

SELEKSI BOBOT SAPIH DAN BOBOT DEWASA UNTUK PENINGKATAN PERTUMBUHAN MENCIT (*Mus musculus*)

INTISARI

Salah satu upaya peningkatan pertumbuhan dan peningkatan mutu genetik mencit yaitu melalui program seleksi, diantaranya seleksi terhadap bobot sapih dan bobot dewasa. Penelitian ini bertujuan untuk mengkaji peningkatan pertumbuhan mencit melalui program seleksi terhadap bobot sapih dan bobot dewasa dari generasi nol (G0) hingga generasi dua (G2) mencit galur Deutch Democratic Yokohama (DDY) dan galur Fancy. Sebanyak 323, 367, dan 386 ekor mencit galur DDY berturut-turut untuk G0, G1, G2 serta sebanyak 327, 330, dan 263 ekor mencit galur Fancy pada G0, G1 dan G2 digunakan dalam penelitian. Seleksi terhadap bobot sapih (21 hari) dilakukan dengan penimbangan bobot badan saat disapih selanjutnya dipilih 50% yang mempunyai bobot sapih terbaik. Seleksi bobot dewasa dilakukan dengan penimbangan saat umur dewasa (35 hari) untuk dipilih sebanyak 8 ekor jantan dan 32 ekor betina yang memiliki bobot dewasa terbaik. Penyusunan ranking dilakukan dengan perhitungan nilai pemuliaan. Berdasarkan hasil penelitian diperoleh rata-rata bobot sapih terpilih mencit DDY pada G0, G1, G2 berturut-turut sebesar $13,93 \pm 2,06$ g, $15,69 \pm 1,91$ g, $17,58 \pm 1,07$ g. Rataan bobot dewasa terpilih berturut-turut sebesar $26,23 \pm 2,08$ g, $28,29 \pm 1,97$ g, $33,32 \pm 1,09$ g. Rataan bobot sapih terpilih mencit galur Fancy berturut-turut sebesar $14,42 \pm 2,00$ g, $18,11 \pm 1,20$ g; $20,20 \pm 1,18$ g. Rataan bobot dewasa terpilih berturut-turut sebesar $23,44 \pm 1,67$ g, $28,58 \pm 1,41$ g, $33,50 \pm 1,39$ g. Peningkatan bobot sapih dari G0 ke G1, dan G1 ke G2 mencit galur DDY sebesar 12,63% dan 12,05%, galur Fancy sebesar 25,59% dan 11,54%. Peningkatan bobot dewasa dari G0 ke G1, dan G1 ke G2 mencit galur DDY berturut-turut sebesar 7,85% dan 17,78%, galur Fancy sebesar 21,93% dan 17,21%. Disimpulkan bahwa dengan seleksi terhadap bobot sapih dan bobot dewasa terjadi peningkatan pertumbuhan; dari generasi ke generasi peningkatan semakin besar

Kata kunci: Bobot Dewasa, Bobot Sapih, Pertumbuhan Mencit, Seleksi



SELECTION OF WEANING WEIGHT AND ADULT WEIGHT FOR INCREASING THE GROWTH OF Mice (*Mus musculus*)

ABSTRACT

One of the efforts to increase growth and improve the genetic quality of mice is through a selection program, including the selection of weaning weight and adult weight. This study aims to examine the increase in the growth of mice through a selection program on weaning and adult weights from generation zero (G0) to generation two (G2) mice of Deutch Democratic Yokohama (DDY) and Fancy strains. A total of 323, 367, and 386 mice of the DDY strain for G0, G1, G2, and 327, 330, and 263 Fancy mice at G0, G1, and G2, respectively, were used in this study. Selection of weaning weight (21 days) was carried out by weighing the body weight at weaning and then selecting 50% which had the best weaning weight. Selection of adult weight was carried out by weighing at the age of maturity (35 days) to select 8 males and 32 females who had the best adult weights. The ranking is done by calculating the breeding value. Based on the results of the study, the average weaning weights of DDY mice selected in G0, G1, G2 were $13,93 \pm 2,06$ g, $15,69 \pm 1,91$ g, $17,58 \pm 1,07$ g, respectively. The average weight of the selected adults was $26,23 \pm 2,08$ g, $28,29 \pm 1,97$ g, $33,32 \pm 1,09$ g. The average weaning weights of Fancy strain mice were $14,42 \pm 2,00$ g, $18,11 \pm 1,20$ g, respectively; $20,20 \pm 1,18$ g. The average weight of selected adults was $23,44 \pm 1,67$ g, $28,58 \pm 1,41$ g, $33,50 \pm 1,39$ g, respectively. The increase in weaning weight from G0 to G1, and G1 to G2 mice of DDY strain was 12,63% and 12,05%, Fancy strain was 25,59% and 11,54%, respectively. The increase in adult weight from G0 to G1, and G1 to G2 mice DDY strain was 7,85% and 17,78%, respectively, Fancy strain was 21,93% and 17,21%. It was concluded that with the selection of weaning weight and adult weight there was an increase in growth; from generation, to generation the improvement is getting bigger.

Keywords: Adult Weight, Weaning Weight, Mice, Selection