

M. Sc. IInd Semester (Botany)
Paper-VIII (Angiosperm Taxonomy)

Economic Botany

By

Dr. Alka Kumari, Associate Professor
Department of Botany
University of Lucknow
Lucknow

FIBRES YIELDING PLANTS

1. Cotton (*Gossypium arboretum*)
Family – Malvaceae
Uses – In textile industry, stuffing of pillows, cushions and also in rubber type fabrics.
2. Cotton (*G. barbadense*)
Family – Malvaceae
Uses – In textile industry, stuffing of pillows, cushions and also in rubber type fabrics.
3. Coir (*Cocus nucifera*)
Family – Palmae
Uses – In production of floor mats, doormats, brushes and mattresses.
4. Flax (*Linum usitatissimum*)
Family – Linaceae
Uses- In manufacture of linen cloth, canvas, carpets, threads, strong threads, cigarette paper, finest writing paper etc.
5. Jute (*Corchorus capsularis*)
Family – Tiliaceae
Uses- In making carpets, coarse material, twine, gunny bags, paper and many similar articles.
6. Sun hemp (*Crotalaria juncea*)
Family – Papilionaceae
Uses – In making twine, fishing nets, mattings, bags, ropes and coarse canvas.
7. Hemp (*Cannabis sativa*)
Family – Cannabinaceae
Uses- In manufacture of ropes, twines, carpets, bags and nets etc.
8. Kenaf (*Hibiscus esculentus*)
Family – Malvaceae
Uses – Main uses of kenaf fibre have been rope, twine, coarse cloth and paper.
9. Sisal (*Agave sisalana*)
Family – Asparagaceae
Uses- Used for footwear, hats, bags, carpets, geotextiles and dartboards. It is also used as fibre reinforcements.
10. Bombax cotton (*Bombax sp.*)
Family – Malvaceae
Uses- As textile fibre.

OIL YIELDING PLANTS

EDIBLE OILS-

01. Groundnut (*Arachis hypogea*)
Family – Papilionaceae
Uses – Oil is obtained from seeds which is used in food as such or by hydrogenation is converted to vegetable ghee. Oil is also used as a substitute for diesel. It is used in soap manufacture, in cosmetics and leather dressing.

02. Mustard (*Brassica campestris*)
 Family – Brassicaceae
 Uses – Oil is obtained from seeds, seeds used to flavour curries.
03. Coconut (*Cocos nucifera*)
 Family – Palmae
 Uses – Oil is obtained from dried meat or copra, cake is cattle feed and also a fertilizer. The coir is used in making ropes and matting and in stuffing cushions.
04. Linseed (*Linum usitatissimum*)
 Family – Linaceae
 Uses- Oil is used mainly for the manufacture of linoleum and oil cloth, printing and lithographic ink. It has a medicinal value too. Linseed cake is used as a nutritive food. It is also used as organic manure.
- NON-EDIBLE OILS-**
05. Castor (*Ricinus communis*)
 Family – Euphorbiaceae
 Uses- Oil used as medicine and in many industries.
06. Pine (*Pinus longifolia*)
 Family – Gymnosperms
 Uses –In air fresheners, anti –inflammatory effects.
- ESSENTIAL OILS-**
07. Sandal (*Santalum album*)
 Family – Santalaceae
 Uses- In cosmetics, perfumes and soaps. Oil as an antiseptic and astringent.
08. Camphor (*Cinnamomum camphora*)
 Family – Lauraceae
 Uses- Oil has antibacterial, antifungal and anti-inflammatory properties, used to treat skin conditions.
09. Clove (*Syzygium aromaticum*)
 Family – Myrtaceae
 Uses-As an antimicrobial, as a pain reliever, for digestive upset, to relieve respiratory conditions like cough.
10. Mentha (*Mentha piperita*)
 Family – Labiateae
 Uses-In ailments, creams, cough medicines, food and many soft drinks.

RUBBER YIELDING PLANTS

11. Rubber (*Hevea brasiliensis*)
 Family – Euphorbiaceae
 Uses- In making mountings for motors and other transport materials, translucent materials, sports goods, paints, tyres etc.
12. Bor (*Ficus elastica*)
 Family – Moraceae

Uses – Latex is obtained by branches of stem and bark by which rubber is made. Rubber is used in making tyres, rubber components for cars, footwear, sports goods, gloves etc

13. Mexican guayule (*Parthenium argentatum*)

Family – Compositae

Uses- Low value rubber is obtained from whole plants. Rubber is used for making floor covering, rugs, rubber backs, gloves, hot water bottles, icecaps.

