

Estimation of Yield of Dry Air Bladders from Eel Fish

Air bladders of some fish especially those of eel form good raw material for production of isinglass, valuable clarifying agent for beer, wine etc (Brody, 1975). At present, dried air bladders, fish maws are exported for preparation of isinglass. Basu *et al.* (1987) developed a suitable technology for the production of isinglass. Large quantity of eel fish are landed annually in this country and dried air bladders from eel are available for production of isinglass. The present study was taken up to work out a method to estimate the yield of dried air bladders from the weight of whole fish.

Weight of the whole eel was taken immediately after landing. Then the air bladder of the fish was taken out and weight of the wet air bladder was determined. Weight of 200 eel of different sizes selected at random and weights of respective air bladders were recorded. Wet air bladders are normally dried in shade in open air. The moisture content of the wet and dry air bladder was determined by AOAC (1975) method.

The weight of wet air bladder showed very high correlation with the weight of the eel ($r: 0.99, n: 200$). The corresponding regression line was found to be

$$Y = -1.3392 + 0.0180 X$$

where Y = weight of wet air bladder (g),
X = weight of eel (g)

From the above regression and also from the classification of the observations, the following relationship between the weight of eel and the weight of wet air bladder was found to hold good.

Weight of eel	Weight of wet air bladder as percentage of weight of the fish
400 - 1000 g	1.3 to 1.6
above 1000 g	1.6 to 1.9

Further from the moisture contents determined on the wet and dry air bladders, the weight of dry air bladder was estimated to be 50% of its corresponding wet weight (with a range of 46-54%). Combining the two results the weight of dry air bladder can be taken to be 0.6-0.9% for eels of 1000 g and less and 0.7-1.0% for eels above 1000 g. Badonia *et al.* (1987) reported that the yield of dry air bladder varied from 0.65 to 1.2% of body weight of eel fish. Their sample size and the basis on which the yield of dry air bladder was calculated are not known. On an average, weight of dry air bladder can be taken to be 0.8% of the weight of the eel. Based on this, availability of dry air bladders from eel fish would be of the order 50-100 tonnes per annum with the states of Maharashtra and Gujarat jointly accounting for 80-90% of the product.

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