

## Practical 2

# IDENTIFICATION OF MAJOR FRUIT CROPS OF OUR COUNTRY

### Objective :

- Imparting knowledge for the identification of major fruit crops on the basis of different morphological characters at different plant growth stages

**Delivery schedule :** 03 period

### Student expectations/Learning objective:

- To demonstrate different characteristic features of major fruit crops for their easy identifications

**Pre-learning required:** Names of major fruit crops and knowledge about classification of fruit crops

**Handouts/material required/equipment's & tools:** Forceps, hand lens, paper sheet, pen to note down the instructions and pictures of different fruit crops.

### Introduction:

Most fruit crops are perennial trees, shrubs, or vines. Trees are large woody plants which generally produce a single main stem or trunk, where the renewal growth occurs at the shoot tips in the canopy. The latter is an important distinction between trees and shrubs, since large shrubs can be trained to a single stem, but tends to produce new growth from the base or crown. Vines are woody plants that are trained to have a single trunk at the base, but use twining stems or tendrils to support the canopy. Vines rarely have large trunks like trees since they support themselves by climbing on taller plants in nature, or on trellises in cultivation. As a result, vines spend little of their energy on supportive wood, while growing very tall and maximizing leaf exposure to sunlight.

Fruit plants can be identified by observing certain distinguishing morphological characteristics. The keen and frequent observations on vegetative and reproductive parts of plant help in easy and clear identification. It is essential to know the different parts of the plants before undertaking the identification as these forms the basis of distinguishing characters. In this practical you will learn how to identify a fruit crop

keeping in mind their characteristic morphological features. The important distinguishing characters of major fruit crops have been discussed here under which may help the students in distinguishing them even at early stages of their growth. It takes time and exposure to learn to identify fruit plants.

### Procedure:

**Step 1:** Critically observe the morphological characteristics of the specimen. To identify plants, look for morphological features such as leaves, flowers and fruits.

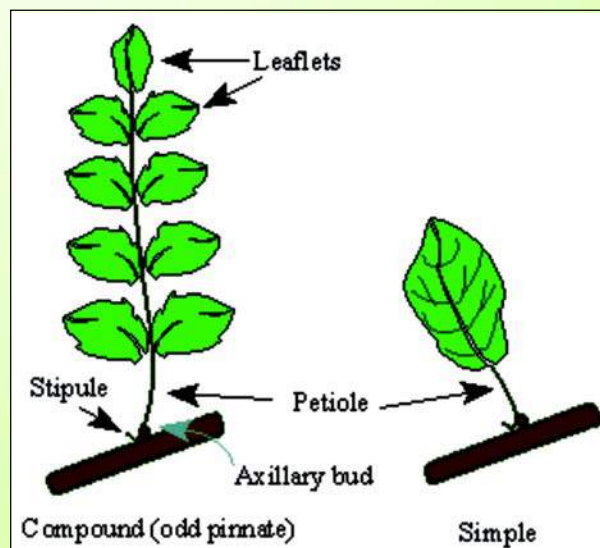
#### i) Plant:

- Tree
- Shrub
- Vine

#### ii) Leaf characteristics:

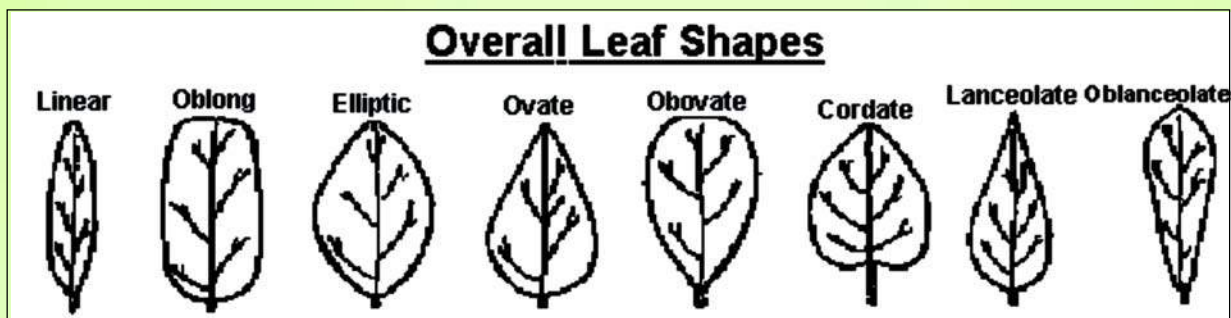
- Shape of leaf- long narrow or ovate or lanceolate
- Presence or absence of pubescence
- Type of leaf - simple or compound leaf, petiolated or sessile
- Presence or absence of leaf sheath
- Leaf margins: serrated or smooth
- Texture of leaf- smooth or rough.

