



Chironomid Farming is the Future of Tomorrows Fish Production Industries

Nath S*

Associate Professor of Zoology, Government General Degree College Singur, India

***Corresponding author:** Susanta Nath, Associate Professor of Zoology, WBES, Government General Degree College Singur, WB, PIN-712 409, India, Email: nathsusanta2012@gmail.com; susanta_nath@yahoo.com

Editorial

Volume 3 Issue 6

Received Date: November 16, 2020

Published Date: November 19, 2020

DOI: 10.23880/izab-16000253

Editorial

Different aquatic invertebrates are used to understand the quality of water of the aquatic body. Chironomids are considered as the most suitable invertebrate for this purpose with time. This insect has an important position in the aquatic food chain as well as a food web, because of its occupancy as a secondary consumer in the aquatic ecosystem. This insect has a benthic habitat and used the sedimentary and benthic debris as food. They also make their tube with these materials. Chironomids are also known as bloodworm, due to hemoglobin present in the body fluid and give them red in appearance. The presence of hemoglobin gives them the extra capacity to survive in polluted water, and thus scientists considered this insect as a pollution indicator of the aquatic body. Lots of works have been done so far to understand the response of this insect exposed to different toxic metals and pesticides. Larvae of Chironomids are used as laboratory specimens for their wonderful structure of the polytene chromosome and easy to handle. Emergence in a huge number of this insect adult may cause damage to the building and monuments in a different way and at the same time allergic to humans. Leaving these few bad effects of this insect, it has huge beneficial aspects. It was observed that many fish and snail feed more upon the larvae of this insect than other long-practiced food. The larva is rich in protein and other essential nutrients like iron. Moreover, live food attracts more fish than artificial food. Wastage of food also less and reduce the dirt in the culture water body. The remaining larvae do not feed by fish stay in the benthic region of the water body and keep the water free from detritus and polluting materials because these materials are used by these larvae in their tube making at the same time. All these aspects are converting this insect into an important research tool throughout the world. Scientists are involving them, how to increase the production of this

insect in laboratory conditions. Scientists have reported that fish fed on Chironomid larvae grow faster than the fish fed on conventional food. It was observed that the red color of the larva is attracted by the fish. In some parts of Asia, researchers are trying to develop the production technique of Chironomid larvae in floodplain waters. They observed that shed swampy areas containing coconut fibers as substrate were suitable for Chironomids production. In the laboratory culture of Chironomids, scientists compare different food mediums like commercially available fish food, algae, yeast, etc. In some experiments, scientists also used cow-dung and other waste materials for mass production of larvae. Such type of research is going on throughout the world due to the importance of this insect as natural fish food. This insect has a high production rate compare to other benthic invertebrates and has exclusive tolerance of changed surroundings due to pollution. Different foods are trialed to increase the biomass of this insect for commercial purposes. Recently, a group of researchers of Sidho-Kanho-Birsa University and Government General Degree College Singur from West Bengal, India has able to increase biomass production and a comparative study was conducted by applying different food media. The food media contain yeast, potato peel a vegetable waste, separately as well as a mixture of these two foods and commercially available food. It was observed that larval production has shown the best performance in the mixed medium than other media used in this experiment when biomasses, as well as the growth of the larvae, were concerned. Use of potato peel was a significant part of this experiment. Because potato peel was used as a culture medium in place of rejecting it as waste material. It was a cost-effective approach because regular vegetable waste was used in this experiment. Scientists are trying to invent a cost-effective technique to increase the production

of the Chironomid larvae. Such technologies are essential which might in the grip of the common people. Scientists are searching for such cost-effective technology for the production of this insect. Any such success in the laboratory

condition will open the avenues for large-scale production on a commercial basis. Once such a technique is available, the culture of this insect will become the small-scale industry in different parts of the world.

