
Fish and Prawn Pickle Production - A Tale of Women Led Fishpreneurship in Balasore District of Odisha

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ABSTRACT

Pisciculture contributes immensely to the agricultural income of Balasore district occupying a water spread area of 3942 ha. The district of Balasore comes under North Eastern Coastal Plain agro-climatic zone between 20-21^o North latitude to 84-87^o East longitude surrounded by neighbouring Mayurbhanj, Bhadrak & Bay of Bengal. The inland fish production solely comes from the carp culture activities undertaken in the tanks and ponds available in the district. Women folk of this particular area also involved in selling fishes & drying the marine fishes at the time of huge catch. But their profit was less due to unhygienic practices during preparation. After taking training & demonstration from KVK,

Balasore the members of Samuka dry fish producers group started to prepare fish pickle with scientific practices & generated income of more than 40,000/-rupees.

INTRODUCTION

Agriculture and fishery are the main occupations of the local population of Balasore district. In fishery sector, it has high potentiality in respect of aquaculture and fishing activities and has rich resource of inland, brackish water and marine water. The district has 7991.99 hectares (39638 nos.) of ponds and 6339.30 hectares of brackish water and a coastline of 80 km. The fishermen population of inland sector is 88,487nos. & that of marine is 2,20,700 nos. as per District Fishery Office, Balasore. As per report of District Fishery Office, Balasore (2018-19) 11,336MT of freshwater fish and 35500 MT marine fish produced annually out of which 30-40% is lost due to storage problem & low shelf life of Fish. Most of the villagers adjacent to the Bay of Bengal are involved in fishing activities for their livelihood. Women folk of this particular area also involved in selling fishes and drying the marine fishes at the time of huge catch. But their profit was less due to unhygienic fish drying & no other value addition produce prepared.

FISH AND PRAWN PICKLE

Anaerobic fermentation of marine fish & shrimp in brine solution or vinegar leads to preparation of preserved food item called as Fish/shrimp pickle. Fish/shrimp pickle should be kept at a pH level not exceeding 4.6 in order to minimize microbial activity. The majority of sea-dwelling species, such as shrimp, tuna, pomfret, and mackerel, are suitable for the production of fish pickles, possessing an average shelf-life of one year. The process of pickling fish is a secure and straightforward way to store fish for a limited period of time. In addition, it is of commercial significance in various Asian and African nations. In order to improve profitability, the introduction of value-added products, such as fish pickles from low-cost *Pangasius*, could herald a new era of production and delivery for human consumption. Fishery value-added products would provide immediate benefits to the current fish processing industries as per as per Rahman (2019). The process of pickling involves the mixing of primary fatty fish with appropriate salt (which may include vinegar and spices), which is then placed in watertight containers beneath the resulting pickle, which is formed by the addition of salt to the water obtained from the fish tissue. The fermentation process of unfermented pickle is characterized by the use of concentrated brine, which may contain as much as 16% salt, or vinegar, before either pasteurizing or cooling the pickle. The primary purpose of pasteurization is to eliminate the bacteria responsible for spoilage and to inhibit the enzymes responsible for softening the pickles. Pasteurized fish pickles typically have a shelf life of between one and two years. Fermented pickles are produced by soaking the raw materials in a brine solution containing 2 to 5% salt for a period of one to two weeks which is corroborated by Anupama (2022).

INTERVENTION BY KVK

Samuka Dry fish Producers Group of Kasafal is formed during 2022 but due to lack of knowledge & skill about value addition, this group is facing problem and approached Scientists of KVK, Balasore for technological guidance. Skill training on "Preparation of cured/pickle and dried fish" to improve their knowledge on value addition is conducted. Simultaneously FLD on "Demonstration of fish pickle" was also conducted involving 10nos. of members of the group to

improve the skill on fish pickle preparation and packaging of the product. Further to enhance the scientific knowledge of the women PG members, an exposure visit was made to college of fisheries, Rangeilunda, Ganjam for training on prawn & fish pickle preparation, packaging & branding. Also power operated sealer machine & Food grade polythene packaging material was provided the group under SCSP programme during FY 2022-23. After these interventions, members of Samuka Dry fish PG started to prepare Fish & prawn pickle with scientific practices & sold these products during various district level agri fair & expo. District administration of Balasore during agri expo-2023 praises the PG as well as KVK for introducing a new value added product to the masses Balasore district & advised to go for FSSAI license.

OUTPUT

Table 1. Quality Parameters of the Fish pickle

FLD- CIFTEQ™ Fish Pickle				
Farmers practice (FP)		Not practicing, only selling the fish (Lack of Knowledge and skill)		
Demo		CIFTEQ™ Fish pickle with Mustard Oil and Tamarind paste		
Results	Shelf life	Sensory evaluation (10 point scale)	pH	Peroxide value (90 days store at room temp)
FP	4-7 hrs	-	-	-
Demo	180 days temp (28°C-32°C)	9.36	3.6-4.1	2.27 mEq/kg
Farmers Feedback: More shelf life, Hygienic product, easy preparation				

Table 2. Income generated from different enterprises per annum

	(shelf life)	Yield (kg/100 kg)	% change in Yield	Cost of Production (Rs/100 kg)	Gross return (Rs)	Net Income (Rs)	B:C Ratio
FP	2.6 months	24.8		13000	24800	11800	1.90
Demo	6.5 months+	86.4	248.39	38800	86400	47600	2.22

IMPACT

Members of the samuka producers group are now self-employed, generating revenues worth



thousands of rupees, securing their livelihood. Success of this group has inspired other SHGs and Women-led groups of Balasore to venture into new horizon of entrepreneurship through

value addition of Bamboo, Jute & oyster mushroom instead of traditional squash, jam & ketch up preparation.



CONCLUSION

Balasore is famous for paddy, fish and betel vine. Both inland and marine fishery sector of Balasore is well explored. Also in ODOB Balasore is selected for Fish based product. More numbers of infrastructures/Post harvest value addition units on a cluster approach may be established for the development of quality fish and fishery products with the marketing linkage with OLM and ORMAAS for successful entrepreneurship development.

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