



MOUSE BREEDING POLICY

Overview/Purpose

The purpose of this policy is to ensure compliance with the *Guide* regarding space requirements for mice utilized for breeding activities in an approved IACUC protocol.

Definitions

1. **Adult mouse** – Any mouse that is 21 days or older and able to eat and drink on its own. A litter would be expected to need space equivalent to one 25 gram mouse.
2. **Overcrowded cage** – A cage that contains more mice than the [Guide](#) recommendations.

Requirements:

1. Breeding must be listed as an animal source in the IACUC protocol.

Acceptable breeding schemes:

- a. Monogamous pairs: One female/one male. Required scheme if delayed weaning is necessary due to delayed maturation of pups. Pups should be weaned as soon as they are able to eat/drink on their own. Anticipated weaning age must be noted on the green breeding card if not standard.
 - b. Trio breeding: Two females/one male. Pups should be weaned at 21 days and prior to the arrival of a third litter. This scheme is not appropriate for animals needing a weaning extension.
 - c. Harem breeding: Four females/one male. Pregnant females must be moved into another cage before parturition with no more than two pregnant females per cage.
2. Colony management (setting up breeding cages, record keeping and weaning) is the responsibility of the Principal Investigator/research team. Weaned mice must be removed at appropriate times to prevent overcrowding that could impact performance and animal welfare.
 3. Pups that are present in the breeding cage 3 days past the normal weaning age will be weaned by ULAR staff and the PI charged a technical service fee. The research team will not be contacted or reminded as dates are clearly indicated on the breeding card.
 4. If pup development is delayed, a weaning extension (up to 28 days) must be noted on the breeding card.



Applicable Regulations

- Health Research Extension Act of 1985 and Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals
- National Research Council *Guide for the Care and Use of Laboratory Animals*, Eighth Edition. National Academy of Sciences, 2011

Additional Information/Guidance

1. The Guide recommends 51 in² for a female plus litter with a comment that “other breeding configurations will depend upon considerations.” The use of IVC cages for breeding of mice has allowed for the use of breeding trios (1 male: 2 females) without detrimental effects, and is acceptable when pups are weaned at approximately 3 weeks of age.
2. The 8th Edition of the Guide for the Care and Use of Laboratory Animals makes it clear that institutions should use the Guide's space recommendations as a starting point for determining caging requirements. Furthermore, the Guide identifies examples of performance indices to assess the adequacy of housing which include the animal(s) health, reproduction, growth, behavior, activity, and use of the space. To ensure the appropriateness of breeding schemes at OSU, performance criteria including ammonia levels, pre-and post-weaning mortality, soiling of bedding, the difference in age of pups of different litters, and growth rate are all evaluated.
3. Current IVC (individually ventilated) mouse caging provides 77.5 square inches of floor space <http://www.allentowninc.com/rodent-housing/nexgen/>

History of Revisions

- 07-0 - New policy approved. 11/18/2005
- 007-01 - Standard breeding cage was defined. Instructions on breeding cage cards deleted.
- 007-02 – Cage size added. Weaning set at 21 days. Required justification for weaning added. Instructions for PI's regarding administrative items deleted. Approved 04/22/11
- 007-03 – Descriptions of monogamous Pairing, Breeding Trio and Harem Breeding added. Cage density section added. Overcrowded cages section added. General Guidelines for Weaning Mice deleted. Approved 10/21/2011
- 007-04 – Reformatted into new template. Condensed purpose, expanded adult mouse definition, removed reference to green acetates and minor wording changes throughout. Removed the requirement for weaning extension to be approved by the IACUC. Approved 03/27/2015
- 007-05 – Revisions reflect definition changes, clarifying each breeding schemes, and the requirement that weaning extensions must be noted on the breeding card. Approved 01/20/17