

Production of pellets based on the Amazonian invasive sailfin-catfish (*Pterygoplichthys* sp.) for feeding the Mexican crocodile (*Crocodylus moreletii*)

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Abstract: One of the main environmental troubles that seriously affects ecosystems is the establishment of invasive exotic species. The fish *Pterygoplichthys* spp. (family Loricaridae) is an invasive species from Amazonian origin that has been established in several waterbodies in Mexico. In the South of the state of Tamaulipas, populations of this fish have generated an economic impact against fishermen of the region. Moreover, the complex lagoon system of the Tamesi River is the natural habitat of the Mexican's crocodile (*Crocodylus moreletii*), a species whose sustainable use within Environmental Management Units (UMAs) has become a profitable business for farmers of the communities of this region. Based on the above, in the sense of taking advantage for local products, searching of a diet for captive neonatal-stage crocodiles containing the necessary nutrients for their development is the aim of this study. Pellets produced with the fishmeal *Pterygoplichthys* sp. as a component were processed and evaluated.

Analysis of the pellets consisted of the feeding of juvenile individuals ($n_1 = 16$) during six months under this diet, and their growth (weight and size) was compared with a traditional diet based on chicken guts ($n_2 = 16$). Results of this study indicate that crocodiles fed with pellets have a higher growth ($\bar{x}_1 = 22.68$, $SE = 4.78$) than the traditional diet ($\bar{x}_2 = 21.43$, $SE = 9.04$) with significant difference [$t(16) = 1.86$, $df = 175.16$, $p < 0.5$]. Therefore, it is concluded that the use of fishmeal pellets is an alternative to grow crocodile populations, while local fishermen improve their economy by marketing them.

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