

ABSTRACT

The objectives of this project were to study the effect of bedding and feeding types on physical and microbiological properties of cultivated African Nighterawlers earthworms. Husked corn leave were then primarily used to test the feasibility to cultivate earthworms as well as to compare with cow's compost. The results showed that earthworm could not well reside in the husked corn leave bedding. In compost's bedding, the earthworm also experienced underweight (0.9 g/worm) after 11 weeks. Even the length of the earthworm (15.3 cm) sill comparable to the commercial worms (15-20 cm), the cocoon of the worm has not been found.

The factorial design was then used to study the effect of two different beddings (cow's manure and mixed manure with husked corn leave at 50:50) and three types of feedings (morning glory, watermelon peels and soyben meal residual from soybean milk process). The results revealed that earthworm cultivated from 100% cow's manure showed higher weight than those of mixed with husked corn leaves. The length, however, did not significantly difference between two beddings. When cow's manure mixed with husked corn leave, clearly gave higher nitrogen content in earthworm after 5 weeks cultivation. This could be positively benefits to produce dried worms for pharmaceutical purposes. Compare between feedings, soybean meal induced higher weight and length of earthworm. Additionally, in manure bedding, it was clearly observed that the earthworm fed with soybean meal gave highest nitrogen content. Nevertheless, the effect of feedings on nitrogen content is not clear in manure mixed with husked corn leave bedding. Above all, samples cultivated from cow's manure and mixed with husked corn leave gave cocoons, red-brown color of earthworms with quite similar pattern of microbiological effect. Also, compare to cow's compost, Bedding of cow's manure and mixed with husked corn leaves showed higher weight, length and better characteristics of sample.