

A Success story on

RTE Stuffed Mussels - A Business venture of ABI Incubatee from ICAR-CIFT takes wings

Mussels are considered as one of the most nutritive food rich in vitamin A, B₁₂, vitamin C, thiamine, riboflavin; high in mineral contents like Iron, Zinc, manganese, phosphorus and selenium. It is good source of Omega -3 fatty acids enriched with easily digestible protein and essential amino acids and has low calorific value. Daily intake of mussels stimulate brain functions, improves heart health, promotes cellular functions, facilitates blood circulation, reduce arthritis, prevents anaemia and asthma. The importance of mussels as a component of healthy diet cannot be undermined as recommended by the nutritionists.

In India, the mussel culture is gaining momentum due to its commercial importance as most preferred seafood with a wider distribution of green mussel (*Perna viridis*) culture along the coast of Kerala, Karnataka, Goa, Maharashtra and Andaman & Nicobar Islands; and brown mussel (*Perna indica*) has got limited distribution in south west coast of India stretching from Varkala to Kanyakumari. It is pertinent to mention that Malabar Coast of Kerala, commonly referred as 'Mussel fishery zone' of India that contributes more than 80 % of total annual mussel production of the country (18432 tonnes) is mostly dominated by green mussel.

Kozhikode district in north-western part of Kerala, the heritage capital of old Malabar province, is famous for its authentic and delicious food recipes, resulting from the amalgamation of different food cultures mingled with the locally available world quality spices. And one of the exquisite delicacy offered in the seafood platter in this region is various forms of mussel products, that allures the budding entrepreneurs to explore appropriate business opportunities in mussels.

Mr. Mohammed Fawas T C, a young man of barely 21 years old, highly ambitious, hailing from a business family at 'sea facing' Chaliyam Bazar in Kozhikode district had a strong determination since his high school days to start a business on his own with some innovations, and being a son of a businessman (local shoe company) engaging in a business activity was not alien to him. "Starting an entrepreneurship was not one of many options, rather it was the only option for me" says Mr. Fawas with a strong sense of achievement motivation blended with innovative ideas. He had a multitude of reasons to give it a shape as it owes him self-dependence, liberty of taking own decision and priorities setting. So after graduating from Farooq College, Kozhikode, in Bachelor of Business Administration (BBA), he did not have much to ponder upon, a situation which often befuddles the budding entrepreneurs. In this background, with the abundance of quality mussels available at his doorstep, strong zeal for developing an innovative enterprises and armed with social media supported marketing mechanism, Mr. Fawas ventured for starting entrepreneurship in seafood sector with ready-to-eat (RTE) mussel products.

As an initiative towards his dream realization, Mr. Fawas established a small production unit in early 2018 at Chaliyam adjacent to Kadukka Bazar, Kozhikode with Mr. N Rameesh and Mr. M Irfan as his co-partners. The trio started to concentrate on selling the stuffed mussel with

exquisite blend of rice and condiments in fried form (*'Kallumakkayi nirachath'* in Malayalam), a well-known traditional snack recipe in Kerala, which fetched good market demand locally as well as in and out of Kerala and overseas also due to its flavorsome ethnic taste and nutritive value, but the problem was with shelf-life period due to lack of proper packaging. Initially they used to sell the stuffed mussels packed in a locally available aluminum foils, which failed to uphold the quality of the product that tend to decay fast within few hours of storage, resulting a heavy loss to his business with daily discard of substantial amount of rotten RTE mussel products. Under this circumstances, Mr. Fawas and his partners thought of consulting ICAR-CIFT for getting the technical support for improved packaging to get rid of this crisis.

ICAR-CIFT intervention

The Agri-Business Incubation (ABI) Centre of ICAR-CIFT, Cochin supports the start-ups or prospective entrepreneurs by providing technical guidance and value-added business support in terms of technical consultancy, project planning, market linkage and capacity building in harvest and post- harvest fisheries to develop technology based business ideas and establish sustainable enterprises.