SUGAR YIELDING PLANTS

01. Sugarcane (*Saccharum officinarum*)

Family –Poaceae

Uses – In making sucrose, molasses, cardboard and paper.

02. Sugar beet (*Beta vulgaris*)

Family – Chenopodiaceae

Uses – In making sucrose, salad.

03. Sweet sorghum (*Sorghum bicolor*)

Family –Poaceae

Uses- Provides grain and stem that can be used for sugar, jaggery, alcohol, syrup, fodder, fuel, fencing etc.

04. Sweet potato (*Ipomoea batatas*)

Family-Convulvaceae

Uses- Can be used for sugar, jaggery, alcohol, syrup and fodder.

05. Stevia (*Stevia rebaudina*)

Family-Asteraceae

Uses-Dried leaves are used as substitute of sugar for diabetic people.

06. Palmyra Palm (*Borassus flabellifer*)

Family-Arecaceae

Uses-Used in manufacturing of jaggery (Gur), Vinegar and Sago.

Besides, several fruits are source of laevulose sugar (Fructose). Carrot is also a source of sugar and some tubers like *Dahlia pinnata* and *Helianthus tuberosus* is also source of inulin (Polysaccharides).

SPICES YIELDING PLANTS

07. Asafoetida (*Ferula asafoetida*)

Family – Apiaceae

Uses- Carminative, digestive, diuretic, laxative and medicinal properties.

08. Black Pepper (*Piper nigrum*)

Family- Piperaceae

Uses- Culinary seasoning, flavouring agent, in medicines, moth killer and insect repellent.

09. Capsicum (*Capsicum annum*)

- Family- Solanaceae
 Uses- As spices and seasoning
10. Cinnamon (*Cinnamomum zeylenicum*)
 Family- Lauraceae
 Uses- In confectionary, pharmaceutical, soap. Carminative, astringent and stimulant.
11. Clove (*Eugenia caryophyllus*)
 Family – Myrtaceae
 Uses- In confectionary, culinary purpose
12. Coriander (*Coriandrum sativum*)
 Family- Apiaceae
 Uses- In pickels, sausages, curries, chutneys. Simulative, diuretic, antispasmodic
13. Cumin (*Cuminum cyminum*)
 Family – Apiaceae
 Uses- Carminative, stimulant and in medicines
14. Fennel (*Foeniculum vulgare*)
 Family – Apiaceae
 Uses- In flavouring dishes, as masticatory, in medicines
15. Saffron (*Crocus sativus*)
 Family – Iridaceae
 Uses- Flavouring and colouring properties,
16. Turmeric (*Curcuma domestica*)
 Family- Zingiberaceae
 Uses- Food, flavourant, expectorant, in cosmetics

PETRO PLANTS

1. Euphorbia (*Euphorbia sp.*)
 Family- Euphorbiaceae
 Uses- Latex of these plants contains terpenoids that can be converted into transportation fuel.
2. Sugarcane (*Saccharum officinarum*)
 Family- Gramineae
 Uses- By-products of sugar production Bagasse and Molasses help in production of fuel , alcohol, liquid fuel and ethanol.
3. Sugar beet (*Beta vulgaris*)
 Family- Amaranthaceae
 Uses- It contain high amount of sugars which processed for sugar production.
4. *Jatropha curcus*
 Family- Euphorbiaceae
 Uses- Oil from jatropha is converted into biodiesel.
5. *Calotropis procera*
 Family- Asclepidaceae

- Uses- latex is obtained which contain high amount of hydrocarbons.
6. *Pittosporum rosinifarum*
Family- Pittosporaceae
Uses- Oil contains monoterpene hydrocarbons.
 7. *Hardwickia pinnata*
Family- Leguminosae
Uses- Bark contains tannins.
 8. *Hevea brasiliensis*
Family-Euphorbiaceae
Uses- Latex is processed to get rubber.

