

2nd Global Summit on

Aquaculture & Fisheries

July 11-13, 2016 Kuala Lumpur, Malaysia

Assessment of feeding habits of Sri Lanka freshwater fishes on their muscle lipid fatty acid composition and tocopherol contents

Chandravathany Devadawson¹, Chamila Jayasinghe² and Naohiro Gotoh³¹Eastern University, Sri Lanka²Wayamba University of Sri Lanka, Sri Lanka³Tokyo University of Marine Science and Technology, Japan

The total lipid content, fatty acid composition and tocopherol content of muscle lipids of 11 fresh water fishes belongs to Cichlidae, Anabantidae, Siluridae, Cyprinidae, Channidae families lived in reservoirs in Sri Lanka were studied. Muscle lipid contents were varied between 1.6-41.5% of the fishes that having omnivorous, carnivorous and herbivorous feeding habits. Walking cat fish (*Clarias brachysoma*) having omnivorous feeding habit showed the highest total lipids (41.5%), polyunsaturated fatty acids (PUFA) (39.9%) and α -tocopherol (29.65 mg/g) in the muscle. The ratio of total n-3 to n-6 fatty acids in walking catfish is 1, confirmed consumption of catfishes favorable for human health and has a particularly beneficial effect in preventing cardiovascular diseases. Tilapia (*Tilapia mossambica*), and climbing perch (*Anabas testudineus*) having omnivorous feeding habit showed 15.73 and 12.55% total lipids in the muscle and contained 5.6 and 2.5 mg/g α -tocopherol respectively. However, tilapia (*Tilapia niloticus*) shows very low total lipid (1.69%) and tocopherol (0.08 mg/g). Fresh water shark (*Wallago attu*) having carnivorous feeding habit shows 11.29% total lipids, 4.02 mg/g α -tocopherol and 36% PUFA in muscle. Similarly, rohu (*Labeo rohita*) having herbivorous feeding habit contained 10.84% lipids, 6.61 mg/g α -tocopherol and approximately 90% unsaturated fatty acids. Results of the study revealed that the lipid content, fatty acid composition and tocopherol content in the muscle of the freshwater fishes in Sri Lanka was not significantly influenced by the feeding habits of the fishes and no relationship with the families.

Biography

Chandravathany Devadawson has completed her MSc and MPhil at Stirling and Aberdeen University, UK and currently pursuing her PhD from Wayamba University of Sri Lanka and attached as Senior Lecturer/Zoology in Eastern University, Sri Lanka. She was the Dean of Faculty, Head of Department and Director for Centre for Aquatic Resource Management. She has published more than 60 abstract papers in international and national conferences, 8 full papers in peer reviewed and proceedings journals and has wrote three books in Aquaculture and Fish and Shellfish diseases. She has been resource staff in many fisheries and aquaculture related projects.

chand_oo@yahoo.com

Notes: