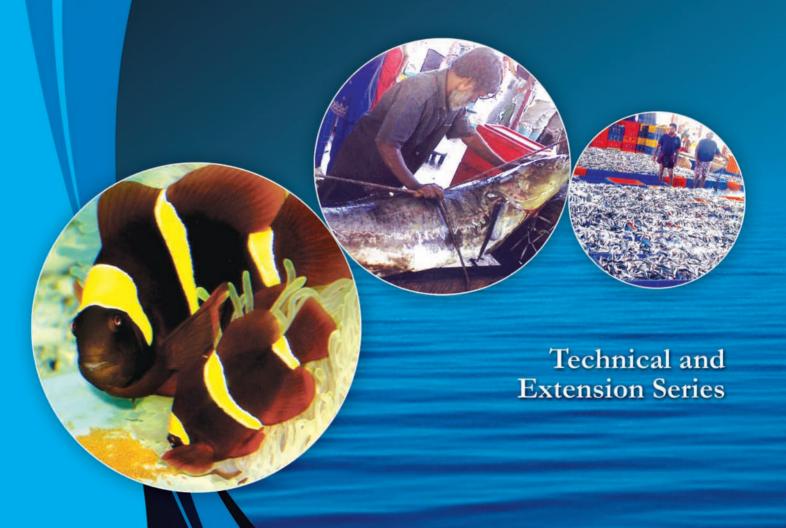
Marine Fisheries Information Service





Central Marine Fisheries Research Institute (Indian Council of Agricultural Research) Post Box No. 1603, Cochin - 682 018 www.cmfri.org.in



Flourishing trade of air bladders at Okha, Gujarat

Shubhadeep Ghosh, G. Mohanraj, P. K. Asokan, H. K. Dhokia, M. S. Zala and H. M. Bhint *Veraval Regional Centre of CMFRI, Veraval*

he swim bladders of eels (*Muraenesox* talabonoides Bleeker), ghol (Protonibea diacanthus Lacepede) and koth (Otolithoides biauritus Cantor) are of best quality and fetch very high market price owing to the huge export demand. Fish air bladder is mainly used for making isinglass. Considerable quantity of eel, ghol and koth are landed at Okha by trawlers operating on the rocky bottom (18 m depth) off Jakhau. Around 500 trawlers having an overall length of 40 to 45 ft, powered with 80 - 105 HP engines are actively engaged in the fishing of eel, ghol and koth. The fishing trip lasts for 7 - 10 days with 4 - 6 hauls of 3 h duration per day depending on whether they fish during only day or both day and night. The trawlers carry on an average 10 to 12 nets having length of 35 - 40 m with cod end mesh size varying between 8 and 15 mm.

The merchants trading on air bladder of eel purchase the fish from boat owners at Rs. 30-35/kg. The wet weight of air bladder extracted per kg of eel range from 30 - 50 g. Generally from eels weighing around 3-6 kg, 100 - 200 g (wet weight) of bladders measuring 385 - 565 mm are extracted (Fig. 1). The bladder after extraction from the fish is immersed overnight in a chemical solution to improve its colour and texture. The bladder is then inflated by blowing air into it and sun dried on nets in raised bamboo platforms after which it is packed and exported. The swollen air bladder fetches higher price than the flat air bladder. The price of air bladders varies between Rs. 4,000 and 7,000 / kg depending on the weight of the bladder.

Ghol weighing 10 - 15 kg and 15- 25 kg yield 350-450 g and 500-700 g wet weight of bladder respectively. The length, breadth and weight of dried air bladders obtained from males ranged between 132 - 180 mm, 120 - 170 mm and 100 - 290 g



Fig. 1. Air bladders extracted from eel

respectively. For females, the length, breadth and weight of the dried air bladder varied from 155 to 190 mm, 145 to 190 mm and 180 to 400 g respectively. For koth, 400 - 600 g wet weight of bladder was extracted from fishes weighing 12 - 15 kg and 300 - 500 g wet weight of bladder was extracted from fishes weighing 7 - 12 kg. The length, breadth and weight of dried air bladders obtained from adult koth (12 - 15 kg) ranged between 293 - 340 mm, 180 - 192 mm and 400 - 460 g respectively. The air bladders extracted from juveniles of koth are however much smaller and had lengths ranging from 98 mm to 132 mm weighing around 2 g each. The air bladders after extraction from ghol and koth (Fig. 2) are trimmed and immersed overnight in the chemical solution before sun drying and packing. An interesting feature is that air bladder from male ghol fetches double the price than that of female. The price of fresh and dried bladders from koth is given in Table 1. The price of fresh and dried bladders extracted from male and females of ghol is presented in Table 2. The air bladder of eel is exported via Mumbai to Singapore while that of ghol and koth is exported to Hong Kong.



Fig. 2. Air bladders extracted from ghol and koth

Table 1. Price of fresh and dried air bladders extracted from koth

	Weight of bladder (g)	Price of bladder (Rs./kg)
Fresh air bladder	2200 1800	>350 250 - 300
Dried air bladder	>200	4,500
	150-200	4,000
	100-150	3,500
	50-100	3,000

Table 2. Price of fresh and dried air bladders extracted from males and females of ghol

		Weight of bladder (g)	Price of bladder (Rs./kg)
Male	Fresh air bladder Dried air bladder	>400 300-400 250-300 200-250 150-200 160-200 140-160	15,000 12,000 9,000 6,000 4,000 40,000 30,000
Female	Fresh air bladder	120-140 100-120 80-100 50-80 >500	25,000 22,000 14,000 12,000 8,500
remaie	rican an bladder	400-500 300-400 200-300	6,500 5,000 2,500
	Dried air bladder	200-250 160-200 130-160 100-130 80-100 50-80	18,500 14,000 11,000 10,000 7,000 6,000