Leaves take many forms, being compound if composed of two or more leaflets or simple if just a single leaf blade. The compound leaf having a single terminal leaflet, and an uneven number of leaflets is termed "odd pinnate", whereas compound leaves lacking the single terminal leaflet are "even pinnate".



*Compound and simple leaves and their associated parts.*

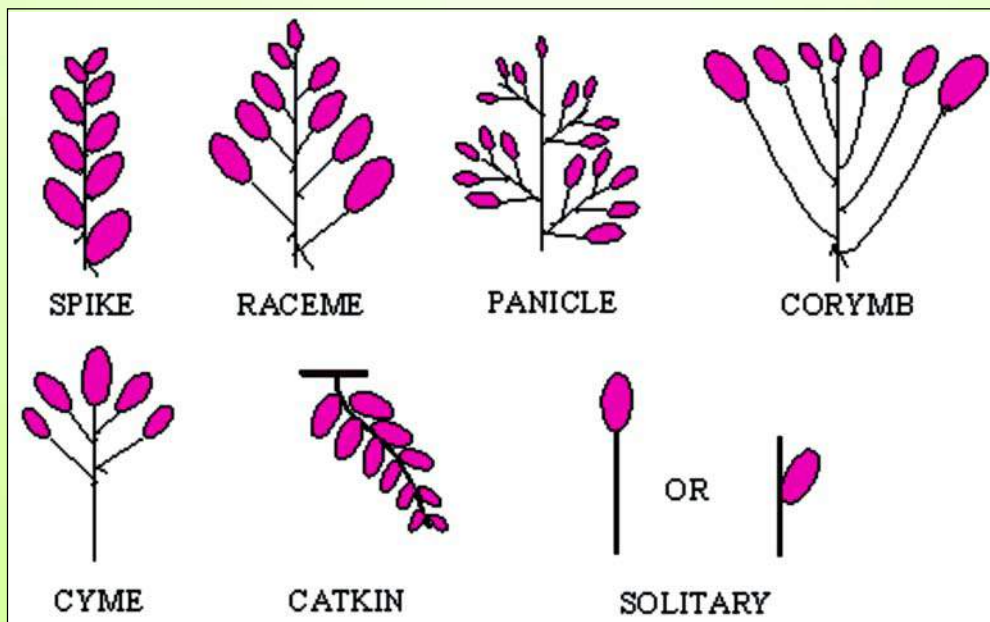
Characterizing the foliage is a great way to start the process of identifying a plant. Several terms are used to describe the overall shape, tip, and margins of leaves or leaflets.



*Pictures for leaf margins & leaf tips*

### iii) Flower:

- An inflorescence is a cluster of flowers, and there are several terms for specific inflorescences.
- Generally, there are two types of inflorescences, determinate and indeterminate. In a determinate inflorescence, the top-most flower is the most mature, and generally opens first, whereas the top-most flower in an indeterminate inflorescence is the least mature and last to appear. The most common inflorescence types in fruit crops are indeterminate (spikes, racemes, panicles, umbels, corymbs), with the cyme being the most common determinate inflorescence.



*Different inflorescence types commonly found in fruit crops*

#### iv) Fruit

- Colour
- Size
- Shape

**Step 2.** Draw the sketch of each plant.

**Step 3.** Record the observations with respect to plant, leaf, inflorescence and fruit characteristics in the data sheet.

**Step 4:** Use chart of morphological features of fruit crops

### EXERCISE 2.1: IDENTIFICATION OF TROPICAL FRUIT CROPS OF OUR COUNTRY

Tropical fruits are the fruits grown in tropical areas /zone i.e. the zone which comprises regions having hot and humid climate in summer and mild in winter. The most commercial fruits are mango, banana, cashew nut, sapota, pineapple, papaya, pomegranate, grapes etc. This zone includes the regions of Maharashtra, Karnataka, Andhra Pradesh, Tamil Nadu, Kerala, southern districts of Madhya Pradesh and West Bengal. The distinguished morphological characters of sub-tropical and tropical fruits are described below:

#### **Mango (*Mangifera indica*)**

##### **Family: Anacardiaceae**

- The tree is medium to large, evergreen, with an open or dense symmetrical canopy.
- Leaves are simple, Lanceolate shaped and leathery in texture with prominent mid and lateral veins.
- The inflorescence is a much branched panicle bearing both male and hermaphrodite flowers
- The fruit is a fleshy drupe with variable shape (nearly round, oval or ovoid-oblong), size (60 g to 2.3 kg) and colour (greenish-yellow, yellow with a red or purple blush or completely red).
- The skin is tight, thick and smooth. The flesh is yellow to orange with few to many fibers.
- The single seed is large, flat and in a woody, fibrous husk.

