

SUBJECT: AGRICULTURAL SCIENCE

CLASS: J SS2

WEEK: 7

TOPIC: FISHERY AND FISH PRODUCTS

MEANING OF FISHERY

Fishery refers to the area of agriculture concerns with the capture and cultivation of fish and other aquatic organisms include processing and selling of them.

FISHING: This is the act of catching fish and other aquatic organisms.

Fishes are cold blooded animals that is, the temperature of the body of fish changes with temperature of the surroundings environment. Fishes belong to the vertebrate group known as Pisces and they breathe with the aid of the gills.

CLASSIFICATION OF FISH

Fish can be classified many ways; the two common ways are;

Based on morphology or types and based on habitat or water

CLASSIFICATION BASED ON MORPHOLOGY OR TYPES

1. BONY FISH: Bony fish are fishes that possess a bony skeleton or hard frame (made of bone).they are therefore, called bony fish these includes tilapia, cat fish , and croaker etc.
2. CATILAGINOUS FISH: These are fishes that possess soft body, their body frame (skeleton) is made up of a firm and elastic substance called cartilage e.g. sharks, salmon, and dolphins.

CLASSIFICATION BASED ON HABITAT OR WATER

1. FRESH WATER FISHES: These are capable of living and reproducing only in fresh water like inland rivers, streams or ponds. Examples include front and mud etc.
2. SALT / MARINE WATER FISH: These are found in seas and oceans. Marine fishes can be grouped into two; those which live at or near the surface of the water are called pelagic marine fish while those that live at or near the bottom of the sea are called demarsal.

OTHER AQUATIC ORGANISMS

Although fish are the most common aquatic animals which we eat, there are many other aquatic animals which are caught by fishermen and eaten by human beings, or used for many other other purposes. Aquatic organisms can be divided into two major groups;

1. INVERTEBRATES: Invertebrate are animals with backbones. They consist mainly of animals which are closely related to spiders, insects and scorpions; these are called crustaceans. Crabs,

shrimps, and prawns are aquatic crustaceans. All these animals are related to insects because they have a hard outer skin and ,other aquatic vertebrates belong to three main animals groups,

- (a) Amphibians which includes frogs and toads
- (b) Reptiles which includes crocodiles, sea snakes and turtles.
- (c) Mammals which include whales, dolphins, seals and porpoises.

USES OF FISH, FISH PRODUCTS AND OTHER AQUATIC ORGANISMS

Fish and other aquatic organisms are very to us in many ways;

1. **FOOD:** Fish and other aquatic organisms are used mainly as human food. fish flesh is regarded highly for containing first class animals proteins, vitamins and many body healthy and strong .
2. **LEATHER:** The skins of cartilaginous fish such as sharks are tough and covered with small, sharp spines.it is sometimes dried and specially treated to produce very special leather called shagreen.
3. **POLISHING MATERIALS:** Dried fish skin or shagreen is sometimes used like glass paper for polishing surfaces.
4. **ORNAMENTS:** The scales of fish are sometimes used to make artificial pearls which can be worn as beads. Oysters contain pearls which are polished and worn as jewellery.
5. **SOAP AND MEDICINE:** The oils obtained from fish, whales and turtles are used as food and also for the manufacture of medicines and soap. Cod-liver oil is a very popular items consumed by many people as a food supplement.

FISHING METHODS AND EQUIPMENT

There are different methods of fishing and each method uses special kinds of equipment which are known a fishing gear, to catch fish and other aquatic animals.

1. **Wounding equipment:** These types of fishing gear can be caught. They are very useful for killing fish which struggle as they are being caught.
2. **Nets:** In this method, a net made from fine cotton or nylon thread is lowered or thrown into the water. Small weights made of lead attached to the edges of the net help the net to sink to the bottom of the water. When the net is pulled up, it enclosed many fish which are then caught between the holes.
3. **Traps:** just as hunters use various traps for catching animals in the bush, fisher folks also use traps for catching fish in water .there are many types of fish traps which are made either from bamboo, raffia, oil palm or coconut fronds or even wire and wire mesh.
4. **Fishing with pot and gourds:** some fishermen who fish in ponds and shallow lakes, place clay pots and gourds in the water to catch the fish which enter them.
5. **Fishing with screens or barriers:** in many parts of Lagos or delta, bayelsa, cross river and rivers states, fisher folk use bamboo, coconut, and raffia or oil palm fronds to construct screens which are used to enclose portions of shallow water. The screens are made in such a way that fish can

enter the enclosed area at high tide. When the water level is very much reduced at low tide, the fish cannot escape and so they are collected by the fisher folk.

6. Fishing without equipment: some aquatic animals can be caught without any kind of equipment. Animals such as periwinkles, oysters, and clams are picked up by hand from the mud and mangrove plants on which are attached and can be caught without fishing equipment.

FISHING PROCESSING, PRESERVATION AND DISTRIBUTION

One major problem with fish and other aquatic animals is that as soon as they are dead, they spoil very quickly. This is because of the action of bacteria on their flesh and the series of chemical changes which take place in the flesh of the dead aquatic animals. Spoiled fish smells badly and is not safe to eat.

METHODS OF PRESERVING FISH

1. **SALTING:** In this method, common salt is rubbed on the fish and is also placed inside the fish through the mouth, gills and in the empty belly. After salting the fish, it is dried in the hot sun.
2. **SMOKING:** Smoking is the most common method used in preserving fish in West Africa. You can see many women selling smoked fish in the local markets all over the Nigeria. The fish is being smoked are placed on metal gauze trays which are then placed on top of the mud oven.
3. **FREEZING:** Fish and aquatic organisms caught in trawlers in the sea usually preserved by freezing them in ice. When the fish is frozen, bacteria and other agents become inactive and so they cannot spoil the fish.
4. **CANNING:** Canning is the process of putting fish in tins with special oils and paste. Tinned fish, as it is commonly called, is very popular in Nigeria. The commonest canned fish are sardines, mackerels and tuna fish.