



University of Michigan Policy On Mouse and Rat Breeding and Cage Densities

The purpose of this policy is to address the health and well-being of mice and rats by ensuring safe breeding practices and population densities. Limiting breeding cage occupancy reduces the incidence of morbidity and mortality due to overcrowding. Overcrowding can be a significant animal welfare issue and is in violation of federal and University policies on the humane care of animals, as well as the *Guide for the Care and Use of Laboratory Animals*. In all cases, cages should be regularly monitored to ensure the well-being of the neonates (e.g., size, age, and activity level of litter), as well as characteristics of the cage environment and colony breeding performance. Exceptions to this policy require prior IACUC approval.

Mice

When breeding, no more than 2 adults and 1 litter, regardless of the size of the litter, will be allowed in a 75 square inch ("standard" mouse) cage.

Mice can be bred under the following conditions:

- **Recommended Strategy:**
 - Monogamous pairs in a "standard" mouse cage.
- Alternative Strategies:
 - Breeding trios (one male, two females) or harem breeding (1 male, 3-4 females) in a "standard" mouse cage.
 - These breeding strategies are only allowable if all but one of the pregnant females is/are removed by the lab from the cage prior to parturition (birth) such that only 1 litter of pups and 2 adults remain in the cage after pups are born.
- Breeding trios (one male, two females) in a 100 sq. in. cage ("standard" rat cage).
- If post-partum estrus is used in "standard" mouse cages, the first litter must be weaned by 21 days of age to prevent the presence of two litters in a cage, i.e. no extended weaning is allowed if post-partum estrus is used.

The IACUC acknowledges that some specialized genetically modified lines may require more than 2 adults and 1 litter in the breeding cage to facilitate adequate production. Breeding records demonstrating poor breeding must first be reviewed with a faculty veterinarian and scientific justification submitted and approved of by the IACUC. See the [Guidelines for Documentation of Scientific Justification to Support Exceeding Cage Densities](#) for details on required data.

Rats

Rats can be bred in the following conditions:

- Monogamous pairs
 - This is recommended to prevent overcrowding.
- Breeding trios (one male, two females)
 - This is allowed only when animals weigh 400g or less.
 - Females must be removed prior to parturition to prevent overcrowding.



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In addition, for any breeding scheme, all rat pups must be weaned by 21 days of age. Delayed weaning (weaning at >21 days) requires prior IACUC approval. Under certain circumstances, it may be necessary to provide additional floor space in order to ensure animal well-being.