

Chapter – 15

Improvement in food resources

Module -4/4

Class IX

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FISH PRODUCTION(PISCICULTURE)

- Fish is a source of animal protein in our food. Depending on the mode of obtaining fish there are two ways of obtaining fish:
 - a) Capture fishery:** The fish is caught from the natural sources, both marine and inland.
 - b) Culture fishery :** It is cultivating rearing and harvesting of fish.



i) Marine fisheries : The popular marine fish varieties are pomphret, mackerel, tuna, sardines etc. They are caught by fish nets from boats. Some marine fishes are farmed in sea water. They include prawns, mullets, mussels, oysters etc. We get pearl from oysters.





ii) Inland Fisheries: Culture fishery is done in freshwater and brackish where sea water and fresh water mix together. The common fishes farmed are rohu, catla, mrigal, grass carp, silver carp, common carp etc.

COMPOSITE FISH CULTURE

- In this cultures system, the combination of five to six species of fish is cultured in a single pond.
- Three are of Indian origin and three are exotic breed.
- **Indian breed** are – Catla, rohu and mrigal
- **Exotic breed** are – silver carp, grass carp and common carp.
- Catla is a surface feeder that feeds on small animals.
- Silver carp is also surface feeder but mostly feeds on phytoplanktons (microscopic plant like organisms)
- Rohu feeds in the middle zone of the pond
- Grass carp feed on water weeds in middle zone.
- Mrigal is the bottom feeder.
- Common carp is also the bottom feeder but feeds on decaying vegetation.

Advantages of composite fish culture:-

- These fishes do not compete for food because they have different types of food habits.
- The food available in all the zones of the pond is utilised due to their food habits.
- Six different varieties can be reared in the same pond.
- The fish yield is very high.

Disadvantage :-

- i) Most of the fishes breed only during the monsoon.
- ii) If all of them lay egg at the same time, there will be a big problem to distinguish the eggs.
- iii) There is a lack of good quality fish seeds available.

BEE KEEPING (APICULTURE)

- Bee keeping is done to obtain honey and wax. Honey is used as a source of energy and also has medicinal uses. Wax is used in medicinal preparations and for making polishes.
 - The local varieties of bees used for honey production are:-
 - Apis cerena indica- Indian Bee
 - Apis dorsata – Rock bee
 - Apis florea – Little bee
- The exotic(Italian) bee – Apis mellifera is domesticated for higher yield of honey.





The Italian bee is preferred because:

- i) It is gentle in nature.
- ii) It has good honey collection capacity
- iii) it has the ability to protect itself from enemies.
- iv) less swarming.

Bees are artificially grown in apiaries and the honey is extracted by machines called honey extractors.



THANK YOU !