ZEOLITE (CLINOPTILOLITE) WITH AQUEOUS EXTRACT OF SELECTED PLANTS AS MOLLUSCICIDAL ACTIVITY AGAINST GOLDEN APPLE SNAIL (*Pomacea canaliculata)*

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ABSTRACT

VICENTE, MARJORIE B., Department of Environmental Science, College of Science, Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines, **July 2023, ZEOLITE (CLINOPTILOLITE) WITH AQUEOUS EXTRACT OF SELECTED PLANTS AS MOLLUSCICIDAL ACTIVITY AGAINST GOLDEN APPLE SNAIL (*Pomacea canaliculata*)**

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The study evaluated the molluscicidal potential of Zeolite(clinoptilolite) with aqueous extract of selected plants namely *Eleusine indica* (L.) Gaertn., *Chloris barbata* Sw., and *Tridax procumbens* L. against Golden Apple Snail (*Pomacea canaliculata*) egg clusters and adult. Each of the four treatment concentrations—25%, 50%, 75%, and 100%—was applied to egg clusters with three replicates using the spraying method, with a total of 10 ml, while the adult snails were submerged in the treatment using a total of 100 ml. The study's findings show in the treatment of *E. indica* with zeolite on *P. canaliculata* egg clusters after 168 hours of exposure had an LC50 of 8.13% and an (R^2) of 0.6422, whereas H_2O had an LC50 of 4.55% and an (R^2) of 0.662. In the treatment of *C. barbata* with zeolite the LC50 was 9.89% and R^2= 0.6805 and with H_2O has an LC50 of 10.38% and R^2= 0.606. *T. procumbens* with zeolite has LC50= 19.45%, R^2= 0.7058. T. *procumbens* with H_2O has an LC50=18.74% and R^2= 0.7071 and Zeolite has LC50 of 4.08% and R^2=0.6303. In addition, *E. indica* with zeolite and *T. procumbens* with zeolite has the highest mortality rate on *P.canaliculata* adult snail in all treatment concentrations that has an average of 100% mortality in highest concentration.

The findings revealed that the concentration rises, correspondingly rises the mortality rate of Golden Apple Snail's egg clusters and adult snail. The results showed that Zeolite (clinoptilolite) with aqueous extract of specific plants has a potential molluscicidal application against major pests in a less expensive and environmentally friendly pesticidal management technique that might increase rice crop production.

Keywords: molluscicidal; golden apple snail; bio-pesticides; aqueous extract

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