

THE EFFECT OF ‘KALUNG’ CRICKET’S (*Gryllus bimaculatus*) FLOUR ADDITION IN MALE MICE (*Mus musculus*) FEED TOWARD THE MOTILITY AND VIABILITY OF SPERMATOZOA

Adisti Rengganis Sekar Kinanti

ABSTRACT

The aim of this research was to examine the effect of the ‘Kalung’ cricket’s (*Gryllus bimaculatus*) flour addition in male mice (*Mus musculus*) feed toward the motility and viability of spermatozoa. The effect of cricket flour was tested on 20 mice that are randomly divided prior to this research. Control group (K) was given the standard feed, P1 was given the standard feed with the addition of 5% cricket flour, P2 with the addition of 10% cricket flour, and P3 with the addition of 20% cricket flour. The treatment was done for 45 days, then the mice were sacrificed. Testes sample was taken by conducting surgery, testes sample was taken by surgery, cauda epididymis was taken and then cut into a tube that has been spilled NaCl physiological drops and mixed evenly. Sperm was taken by using a pipette dripped on the object glass and cover with a glass cover (for motility). Observe the viability of spermatozoa with drip two drops of eosin dye then mixed evenly with one drop of sperm. Both are observed by using 400x magnification microscope. The results of the motility were analyzed by using *Analysis of Variant* (ANOVA). The result of viability was analyzed using *Analysis of Variant* (ANOVA) and continued with *Duncan's One Way* test. The result of motility are $56 \pm 5,477$ (K), $84 \pm 5,477$ (P1), $66 \pm 5,477$ (P2) and $38 \pm 4,472$ (P3) which shows significant differences ($P < 0.05$). The result of viability are $60,2 \pm 3,1$ (K), $89,2 \pm 5,4$ (P1), $70,8 \pm 2,5$ (P2) and $48,6 \pm 2,8$ (P3) which shows significant differences ($P < 0.05$). Therefore, the conclusion is, the addition of 5% cricket’s flour is the optimal dose to increase the motility and viability of spermatozoa.

Keyword: Kalung cricket’s, Motility, Viability, Male Mice.