

LENGTH COMPOSITION OF YELLOWFIN TUNA CAUGHT BY JAPANESE
LONGLINE FISHERY IN THE ATLANTIC OCEAN, 1956-1964

(Data already published in ICCAT Data Record,
Volume 6, pp. 48-50 and 75-80)

by
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A main purpose of this report is to present all available data on the length composition of yellowfin tuna caught by Japanese longline fishery in the Atlantic Ocean prior to 1964. This will supplement the more detailed data on yellowfin size composition during the early stage of Atlantic longline fishery.

1. Sample length frequency

Data compiled in this report were collected mainly from research vessels as well as from commercial boats operated during the period from 1956 to 1964. They were tabulated in the unit stratum, by quarter of the year and by area 10° in latitude and 20° in longitude (Table 1). The notation for the area in the Table is expressed by smallest numbers in each unit area, for example, the area 10°-20°N and 20°-40°W is expressed by 10°N and 20°W. Quarter of the year is indicated as Quarter-I for Jan.-Mar., as Quarter-II for Apr.-Jun. and so on. Length is in terms of fork length, a distance from the tip of the upper jaw to the posterior tip of the shortest caudal fork.

2. Catch in number by length class

Because of no sample data or very few data in some years, catch in number by length class was estimated only for four years 1956, 1957, 1963 and 1964, by GUINEA and CARIB areas designated by Honma (1973) (Table 2 and Fig. 1). When sample number by quarter was few or none, data from neighbouring quarter as indicated in parenthesis were substituted (Table 3). The procedure of the estimation was already described by Honma (1973).

3. Brief explanation on the result

Most of catch comprises the fish between 100 and 170 cm in length, especially with higher proportion of larger fish than 120 cm, except CARIB area, where small fish between 100 and 120 cm are fairly predominant.

In the CARIB, modal lengths in large-sized fish were positioned at 148-152 cm in 1956, 152-156 cm in 1957, and 136-140 cm in 1963 and 1964. In the GUINEA, modal lengths were at 152-156 cm in 1957, 136-140 cm in 1963 and 124-128 cm in 1964. It is indicated by comparing the size composition between earlier years' and later years' that decrease of the proportion of large-sized fish is obvious in both areas. Reduction of large-sized fish seems to be more marked in the GUINEA than in the CARIB.

References

- Honma, M. 1973. "Overall fishing intensity and catch by length class of yellowfin tuna in Japanese Atlantic longline fishery, 1956-1970". Col. Vol. Sci. Pap., Vol. I, 59-77.

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