

05. Classification of plants

According to the use of plants and plant products to man the grouping is made.

Cereals

It is generally applicable to the **grains** obtained from the members of the Family **Poaceae**. Rice, Wheat, Maize, Sorghum, Ragi, Barley, Pearl Millet, Fax tail millet, Rye, Oats etc come under this group. Principal source of food for man and animals. Botanically the characteristic fruit of the family Poaceae is **caryopsis**. Millet is generally used for the member of small grained cereals which are of minor importance as food. Few species of plants other than those of poaceae which produce small grains and used as food as in the of cereals. They are **pseudo cereals**. Buck wheat(*Agropyrum spp* – Chenopodiaceae, grain amaranthus – *Amaranthus spp* Amaranthaceae, Quina, (*Chenopodium quinoa* - Chenapodiaceae). The major cereals are paddy, wheat sorghum, ragi, maize , pearl millet, and the minor millets are fox tail millet, little millet etc . minor cereals are of important space of food in drought prone rural areas. Tillering habit is more common in cereals except in maize and sorghum. The infloresence is panicle, which may be compact or loose. The grain is caryopsis. Cereals supply food to man and straw to animals. Grain contains starch as the major components. Rice is the staple food for nearely half of the world population. Contains large proportion of starch wheat contains good preparation. Bearly is used as malted food and flour is processed in the form of light food.

Pulses

Seeds of leguminous plants. Pulses supply protein, chief source of in vegetarian food. Seeds are generally used, the whole fruit or pods, with young and mature leguminous plants fix atmospheric Nitrogen in their root nodules by the nitrogen fixing bacteria. The whole plant body in legumes in papilionaceous plants rich in nitrogen and the seeds, the pods and also the leaves and shoots contains a high proportions of protein and are hence used as food. The average per capita consumption of pulses in India is alone one ounce but the minimum require wet is along three ounces, *Cajanus cajan* – Red gram, *Vigna mungo* (black gram) *V. radiata* (green gram)

Vegetable, Fruits and Nuts

Olericulture deals with vegetables, Pomology deals with fruits and nuts which are rich and valuable sources of food. Horticulture – the branch of Agriculture relating to the cultivation of fruits (Pomology), vegetables (Olericulture) and flowers and oranamental plants (Floriculture)

Oils and oil seeds

Oil seeds are important both for consumption and for industrial purpose. In human diet, fat is supplied by oils which give the necessary energy for metabolism besides adding taste to the food. Oil is used for medicinal purpose and also for preparation of soap, cosmetics, and lubrication. Castor and coconut oil are the important industrial oil.

Sugars and Starch

The use of sugarcane for the production of jaggery has been in existence for many centuries. In Europe, Canada and USA sugar beet is the source of sugar. Sugar beet was not prominent in tropical countries because sugarcane give high tonnage of yield. The other sources are palmyrah, coconut and date. The tapped juice of the plants are converted into palm gur, the cheap source of sugar to the people sugars, besides being used as food sweeteners are rich source of energy.

In Indian diet, cereals supply the bulk of starch as in rice, sorghum, maize and other cereals, Starchy food is also obtained from sweet potato, tapioca, and sago palm, Starch is also an industrial product used in confectionary, textiles, stationary and cosmetic industries.

Fibres

Next to food clothing is the most important one and is obtained from wood pulp for the manufacture of gunny bags, hessian cloths, and packing material. The fibres of Jute and Mesta are of importance. Twines, cordages and ropes needed in daily life are made from cotton, and for stuffing purpose such as cotton is used.

Beverages

Coffee, tea, cocoa are important beverages and they have stimulating effect. Fruit juices like lemonades, orangeades, apple, pineapple and mango juices constitute the soft drinks. Coffee and tea are commercial crops grown in plantation and exported. Cocoa is gaining importance in beverages and confectionaries.

Narcotics, fumigatives and masticatories

Products from tobacco, ganja, opium which have a stimulating effect on small doses come under narcotics. Narcotics are substances which produce a stimulating or drowsy effect. They relieve pain and produce sleep. Mild stimulating preparations, adjuncts to fermentation, flavouring ingredients to

beverages, and mild poisons are also called narcotics. When substance are smoked because of the stimulating effect of tobacco they are called as fumitories. Substance which are chewed as the betel leaf and arecanut for the masticatories. Tobacco comes as Narcotics, Fumitories and masticatories. The alkaloid present in the plant parts are responsible for creating the effects. Drugs are obtained from large number of plants are called medicinal plants.

Species and containments

A variety of plant products are made use of as food adjuncts to add flavour, aroma and taste, is spices and those give aroma and flavour is condiments. Pepper, cardamom cloves, chillies, turmeric ginger, onion, and garlic. The species and condiments have essential oils which are responsible for the flavour and taste.

Rubber

The rubber plantations in tropical countries, given the species, *Hevea brasiliensis* a plant introduced from Brazil Latex is obtained from the plant and processed as used as rubber . Rubber is also obtained from *Manihot glaziovii* *Cryptostegia* and *Taraxacum*.

Forages

Feed for domestic animals is obtained from grain crops and fodder crops. Generally includes fodder and postarages; Guinea grass Napier grass, Lucerne, fodder cholam, fodder Maize etc., are harvested and fed to animals. The grasses and legumes are grown in arable land and left for grazing of animals come under pastures. The foliage of number of trees and shrubs which are edible to animals form the another source of forage.

Green manures and green leaf manures

Growing of special crops for adding organic matter and Nitrogen to the soil and ploughing them in situ is called green manuring. daincha, sunnhemp, pillipesara, kolingi, indigo and *Sesbania speciosa* the green lopping from shrubs, trees incorporated in the field as from *Ipomoea cornea*, and *Gliricidia* form the green leaf manuring. Usually green manuring plants are popilonacious type which fix nitrogen in the soil by the formation of bacterial nodules and higher 'N' content in leaves and shoots.