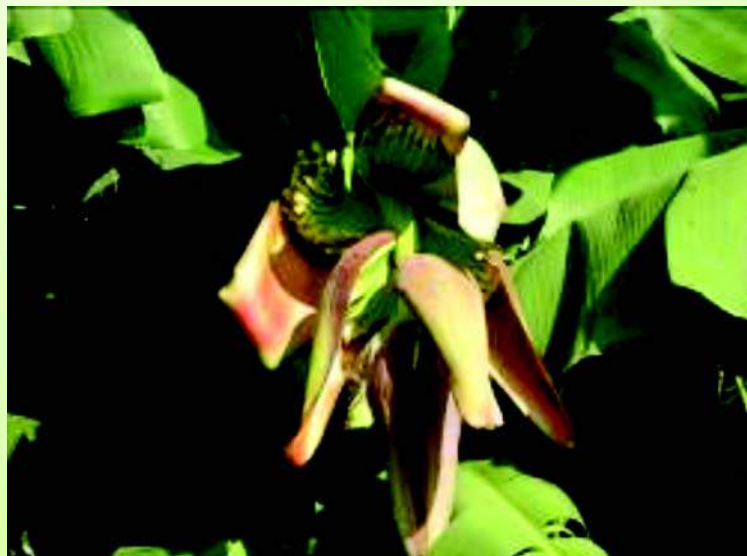




### Banana (*Musa acuminata* x *M. balbisiana*)

#### Family: Musaceae

- Pseudostem is composed of tightly clasping leaf sheaths, slightly swollen at base; suckers freely produced.
- The leaves of banana plant are very large, blunt, wide and long, arranged in a spiral, and sometimes tattered along the edges.
- Bracts and flowers are inserted independently on peduncle. Basal flowers are generally female only and male flowers are on distal hands. The flower bud is reddish-purple, large and pointed.
- Fruits are long, finger-like, and slightly curved, with a smooth, yellow skin and soft, creamy-white pulp. There are no seeds in edible types. The fruit are arranged in clusters, called hands, of 6-25 or more bananas.





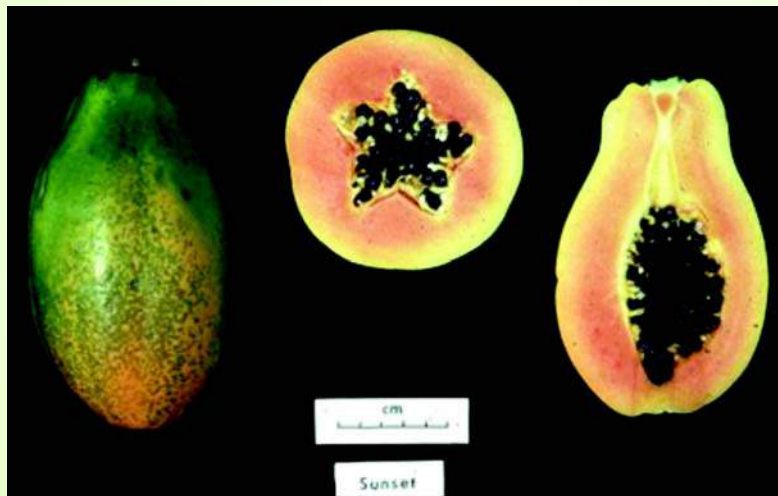
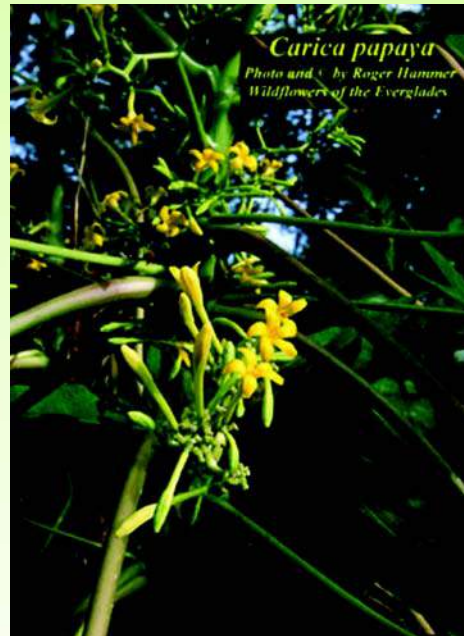
## **Papaya (*Carica papaya*)**

