

Subject - Botany

Class - B.Sc (Subs.) Part-I Group - B

Topic - "Botanical Names, Families and the part used of the following: wheat, Rice, Gram, Arhar & Ground nut."

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Wheat

Botanical name :- Triticum spp.

Family :- Poaceae

Vernacular Name :- Graham
(common name)

Fruit — Caryopsis

Parts used — Fruit/Grains

- wheat is second staple crop of India and is most important cereal crops of temperate region.
- The properties of gluten in the wheat grain makes it suitable for preparing bread from wheat flour.
- wheat is also used in the manufacture of starch, industrial

alcohol, malted wheat and cere binder flour.

- Byproducts of wheat milling, bran, germ and middlings, constitute valuable feed for stock.
- wheat straw is used as bedding for cattle, for packing for fragile foods, etc.
- It is also used in the production of furfuryl alcohol.
- Straw pulp is utilized in the manufacture of paper, straw-board and building board.

Some Important Varieties of Wheat -

Lerma Rojo 64, N.P. 846, Sohara 64, Kalyan Sona, Sonalika, Sharbati Sohara, Moti (HD 1949), Hira (HD 1941), etc.

Rice

Botanical name - Oryza sativa

Family - Poaceae

Vernacular name - Dhan, Chawal
(Common name)

Fruit - Caryopsis

~~Parts used~~ -

Fruit/grain yields kernel. The grain contains about 90% carbohydrates, 8-10% proteins, 1% fats and about 1% mineral matter.

Uses: - Rice is a staple diet of over a third of world's population. It is a starch rich food eaten after boiling.

- It is also converted into parched rice, beaten rice or rice flakes and puffed rice.
- It is also used for fermented preparations in South

Indica like Idli and Dosa.

- It is also used for making alcoholic beverages and source of starch and rice flour.
- Rice starch has a wide industrial potential in cosmetic industry.
- Paddy husk is used as a fuel and for making hardboards and as a raw material for alcohol and perfural.
- Rice bran extract and rice bran oil are used in bath preparations for treatment of atopic dermatitis and senile xeroderma.
- Bran also serve as cattle feed.
- Paddy straw is used as fodder, as a soil mulch, etc.

Some important varieties of rice -

Bala, Jalmahal (BC 6/48), Krishha, Jaya, Kaveri, Bhawani, Sona, Basmati-217, Basmati-370, Jayanti, etc.

Gram (Chick Pea)

Botanical name - Cicer arietinum

Verhacular name - Chana
(Local name)

Family — Papilionaceae

Parts used — Seed

Seed of Chick pea contain 17.1% Proteins, 5.3% fat, 61.2% Carbohydrates, 3.9% fibers and 2.7% minerals.

~~Arhar~~ Arhar (Pigeon pea)

Botanical name - Cajanus cajan

Vernacular name - Arhar Arhar
(Local name)

Family - Papilionaceae

Parts used - Seed

Pigeon pea consists of 22.3% Proteins, 1.7% Fats, 57.2% Carbohydrates and 3.6% minerals.

→ Cajalin and Concjalinh are two important proteins present in pigeon pea.

Mustard

Botanical name - Brassica spp.
Brassica campestris

Family - Brassicaceae

Parts used - Seed

→ The oil obtained from various species of Brassica is known as rape, colza or mustard oil.

Uses : -

Mustard oil is chiefly used for edible purposes. Superior grades of oil is also used for manufacture of soap and rubber substitutes.

→ The oil is also used ~~for~~ as preservative for pickles and for flavouring curries and vegetables.

→ The oil cakes is mostly ~~is~~ used as a livestock feed and as fertilizer.

Groundnut

Botanical name — Arachis hypogaea

Family — Fabaceae (Papilionaceae)

Vernacular name — Mungphali

Parts used — Seeds

- Principal fatty acids present in the oil are oleic acid (56%), linoleic acid (25%) and palmitic acid (6-12%). A little amount of stearic, arachidic and higher saturated acids is also present.
- The oil is rich in phosphorus and vitamins (thiamine, riboflavin and biotin).
- Groundnut oil is predominantly used for culinary purposes. It is used extensively for the manufacture of vegetable ghee by hydrogenation.
- Medically the oil is used as laxative, laxative and emollient.
- The oil is also used in soap making, in leather dressings, furniture, creams, cold creams and in making shaving creams, cold creams, candles, glycerine, etc.
- The oil cake is used as feed for cattle and other farm animals and as a manure.