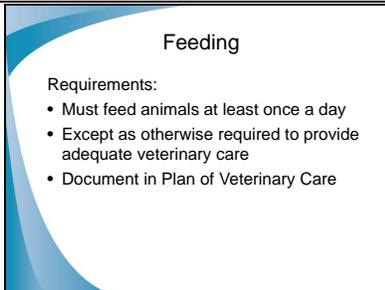
By the end of this presentation, you should be able to, as appropriate for guinea pigs, hamsters or rabbits:

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

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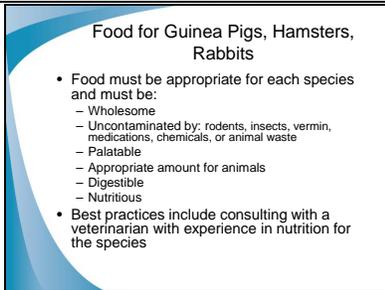


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At a minimum, animals must be fed at least once a day. Some animals' conditions may require additional feedings in order to provide for adequate veterinary care. Consult your attending veterinarian for information regarding proper feeding and nutrition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

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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

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**Food for Guinea Pigs and Hamsters**

- Food in basic diet must be equivalent to commercial pelleted rations
- Hamsters can be fed pelleted feed on floor
- Good quality fruits or vegetables may be used as supplements:
  - Provided they are consistent with individual dietary requirements (especially beneficial to provide guinea pigs with sufficient Vitamin C)
  - May be placed on bedding in primary enclosure
  - Uneaten portions and soiled bedding must be removed

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.

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**Food Receptacles**

- Make accessible to all animals in enclosure
- Choose location to minimize contamination
- Keep clean and sanitize at least every two weeks
- In self-feeders, prevent molding, caking, deterioration of food



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.

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**Watering**

- Potable water must be provided daily
- Except as otherwise required to provide adequate veterinary care
- Keep clean and sanitize at least every two weeks
- For guinea pigs and hamsters
  - May feed supplements that supply normal water requirements
  - Open water receptacles must be placed to minimize contamination



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.

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**Cleaning and Sanitization**

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

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**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

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**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

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**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



Photo: D. Ausen, ISU

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**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



Photo: D. Ausen, ISU

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**Sanitization Definitions**

- Sanitization
  - Makes surfaces physically clean
  - Helps remove dirt and germs that you can't see
  - Removes and destroys germs which may make animals ill:
    - Bacteria
    - Viruses
    - Fungi
    - Protozoa
    - Worms



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.

Photo: D. Bickett-Weddle, CFSPH

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**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 detergent/disinfectant 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

Photo: D. Ausen, ISU

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**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

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**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

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**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

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**Pest Control**

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**Pest Control Program**

- Have and maintain an effective program to control:
  - Insects
  - Ectoparasites
  - Birds
  - Mammals
- Discuss insect and ectoparasite control with your veterinarian
- Never pose a hazard to the species being protected

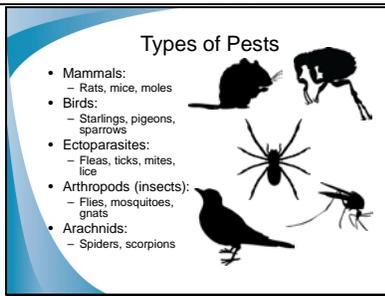


The regulations require that a licensee establish and maintain an effective program for controlling insects and external parasites, and birds and mammals that are pests. Examples here are rodent traps and screening to keep out animals. Such a program aids in promoting the overall health and well-being 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

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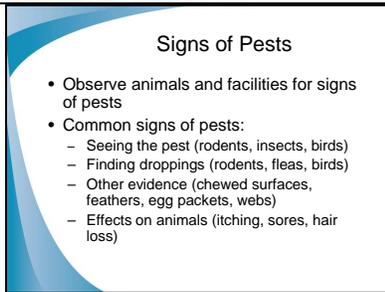


Types of pests that are of concern in commercial dealer facilities include, but are not limited to:

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

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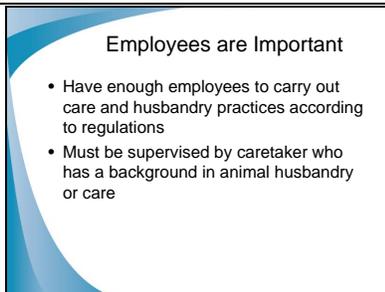
Observe your animals and facilities for signs of pests. Common signs include:

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

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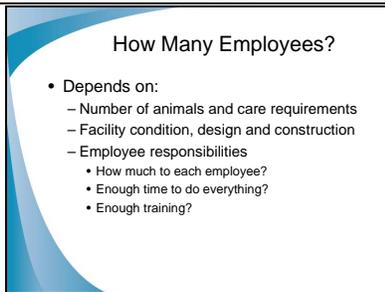
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Having enough trained employees is an important part of keeping a facility in compliance with the regulations. Under the AWA regulations and standards, each licensee must have a sufficient number of employees to carry out the care and husbandry practices required by the regulations.

Employees need to be trained to complete assigned tasks to the levels established by the regulations and standards. They must be supervised by someone who is knowledgeable and experienced in the care and husbandry of animals to the level that they can train and supervise others. Employers are responsible for ensuring that supervisors and employees are able to perform their jobs to meet or exceed the standards set in the regulations.

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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?

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Hint

- If repeatedly out of compliance on husbandry issues, ask, are there enough people to get everything done?

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Classification and Separation

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Compatible Grouping

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



Animals housed together in primary enclosures must be compatible. Regularly observe animals interacting in their enclosures for signs of incompatibility.

Photo: D. Ausen, ISU

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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

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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

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**Conclusion**

You should now 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 how to classify and separate animals

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

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Questions?

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**Acknowledgments**

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Iowa State University