### **Family: Caricaceae**

- Papaya is a small, single-stemmed, evergreen, quick growing plant.
- Trunk is erect, unbranched (generally) with hollow soft wood.
- Pal-like leaves are large, deeply lobed margins with long petioles.
- Flowers are borne singly (usually female and hermaphrodite) or in large clusters (male) in leaf axils and colour ranges from yellow to white.
- Fruits are spherical to oblong in shape, fleshy berry with central cavity.
- The skin is thin and yellow or yellowish-green at maturity.
- The flesh is yellow, deep orange, pinkish or deep red depending on cultivars.
- The center of the fruit is a large cavity lined with soft, black, pea-sized seeds.





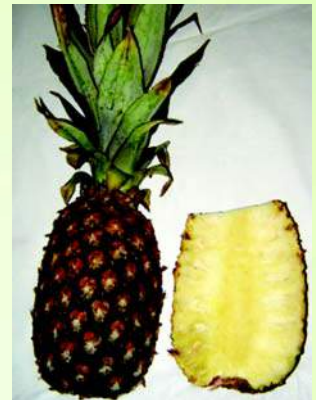


## Pineapple (*Ananas comosus*)

### Family: Bromeliaceae

- Pineapple plants are herbaceous and perennial with dense rosette leaves. The stem is short and thick, 15-25 cm long, narrow at the base and wider at the top with short internodes.
- The leaves are long and narrow and are arranged in a right-or-left-handed spiral on a short stem, forming a rosette. The number of leaves ranges from 35 to 60, and there is a bud in every leaf axil. The leaves either have smooth edges with a few spines just below the tip or have spines all along the margins. The tip is elongated, ending in a finer point. The upper leaf surface is green and the lower is silvery-white.

- The pineapple fruit grows on a stalk in the center of the rosette of leaves. The pineapple is a multiple fruit. (i.e. Fruits formed when a cluster of flowers produces numerous fruit that mature into a single mass.) The pineapple is oval to cylindrical in shape, topped by a leafy crown.
- The skin is golden yellow at maturity and has numerous scales.
- The flesh is whitish-yellow, juicy and sweet, around a central fibrous core. Seeds are absent.



## Grapes (*Vitis vinifera*)

### Family: Vitaceae

- Grape is a woody vine that uses tendrils to attach to supports.
- Leaf shapes vary with type and cultivar but are usually large, roundish to heart-shaped, often lobed, with serrate margins.
- Grapes grow in bunches or clusters.
- Fruit may be green, red, purple, or yellow when ripe.
- Individual grapes are round or oval, thin-skinned and juicy. Seeds are few or absent, small, round and often pointed at one end.







### **Sapota (*Achras zapota*)**

#### **Family: Sapotaceae**

- It is evergreen tropical fruit plant. The branches appear in whorls.
- Leaves are elliptic to obovate and light to deep green.
- Flowers are solitary appear in leaf axils.
- Fruit is a drupe, egg or round shaped. The skin of the fruit is slightly tough resembling potato skin in appearance. Each fruit contains 3 to 5 or more black shining seeds.



## **EXERCISE 2.2: IDENTIFICATION OF SUB-TROPICAL FRUIT CROPS OF OUR COUNTRY**

Sub-tropical fruits are the fruits which are commercially successful in sub-tropical zones i.e. where the temperate occasionally goes below freezing points but not as a rule below 25° F. The overall climate is hot and comparatively dry, whereas, the

winters are less cold. The chief fruits are sweet orange, mandarin, grapefruit, lime, lemon, litchi, grape, guava, phalsa, fig, pomegranate, avocado etc. The tropical fruits like Mango and Banana can also be grown in this zone whereas, the low chilling cultivars of Pear, Peach, Plum, and Almond of temperate zones can also be grown in sub-mountainous tracts of sub-tropical zone. The chief regions of sub-tropical zone are Punjab, Haryana, Uttar Pradesh., north districts of Bihar, West Bengal, Madhya Pradesh, Rajasthan, and Assam.

