

Fisheries 2020- Utilization of knife fish (*chitala ornata*) in the development of value added products: An input for sustainable food production

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The clown knifefish *Chitala ornata*, a very popular knife fish. This is partly because of its common availability and being relatively inexpensive. But its also a favorite because it is extremely attractive. They usually have a pattern of large spots, but this can be quite variable and it seems that no two clown knifefish are exactly alike. They come from South America and South East Asia specifically from Thailand, Borneo, Malaysia, India and Sumatra and usually found in lakes swamps and river backwaters. They prefer still waters and can survive with low oxygen. Knife fish was accidentally introduced in Laguna de Bay, the largest lake in the Philippines during the super typhoon Ondoy in 2009 which caused flash floods in many parts of the country. As early as 2011, reports from fisherfolk surfaced regarding knife fish being a pest as it eats tilapia and milkfish fry which are the two main commodities caught from the lake. The proliferation of knife fish has affected the aquaculture and capture fisheries of the lake causing the catch and harvest of the fisherfolk to decline dramatically. The bulk of the fisher folks catch comprises now of knife fish which is not acceptable to them because it does not suffice to their previous income when most of their catch is bangus and tilapia. This is because knife fish only sells for 10-20/kg while bangus or tilapia is usually around P100.00/kg in local markets (BFAR IV-A). The fish is aggressive, highly carnivorous in nature and naturally breeds in ponds and open waters. In the wild, a knife fish can grow up to 100 cm in length and 5 kg in weight. According to BFAR-National Inland Fisheries Technology Center (BFAR-NIFTC), the fish consumes/requires seven kilograms of different type of fishes to grow to a kilogram. It is also rapidly produced with a fecundity of 20,000 eggs/kg of fish. Knife fish eggs are found attached on stakes and poles of fish cages and pens where they grow and feed on the tilapia and bangus fry and fingerlings. The fish is now considered as an invasive species and a threat to the biodiversity of the lake, particularly to the indigenous species including silver therapy or ayungin, goby or Biya and freshwater shrimp or hipon. One of the strategies of BFAR IV-A in the containment of knife fish is to explore its economic utilization. Under this is the use of knife fish as a raw material in postharvest. The knife fish is now used as a raw material in making nuggets, kikiam and siomai. In this research, the researchers utilized knife fish in making the fish ball, fish kropeck and fish patties. The Laguna State Polytechnic University (LSPU) Research and Development Agenda Formulation Workshop held last September 13, 2013, at LSPU Siniloan Laguna, wherein the framework of research priorities, as well as the LSPU Research and Development Mission and Vision Statements, were approved to the Board of Regents. In this forum, the research priorities were set and these junctures that the Vice-President for Research and Development identified *Pangasius* and Knife fish will be given priority in

research activities for LSPU, Los Banos Campus. The University invested time and effort to make and adopt *Pangasius* and Knife fish as the main commodity for Research of LSPU, Los Banos Campus and is one of the State Universities and Colleges in the Cavite-Laguna-Rizal-Quezon (CALABARZON) offering fisheries courses in this part of region, the researchers in order to contribute to the collective effort of the faculty and personnel of the University, decided to focus on the Utilization of Knife Fish (*Chitala ornata*) in the development of Value Added Products: An Input for Sustainable Food Production.