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FISH HANDLING AND PROCESSING



INTRODUCTION

- After independence, India has made glorious achievements in food production and have witnessed multicolor revolutions in terms of green, yellow, white and blue.
- As compared to food grains, milk eggs and other foods, country's fish production has increased at a higher rate.
- This sector is contributing 1.2% to the national GDP and 5.3% to the agricultural GDP.
- Fish is a highly perishable commodity requiring a cautious handling and careful processing.
- To ensure best quality, appropriate technologies and processes must be followed with clean and hygienic conditions.

KEEPING QUALITY OF FISH

- The physical, chemical and bacteriological characteristics of fish are influenced by the species, seasons, catching methods and fishing grounds etc.
- The characteristics of fresh fish are–
 - Shining, iridescent surface covered with a nearly transparent, uniformly and thinly spread slime.
 - protruding eyes with a jet black pupil and transparent cornea
 - gills that are bright and free from visible slime
 - flesh is soft and flabby, tending to retain finger indentations
 - the flesh odor is ‘marine’, ‘fresh sea weedy’ or laky in addition pleasant, margarine like odor in case of fatty fish.

HANDLING OF FISH

Handling of market fish

- Fish should be purchased as fresh or frozen as possible
- Exposure to unsafe temperature should be avoided
- Exposure to contaminants should be avoided by keeping fishes in plastic bag
- It should be kept in refrigerators at home
- Raw fish purchased should not come in contact with cooked fish, other cooked food stuffs and raw fruits and vegetables as raw fish contains bacterial load
- It should be stored at proper temperature– if hot, temperature should be 140°F and if to be kept cold, temperature should be 40°F or less.

Handling of fresh catch

- Efforts should be done to keep the fish alive as long as possible– by keeping in metal link basket or live box.
- The fish should be checked for signs of disease or parasites or for any abnormal growth in the flesh.
- It should be made certain that the fish is being taken from safe water without any contaminants.
- If it is difficult to keep fish alive, it should be stored at temperature below 40°F.

GUTTING, CLEANING AND COOLING

- **The harvested fish should be cleaned and cooled as soon possible due to their strong digestive juices, fish spoil very soon and if not gutted and cleaned promptly may develop off flavour and color.**
- **A sharp knife, clean cloth, plastic bags and crushed ice must be kept ready for gutting and cleaning of fish.**
- **With the help of knife, fish should be cleaned and bled.**
- **Throat should be cut and gills and entrails are removed.**
- **Cleaned fish first be put in plastic bags and then in ice.**
- **To prevent contamination, hands, working area, cutting boards, knives and other utensils should be properly cleaned with water and soap.**

PREPARATION OF FILLETS

- Wash the fish in clean cold water to remove blood, microbes and enzymes.
- Filleting is done with a sharp knife with flexible blades.
- The fillets collected should be stored properly at low temperature.





PROCESS OF FILLETING

Fish is cut behind the pectoral fin straight down to the backbone and cut is angled towards the top of the head



Knife is run along one side of the backbone, scrapping the rib bones without cutting them



The knife is pushed through the flesh near the vent just behind the rib bones and fillet is cut free at the tail



Flesh is cut carefully away from the ribcage.



The first boneless fillet is removed by cutting through the stomach skin.



STORAGE

After cleaning and packaging the fish should be stored either by refrigerating or freezing.

Refrigerating-

- Raw fish can be kept in refrigerator at the temperature of 40°F or lower.
- Should be stored in covered containers.
- While keeping in refrigerator, fish should be moist but not wet.
- For refrigerating fish at home, the fish should be removed from wrapper, rinsed properly in clean cold water, pat dried with paper towel and kept in a plate or pan lined with double layer of paper towels.
- The pan should be covered tightly with aluminium foil or plastic wrap to avoid leakage.
- This covered fish may be kept in the coldest part of the refrigerator.

CONCLUSION

- Fish is a highly perishable product and can be handled safely to improve its shelf life.
- Different processing methods like canning, drying, smoking, etc if applied properly to the fish as soon as the fish is caught, can enhance the shelf life from months to years depending on the methods used.
- The processed fish can be transported to the distance places without the risk of spoilage and food poisoning.

THANK YOU