### **Mandarin (*Citrus reticulata*)**

#### **Family: Rutaceae**

- Trees are medium-sized and upright in growth.
- Leaves are lanceolate in shape with narrowly-winged petiole.
- Fruits are medium-sized, globose in shape, sweet in taste, segments easily separable, core open at maturity, loose skinned, orange in colour, rind thin, rind and segments easily separable, usually 10-14 segments in each fruit. Seeds are pointed with light green cotyledons.



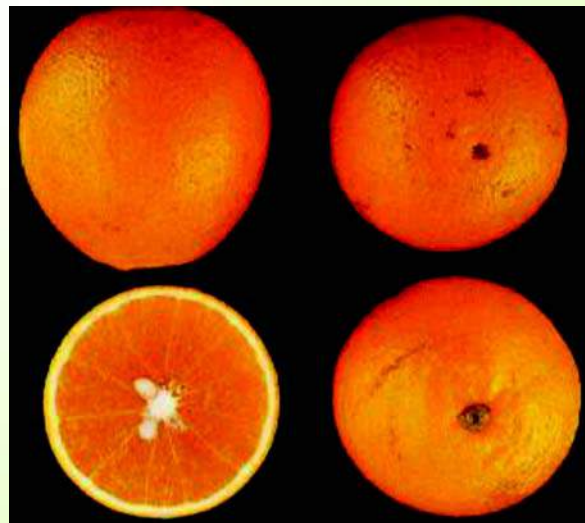
### **Sweet Orange (*Citrus sinensis*)**

#### **Family: Rutaceae**

- Sweet orange is a medium-large evergreen citrus tree.
- Leaves are ovate with blunt-pointed leaf apex and have rather narrowly winged petiole.



- Fruit are subglobose to oval in shape, orange-coloured, tight skinned with solid central core and have a somewhat coarse rind.
- The flesh colour is usually orange and sweet.
- Seeds are with whitish cotyledons.



### **Lemon (*Citrus limon*)**

#### **Family: Rutaceae**

- Lemons are medium-sized spreading thorny citrus trees. The new flushes are pigmented.
- Leaves are not dark green and leaf margins are subserrated. Petioles are medium-sized and narrowly winged.
- Flower buds are pigmented and the pistil is densely dotted with oil glands.



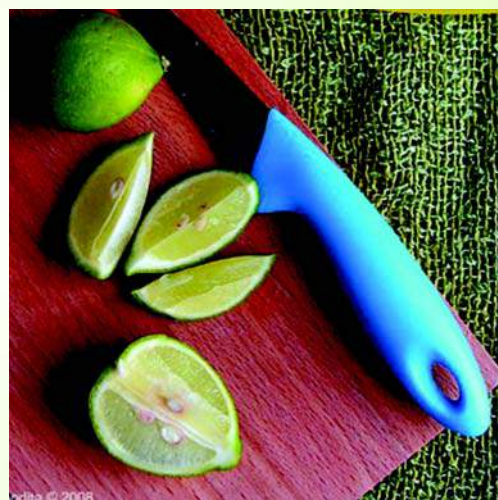
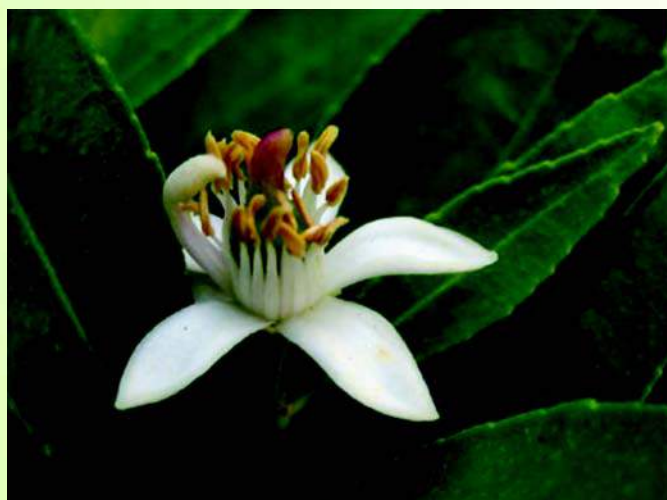
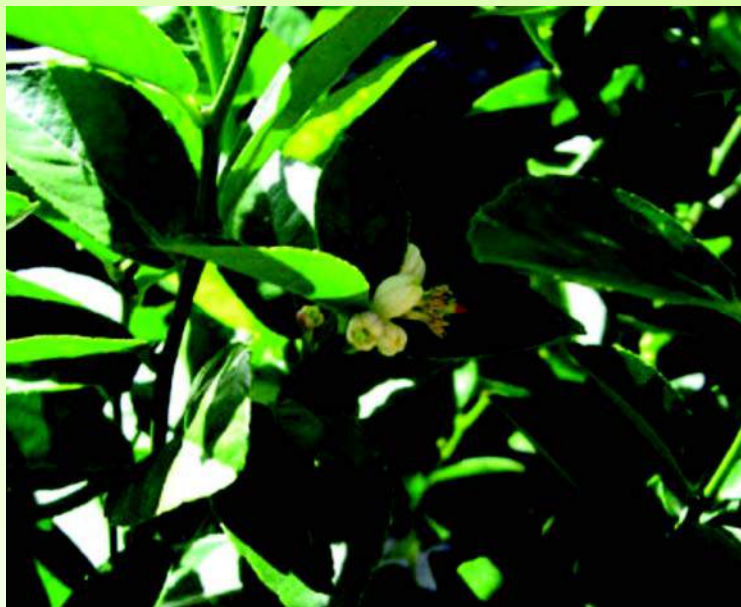
- Fruits are oval to elliptic with pointed nipple. Fruit surface is smooth, light yellow and core solid; juice abundant and acidic. Seed cotyledons are white.



