Importance of fish meal

Fish meal is a good source of proteins. Depending on the raw material used in its manufacture, its protein content may vary from 40% to 60%. Fish meal protein is a rich source of amino acid lysin which occurs in deficient quantities in most of the cereals and legumes.

Prepared by
Dr. L.N. Murthy
Dr. Jeyakumari A.
Smt. Laly S. J.

Designed by
Smt. Sangeeta Gaikwad
Smt. Priyanka Nakhawa
Dr. Girija Behere

For further information, please contact
The Director
ICAR-Central Institute of Fisheries Technology
CIFT Junction, Matsyapuri P.O.
Willingdon Island, Kochi-682 029
Phone: 91 (0) 484-2412300
Fax: 91 (0) 484-2668212
Email: cift@ciftmail.org

Mumbai Research Centre of
ICAR- Central Institute of Fisheries Technology
CIDCO Admn. Bldg., Sector-1, Vashi,
Navi Mumbai-400 703
Email: ciftmum@gmail.com
**Fish Meal**

**Introduction**

Fish meal is a dry product having brownish grey colour and milled to a fine to course powder. It is a good source of major nutrients such as protein and contains fair amount of fat. It is rich in essential minerals, namely phosphorous, calcium and iron. It is also a good source of micro minerals, oil soluble vitamins and water soluble vitamins. Fish meal is an important ingredient of shrimp, poultry, fish and other animal feeds.

**Manufacture of Fish Meal**

For the manufacture of fish meal, the following three types of raw materials are generally used.

1. Oily pelagic fish like oil sardine (*Sardinella longiceps*)
2. Whole fish of low market value or underutilized fish such as lesser sardine which contains more bones
3. Inedible parts of fish and shellfish such as head, viscera, fins, bone frames and shell waste. Some varieties of fish used all over the world for fish meal production are Anchovy in Peru, Menhaden in USA, Pilchard in south Africa, Herring and Capelin in Norway

Generally, fish meal produced from fish processing waste, contain low percentage of proteins and high proportion of ash/minerals. Hence it is not possible to produce Grade I fish meal using only wastes from fish processing industry.

**Manufacturing process**

There are essentially two methods of fish meal production

1. Wet reduction method
2. Dry reduction method

Dry reduction method is suitable only for lean fish i.e. for fish which contains less than 2-3% oil. Wet reduction method is primarily used for fish meal manufacture from oily fishes such as capelin, herring, pilchard, anchovy, menhaden and oil sardine.

![Fig. Wet reduction method for fish meal and oil manufacture](image-url)