Evaluation of the Biodegradable Effect of Tenebrio Molitor "Flour Worm" in the Polystyrene "Styrofoam Residues" to Reduce the Environmental Pollution and Generate Conscience to the Population of Huanuco 2018

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The purpose of this research is to Evaluate the Biodegradable Effect of Tenebrio molitor in Polystyrene to reduce Environmental Pollution and Generate Conscience. The procedures have an experimental design with the following post-examination and control groups: RG 1 X O 1 and RG 2 - O 2. We worked with experimental group and control (300 individuals each group), selected by size, weight, larval stage. In the first phase , the nursery of Tenebrio molitor was installed , factors were controlled: temperature, light, humidity . S and developed four experiments Tenebrio molitor, the first to determine the lifetime consuming styrofoam. The second, oversee the consumption of other types of plastic (polyethylene), third to suppress bacterial activity of the digestive system and test its ability des polymerization and isolate - cultivate Exiguobacterium sp . Results: 5 0% moisture, reproduction and feeding eggs - 5g styrofoam (per individual) light (photo phobic), temperature (35 ° C 25): factors affecting growth were determined. The life time consuming styrofoam (experimental) and oats (control) is 130 days , can consume polyethylene (bag) but the degradation is slow. The Exiguobacterium sp , depolymerizes and mineralize polystyrene, removing it as feces and CO 2 was isolated and cultured - Exiguobacterium , in contact with the styrofoam , after holes were observed. Conclusions: The evaluation of the biodegradable effect of Tenebrio molitor allowed us to establish that they are effective in the degradation of polystyrene . This animal is able to engulf polystyrene in bacteria. When isolating and cultivating Exiguobacterium sp , these form holes in styrofoam .

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