



Award Details

Development of innovative drying technology for optimized product value of sea cucumber

Research Details

Competition Year:	2018	Fiscal Year:	2018-2019
Project Lead Name:	Dave, Deepika	Institution:	Memorial University of Newfoundland
Department:	Fisheries and Marine Institute	Province:	Newfoundland and Labrador
Award Amount:	25,000	Installment:	1 - 1
Program:	Engage Grants Program	Selection Committee:	Atlantic Internal Decision Committee
Research Subject:	Food science and technology	Area of Application:	Oceans, seas and estuaries
Co-Researchers:	No Co-Researcher	Partners:	Quin Sea Fisheries Ltd.

Award Summary

Sea cucumbers are found in both benthic areas and deep seas and have been used as a source of food and pharmaceuticals for decades. During the past decade, several scientific research initiatives have explored various species of sea cucumber, however, limited research has been dedicated to the Atlantic species. As an emerging fishery in Atlantic Canada, the sea cucumber fishery is currently enduring sustainability and viability issues. The most common sea cucumber species found in the northwest Atlantic is *Cucumaria frondosa*. Newfoundland and Labrador (NL) is particularly concerned about the over exploitation of *Cucumaria frondosa* and as a result, the province is enforcing more stringent policies compared to other Canadian provinces which are currently in the developmental stages in Sea cucumber fishery. Limited amount of information available on the harvesting and potential utilization is another drawback that hinders the expansion of this highly marketable species. Therefore sustainable harvesting, processing and utilization of this benthic marine invertebrate is crucial to create growth associated with most successful Sea cucumber fisheries worldwide. The proposed research is based on Quin Sea Fisheries Ltd.'s objective to further research and development of current Sea cucumber processing methods in an effort to maximize efficiencies and yield of final market products. The work consists of (a) Investigate and select the most efficient, economically and environmentally acceptable storage and preservation methods; (b) Characterization of sea cucumber muscle wall; (c) Investigation of use of different drying techniques to achieve higher yield and quality; (d) Evaluate the effectiveness of drying process in terms of drying time, dehydration ratio, energy consumption, protein values and product quality. This innovative approach will allow Canadian seafood processors to diversify, develop new products and better position themselves to break into new markets and compete on an international scale.