

ABSTRACT

Rina Arditia Kartikasari, 2016. Effect of the duration of irradiation on the capacity of Gold Snail *Pomacea canaliculata* in Degrading Fresh Organic Trash. Supervised by Dr. Cartonno, M.Pd., M.T. and Drs. Otang Hidayat M.Pd.

The research purpose was to find out whether there is or not an effect of the duration of irradiation on the capacity of gold snail in degrading fresh organic trashes. In addition, it also would determine the duration of irradiation, that is, hours per day, which results in the highest capacity of gold snail in degrading fresh organic trashes. The research findings expectantly could provide information on the effect of the duration of irradiation on the capacity of gold snail in degrading fresh organic trashes to both educational world and urbanites. The experimental research was carried out by using a Complete Random Design system. The treatment factor tried-out was the duration of irradiation, that is, 12 hours per day as control, 8 hours, 4 hours, and 0 hours. The irradiation used was sun's indirect irradiation. Each treatment was tried out to 5 research samples consisting of 5 gold snails with a total weight per sample of 80-100 g. the data sought was the quantity of trashes that the gold snails ate and the increase in the gold snails' weight. The increase in weight was determined by finding the difference of the gold snails' weight per sample at both the beginning and the end of the research. The research data was then analyzed by using a BNT test. The research result revealed that the duration of irradiation has an effect on the capacity of gold snail in degrading fresh organic trashes and on the increase of gold snail's weight, at a 95% confidence level. From the result of BNT test at a 95% level, the treatment that really differed than the control was one with the duration of irradiation 0 hour. The quantity of fresh organic trashes that gold snails degraded for 5 days during 12 hours irradiation (control) was 12.4 gram/sample, while that of 0 hour was 15.4 gram/sample. The increase of gold snail's weight in the duration of 12 hour of irradiation was averagely 0.8 gram/sample, while that of 0 hour was 4.4 gram/sample.

Keywords: Duration of irradiation, gold snail *Pomacea canaliculata*, Degradation, Fresh organic trashes.