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An Overview of Fish Maw and its Potential Benefits

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SUMMARY

Fish is a vital source of food for people. Fish processing for human consumption results in an enormous quantity of wastage in the form of viscera, swim bladder, skin, head, scales, bones, and trimmings. The quantity of wastage depends on the size and type of fish. Industrial fish processing utilizes only 40% of fish flesh as edible part and the remaining 60% is thrown as waste. The world's annual fish discards as wastage exceeds 20 million tonnes (25%) each year, which includes by-products also. The enormous degree for high-esteem final results from fisheries squander has been acknowledged as of late and various advances have been created to use fish preparing waste by changing over them into value-added and by-products for human consumption and animal nutrients. Among them, fish maws have a great demand in the export market and high-end restaurants.

INTRODUCTION

Often called by many names like fish bubble, air bladder, or swim bladder, it is an internal gas-filled hydrostatic organ that control the buoyancy of the fish and also helps to stay at the required depth without energy consumption. Generally, the swim bladder is thrown as waste in fish cutting centers without recognizing its value. Fish maw is a dried form of fresh and high-quality air bladder which is rich in gelatin. The air bladder is taken from large fishes and graded according to sex because male bladders are better than female ones. In some Asian cultures, swim bladders of certain fishes are considered as a food delicacy. Cleaned, desalted and dried air bladders are commonly used in Chinese soups and stews as luxuries item. When it is cooked, it takes flavors from surrounding ingredients and becomes soft and tasty with a slippery texture.

Species Preferred

In India, fish maws are mainly produced from bladders of large fishes like seabass, snapper, eel, catfishes, threadfins, drums, groupers, etc. Swim bladders of Ghol fish *(Protonibea diacanthus)* are highly priced and is called 'the fish with a heart of gold'. In many African countries, they are produced from Nile perch. They can be obtained from many of the larger fish species, especially the demersal fishes, which have thick and high-quality air bladders.

Nutritional Benefits

Fish maw is one of the precious Chinese foods rated equal to abalone, sea cucumber and shark fin due to its high nutrient profile. Fish maw contains high protein and micro-nutrients such as P and Ca. It is believed to be effective in lung, kidney and anemia treatment. It is suitable for the consumption of broad age groups and is a kind of therapeutic food. Fish maw contains high viscosity gel protein and mucopolysaccharide which are important to skincare and capable of preserving fine complexion and invigorating blood circulation. Many Chinese people believe that having fish maw soup will improve their skin and good for pregnant women. Besides, fish throat doesn't contain cholesterol and accordingly it is thought of as a valuable health enhancing food. In Chinese medicine, it is used to treat circulatory and skin problems.

Grades of Fish Maw

Fish maws are graded into various types they are "kingfish maw", "premium fish maw", "grass seabass fish maw" and "fried fish maw". Kingfish maw and premium fish maw are the best quality and highly-priced amongst the four types. Grass Seabass fish throat and seared fish throat are anyway more famous because of their

affordable valuing. Fish throat is additionally evaluated by their sex. The male fish bladder has a thicker body and smooth and not effortlessly disintegrated in the mouth, while the female bladder has a more slender body and delicate.

Nutrition Facts

Serving Size	100 g
Amount Per Serving	
Calories 158	
	% Daily Value
Total Fat 0.2g	**0 %**
Saturated Fat 0g	**0 %**
Cholesterol 0mg	**0 %**
Sodium 12mg	**5 %**
Total Carbohydrate 10g	**10 %**
Dietary Fiber 5g	**17 %**
Sugar 2g	
Protein 84g	**160 %**
Vitamin A 0 % • Vitamin C 0 %	
Calcium 11 % • Iron 37 %	

Daily values are based on 2000 calorie diet.

Production Procedure

Remove the air bladders from fish
↓
Wash to remove the blood and dirt
↓
Flatten the air bladders to required shapes
↓
Dry under the sun until they become hard
↓
Weigh the dried fish maws
↓
Grade them according to their weight, size and quality
↓
Pack them in suitable containers

Export Potential

Fish maws export is considered as a lucrative business among several developing countries like India, Uganda, Kenya, etc. and becoming a multi-million dollar industry exporting particularly to China. The demand for fish maws is high among the East Asian countries, especially China, Indonesia, Japan, Hong Kong, Malaysia and Singapore. International prices of high quality dried fish maws range from 450 USD upto 1000 USD per kilogram depending upon the size, quality, and market strength.

Other Applications

Swim bladders are likewise utilized in the food business as a wellspring of collagen. They can be made into solid, water-safe paste, or used to make isinglass. It is a kind of gelatin obtained from fish maws of larger fishes, especially sturgeon, and used in making jellies, glue, and for the clarification of beer. In India, air bladders of eel and catfishes are used for the production of isinglass. India exports dried fish maws, which form the raw

material for the production of isinglass and other such products. Process has been developed to produce the finished products from fish maws.

CONCLUSION

Since, fisheries and aquaculture sector is growing every year future development of high value items from this sector has huge potential. Hence utilization of fishery waste for the production of high value products is gaining importance in recent years. A variety of value added and by-products can be developed which is found to have wide applications in various fields such as medical, food, and cosmetics etc. Fish maw export business is becoming a multi-million dollar industry with high potential of creating more economical benefits and business opportunities.

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