

UNIVERSITY OF WESTERN ONTARIO
ANIMAL CARE AND VETERINARY SERVICES

HOUSING & CARE / MOUSE BREEDING / HEALTH SCIENCES

Standard Operating Procedure #441-01

1 **INTRODUCTION**

Standard Operating Procedures (SOP's) provide an outline of procedures to be followed *unless* alternate procedures have been outlined in an "Application to Use Animals." If an investigator wishes to proceed differently from an approved SOP, the differences must be itemized in the application. To assist the Animal Use Subcommittee in protocol review, the reasons for deviating from standard procedure should also be included. Approval of the protocol indicates approval for the deviation from that SOP for that protocol only.

The purpose of this document is to outline acceptable housing methods to be employed in breeding protocols in the Health Sciences Animal Holding Facility. It does not describe breeding systems.

Commerically available, specially formulated diets are available to provide extra nutrition during stressful periods such as pregnancy and lactation. See the facility manager for additional information.

The future breeding potential of mice can be correlated to weaning weight. It is therefore important to ensure weanlings attain the maximum weight possible. If weaning weights are low there are several measures, which can be implemented to improve weight gain:

- * provision of high caloric food to the dam in early lactation
- * providing dam with food on the cage floor during the last trimester
- * provision of high caloric food on the cage floor for older pups
- * removing dam from male prior to parturition to prevent early rebreeding
- * reducing the size of very large litters

An ACVS veterinarian will be pleased to discuss strategies to optimize pup health and future reproduction.

2 **PROCEDURE**

2.1 Mice may be housed in either shoebox or colony cages.

2.1.1 Shoebox

- 2.1.1.1 Monogamous pairs may be housed in shoebox cages. Weanlings must be removed prior to the birth of the subsequent litter.
- 2.1.1.2 Harem groups may be housed in shoebox cages provided pregnant females are removed prior to delivery. The maximum number of adult mice in a shoebox cage is four.
- 2.1.1.3 Pups are weaned at 21 days. They are placed in single sex groups according to standard cage densities (4 / shoebox, 10 / colony cage). A small amount of chow may be provided on the cage floor.

2.1.2 Colony Cage

- 2.1.2.1 Colony cages must be used when females in harem groups are allowed to deliver in the home cage.
- 2.1.2.2 No more than three females may be housed with the male.
- 2.1.2.3 Pups must be weaned at three weeks of age unless previously discussed with the

facility manager. Situations taken into consideration for later weaning include cage density and weanling weight.

2.2 Record Keeping

2.2.1 Records must be maintained. Date of breeding, number born, date born and date of weaning in addition to the standard information required on cage cards is MINIMUM.

2.3 Monitoring

2.3.1 It is the responsibility of the research staff to monitor the health and well being of animals being bred for a research or teaching protocol. In normal circumstances, twice a week would be adequate.

3 **SUMMARY**

Adherence to this SOP will prevent overcrowding and optimize colony health and ensure compliance with the Canadian Council on Animal Care Guidelines.

4 **REFERENCES**

4.1 Canadian Council on Animal Care, **Guide to the Care and Use of Laboratory Animals, 2nd Edition**, Appendix 1, Housing and Environment, pg167-168