When Mr. Fawas along with his team approached CIFT- ABI with the problem of packaging, then the technology developed by Dr. C O Mohan, Mr. S Sreejith and Dr. J Bindu, Scientists of Fish Processing Division of ICAR-Central Institute of Fisheries Technology, Cochin was suggested as appropriate technology to solve their problem which the entrepreneurs indeed looking for. The scientific technique of thermal processing or high temperature processing was used for product storage without adding any chemical preservatives to enhance the shelf life of the product at room temperature. Immediately, Mr. Fawas registered as an incubatee at the Agri-business Incubation (ABI) Centre of ICAR-CIFT during the month of November 2018.

The CIFT-ABI took a pro-active step and provided the necessary technical supports to the Mr. Fawas (incubate) to process the classic Malabar snack 'Stuffed Green Mussel' from the inception stage itself, which involved procurement of fresh green mussels, stuffed with traditionally blended rice and other ingredients, then packed carefully in food grade retort pouch at high temperature sufficient to kill pathogens of public health significance and thus increasing the shelf life of the product. Then this RTE items could store at normal room temperature without refrigeration for an extended period of minimum 2- 3 years depending on the product type. Firstly, the product trials were conducted at the Institute's pilot plant facility during December 2018. After successful test marketing, Mr. Fawas registered a company during April, 2019 in the name of M/S Foo Foods Pvt. Ltd. at Chaliyam, Kozhikode for creating a marketing brand FOO FOODS for the product. The technology was transferred by ICAR-CIFT through signing a MOU with the party. Later, the product christened as "*Kallummakkaya Nirachath*" was launched on 25th May 2019 by Hon'ble Secretary, DARE & DG, ICAR Dr. Trilochan Mohapatra, at a function held at ICAR-Central Institute of Fisheries Technology, Cochin in presence of Dr. J.K. Jena, DDG, Fisheries, Dr. P. Pravin, ADG (Marine Fisheries), Dr. Ravishankar, C.N., Director, ICAR-CIFT, Cochin and Dr. Ashok Kumar, K., Head, Fish Processing Division.

Product convenience

The RTE stuffed mussel product developed at CIFT-ABI centre got several advantages like long shelf life under normal room temperature without refrigeration, no chemical preservatives and additives to retain the food quality and wholesome, no trans-fat and low in cholesterol, gluten free keeping intact the freshness and taste throughout the year. Entire content is edible without wastage after initial pre-heating and for this product it tastes best after frying.

Commercial importance of the product

The RTE stuffed mussel product “*Kallummakkaya Nirachath*” received enormous response from both the consumers and retailers in respect of quality, test and cost. The product is now available in hypermarket and supermarkets in Kozhikode and Malabar regions throughout the years with a market price of only Rs 140 per pack (125 gms.) containing five stuffed mussels. The cost of production was estimated to be Rs. 740 per kg. of mussels with average monthly production of 375 Kg. of RTE stuffed mussel products. The net profit of the company after meeting all the expenditures is around Rs 1,42,500 per month with BCR 1.51. Mr. Mohammed Fawaz T.C, the founder of M/s Foo Foods Chaliyam initially invested about Rs. 30,000 for establishing a small production unit and availed the technical facilities for thermal packaging of products through out-sourcing. Within a period of almost one year, he could introduce the taste of Kerala to the table of fish lovers spread across the gulf countries. Owing to the increasing market demand of product and again the brand popularity, now M/S Foo Foods Pvt. Ltd, Chaliyam is in the forefront in seafood entrepreneurship. With the present pace of momentum, the company expects to create a business turnover of Rs 25 crore by the year 2025. In addition, the Company is also planning to roll out more ethnic food recipes as convenience foods in the near future.



MOU signing for transfer of retort pouch technology to Incubatee Mr. Fawas



Product release by Dr. Trilochan Mohapatra, Secretary DARE and Director General, ICAR



Stuffed Mussel Products in Retort Pouches



Foo Foods Products displayed at Mango Supermarket, Kozhikode, Kerala



Mr. Fawas and his team, with the products