MEDICINAL PLANTS

9. Sarp Gandha (*Rauwolfia serpentine*)
Family- Apocynaceae
Uses- Alkaloid reserpine is obtained which is used in snake bite, high blood pressure and mental diseases.
10. Opium (*Papaver somniferum*)
Family- Papaveraceae
Uses- Morphine and codeine medicines are obtained which are used in pain relieving.
11. Quinine (*Cinchona sp.*)
Family- Rubiaceae
Uses- Quinine is used in Malaria disease.
12. Belladonna (*Atropa belladonna*)
Family- Solanaceae
Uses- Alkaloid atropine is obtained which effects on CNS and help in pain relieving.
13. Datura (*Datura stramonium*)
Family- Solanaceae
Uses- In removing dandruff and in neck diseases.
14. Avla (*Emblica officinalis*)
Family- Euphorbiaceae
Uses- For digestive purposes, in many ayurvedic medicines
15. Kuchla (*Strychnos nux-vomica*)
Family- Loganiaceae
Uses- Strichnun alkaloid is obtained which is used in mental problems and paralysis.
16. Artimicia (*Artimicia absinthum*)
Family- Compositae
Uses- Used to kill intestinal parasites.
17. Ephedra (*Ephedra gerardiana*)
Family- Gymnosperm plant
Uses- Ephedrin is obtained which is used in cold.
18. Neem (*Azadirachta indica*)
Family- Meliaceae
Uses- Used for leprosy, eye disorders, bloody nose, skin ulcers and fever.

WOOD YIELDING PLANTS

19. Sheesham (*Dalbergiasisoo*)
Family- Papilionaceae
Uses- In manufacture of furniture, railway sleeper and doors.
20. Teak (*Tectonagrandis*)
Family- Verbenaceae
Uses- In making furniture, doors and sportsequipments.
21. Sal (*Shorearobusta*)
Family- Dipterocarpaceae
Uses- In manufacture of furniture, railway sleeper, bridge and hopuse.
22. Black siris (*Albizziaoctoratissima*)
Family- Mimosoideae
Uses- In making furniture, packing boxes and houses.
23. Toon (*Cedrellatoona*)
Family- Meliaceae
Uses- Used in making houses and furnitiure.
24. Mango (*Mangiferaindica*)
Family- Anacardiaceae
Uses- In making furniture, houses and as a fuel.
25. Walnut (*Juglansregia*)
Family- Juglandaceae
Uses- In making music equipments.
26. Willo (*Salix alba*)
Family- Salicaceae
Uses- In making cricket bats.
27. Mulberry (*Morus alba*)
Family – Moraceae
Uses- In manufacture of hockey stick, cricket stumps and rackets of badminton and tennis.
28. Deodar (*Cedrus deodara*)
Family- Pinaceae
Uses- In making barracks, public buildings, bridges and canals.

BEVERAGES PLANTS

29. Tea (*Thea sinensis*)
Family- Theaceae
Uses- Tea is obtained from small leaves.
30. Coffee (*Coffea arabica*)
Family- Rubiaceae
Uses- Coffee is obtained from seeds.
31. Cocoa (*Theobroma cocoa*)
Family- Sterculiaceae

- Uses- Beverage is obtained from seeds.
32. Daab (*Cocos nucifera*)
Family- Apiaceae
Uses- Water of green coconut is a good nutritional drink.
33. Sugarcane (*Saccharum officinarum*)
Family- Gramineae
Uses- Used to quench thirst

MASICATORIES YIELDING PLANTS

34. *Areca catechu*
Family – Arecaceae
Uses- Nuts are chewed with or without betel leaf. Used in whooping cough and constipation.
35. *Nicotiana tabacum*
Family- Solanaceae
Uses- Leaves are used in leech bite, toothache and pyorrhoea.
36. *Euphorbia pulcherrima*
Family- Euphorbiaceae
Uses- Used in toothache.
37. *Phyllanthus emblica*
Family- Euphorbiaceae
Uses- Used for cuts and wounds, stomach-ache, gastric problems and eye trouble.
38. *Pinus kesiya*
Family- Pinaceae
Uses- Used for cough, whooping cough and asthma.
39. *Piper betle*
Family- Piperaceae
Uses- Used in burns, constipation and menorrhagia.
40. *Terminalia chebula*
Family- Combretaceae
Uses- in dysentery and gastric problems.
41. *Potentilla polyphylla*
Family- Rosaceae
Uses- In colic and spasmodic pain
42. *Dalbergia pinnata*
Family- Fabaceae
Uses- Chewed with betel leaves