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**An Update on Freshwater Pearl Cultivation Research and Development in Nepal**

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A pearl is a beautiful, shiny and hard natural gemstone which growth inside the shell of a mussel, used in jewelry since time ancient and also known to have some medicinal values. Most of the pearls available in international trade are cultured pearls produced using freshwater mussels in ponds, rivers, or lakes. Pearl culture is an ancient activity that gradually transformed into one of the leading and more profitable aquaculture industries worldwide. China is the world's biggest producer of pearls, including both marine and freshwater pearls contributing about 98% of global pearl production. Freshwater pearl culture in South Asia is also growing rapidly as a source of employment and income .

As much as it is known there has been no study reported the pearl cultivation practices from Nepal. In Nepal, different species of mussels are known to occur, could be utilized for freshwater pearl farming to generate income. This paper elucidates some recent updates on the status of pearl farming research, development, and its future prospective in Nepal. All experiments described in this case study was perforated at Fishery Research Station (FRS), Begnas, Pokhara and Rupa Lake of Pokhara Valley, Kaski in Gandaki Province of Nepal. For pearl farming, a locally available *Lamellidens marginalis*, freshwater mussel was identified to use. The shells of dead mussels were used for the image and circular bead preparations. We collected the mussels from outlet canals of fisheries research facility, brought to laboratory and skillfully inserted beads (nucleus) in the mantle cavity of the 300 hundred mussels, placed in the nylon bags at 2 pieces /bag and hung back in a productive fish pond and Rupa Lake for the response. For the productions of optimum phytoplankton population to feed cultured mussels, pond was manured with organic and inorganic fertilizers. We kept observing the mussels periodically, where the mussels responded to grow white coated glister as the initial stages of pearl. After the continued experiments for 18 months in the Rupa Lake and ponds of FRS, Begnas Lake, Kaski, the final stage half round pearl was harvested.

Our preliminary experiments and their findings demonstrated that pearl farming could be possible in Nepal. Since this is one of the newest aquaculture technology in Nepal, emphasis on handling mussels in procedure of bead preparation, implantation inside mantle cavity, and growth of the pearl are necessary.



Figure 1: Temporal growth pattern of the pearl in mussel’s cavity

Figure 2: *Lamellidens marginalis*