

Effect of Different Room Temperatures on Breeding Performance of icr Strain Mice

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Myanmar Health Sciences Research Journal, Vol. 30, NO. 2, 2018

Summary

Temperature is one of the environmental factors and the laboratory mice may have Physiological changes because of the environmental temperature. Food and temperature availability have a strong interaction that influences the reproductive performance of female mice throughout the reproductive cycle. This study aimed to analyze the effect of different room temperatures in the housing room on breeding performance of icr mice. In this study, healthy 15 males and 45 females with 1:3 mating ratio of icr strain mice, weighing 25-30 gm, were used for breeding performance under different room temperature; 18-22 °C, 23-25 °C and 26-32 °C conditions. The monitoring and evaluation were done during 21 days, from birth to weaning for each group. Fertility rate, delivery rate, litter size, birth weight weaning weight and mortality rate were monitored at the first, the second and the third consecutive gestations. It was found that fertility rate 100%, delivery rate 100%, litter size 9, weaning rate 99.75% and mortality rate 0.24% in group one condition; fertility rate 100%, delivery rate 100%, litter size 7.67%, weaning rate 98.67% and mortality rate 1.32% in group two condition; delivery rate 71.11%, litter size 5.33, weaning rate 80.63% and mortality rate 19.37% in group three condition; were found in the first, the second and the third gestations in this study. Birth weight 1.5±0.1 gm were found in every room condition. The findings showed that high temperature has effect to lower growth rate and impaired fertility. It was found that the high temperature (26-32 °C) is not suitable for breeding performance and well-being of the animals.