Poster – Session 2

Life cycle and development of *Pontoscolex corethrurus* (Müller, 1857) in tropical artificial soil

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The earthworm *Pontoscolex corethrurus* is a peregrine species of the Glossoscolecidae family, native to the Neotropics. The aim of this study was to evaluate the life cycle of this species in tropical artificial soil (SAT), the substrate used in ecotoxicological tests, and the influence of food availability and humidity in its growth. The life cycle was evaluated in four treatments: SAT (120 g) without additional food (SAT0) (n = 24), SAT with 5 g of horse manure (SAT5) (n = 24), SAT with 10 g of manure (SAT10) (n = 24) and saturated SAT (with 25% greater soil moisture) with 5 g of manure (SAT5H) (n = 24). Food was provided every 14 days and the containers maintained at room temperature (19,8 ± 4,1° C). The earthworms used were obtained from 96 cocoons collected near the Embrapa Florestas (Colombo-PR-Brazil), at different stages of development. These were classified into 6 color gradients and compared with the time taken until hatching. On average, white transparent cocoons hatched at 34 days, white opaque cocoons after 33 days, white cocoons with embryo visible to the naked eye at 30 days; white with rosy stripe at 20 days; light pink at 15 days, and dark pink at 6 days. The intensity of the cocoon color indicated the degree of embryo development. The cocoons were placed individually in different treatments and development monitored by registering weekly changes in biometric and morphological characters from hatching to sexual maturation and oviposition. The newly hatched earthworms weighed 0,052 g and measured 1,9 cm in length. By the 13th week all juveniles in SAT0 had died and reached a maximum of 2,2 cm length and 0,013 g fresh weight. For the other treatments, all earthworms had already played (?) at the 44th week, showing length of 5.4 cm and 0.72 g biomass in SAT10, while in SAT5 had 5.1 cm and 0.61 g in SAT5H, 5,1 cm and 0, 59 g. The growth and weight gain in adults of *P. corethrurus* responded positively to the offer of food. *P. corethrurus* was tolerant of excessive moisture in SAT, with eurihigric behavior, surviving both dehydration and flooding, in contrast to other species. The life cycle of *P. corethrurus* was 12 months in SAT. This substrate showed no limitations for the development of the species, provided that the food was offered.