### **Kagzi Lime (*Citrus aurantifolia*)**

#### **Family: Rutaceae**

- Tree is small, bushy with small but sharp spines.
- The leaves are small with narrowly-winged petioles.
- The flowers are yellowish white with a light purple tinge on the edges. Flowers and fruits are small.
- Fruits round to oval, maturing irregularly throughout the year, greenish yellow in colour and thin skinned. Core solid at maturity, flesh greenish in colour and juice highly acidic.
- Seeds are small, smooth and cotyledons whitish.

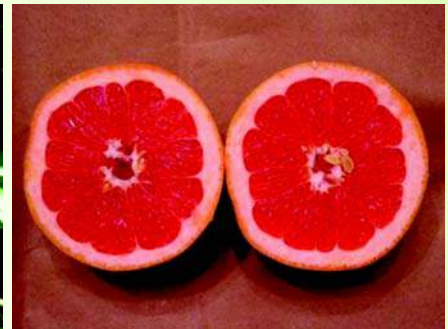


## Grapefruit (*Citrus paradisi*)

### Family: Rutaceae

- The grapefruit tree is round-topped spreading citrus tree.
- Leaves are large with winged petioles.
- The flowers of grapefruit are white and fragrant.
- The fruit is large but subglobose in shape. Rind surface and fruit flesh are yellowish in colour. Fruits are highly juicy, sweet with bitter aftertaste. The central core opens at full maturity. Seeds big but smooth-surfaced and white inside.





### **Pummelo (*Citrus grandis* / *C. maxima*)**

#### **Family: Rutaceae**

- The pummelo tree is spreading, round-topped, almost thornless citrus tree.
- Leaves are large with broadly-winged petioles. Lower surface of leaves is pubescent, particularly the main vein.
- The flowers of pummelo are very large, crowded in short axillary racemes.
- The fruits are large-sized, subglobose to pyriform in shape, with thick and spongy rind. Fruits are sweet and moderately juicy. Rind thick, smooth with large oil glands. Seeds are very large, coarsely veined and white within.





## Guava (*Psidium guajava* L.)

### Family: Myrtaceae

- The guava is a large shrub or a small spreading tree that may grow up to 10 m in height with a fairly thin trunk. The bark of the trunk is attractive with smooth, greenish or reddish brown or multi-coloured bark peeling annually in thin flakes.
- The leaves are simple, opposite, oval almost and light green in colour. Veins are prominent on soft under surface and markedly depressed on upper surface.
- Guava flowers are white borne in leaf axils of new growth.
- Guava is a berry with few to many small brown seeds. The fruit is very variable in size and other characteristics depending on cultivar. Fruit shape ranges from round, ovoid to pear-shaped.
- The peel color ranges from green to yellow and flesh color may be white, yellow, pink or red. Fruit peel thickness may be thin or thick and depends upon cultivar.
- There is a wide range in flavor and aroma, ranging from sweet to highly acid and strong and penetrating aroma to mild and pleasant.



## Litchi (*Litchi chinensis*)

### Family: Sapindaceae

- Trees are medium to large, much branched, round topped, evergreen reaching up to 10m or more in height with short stocky trunk. Bark is grayish brown and rough.
- Leaves are compound, alternate consisting of 4-7 oblong leaflets, glossy dark green above and grayish brown under surface. New leaves are a bronze red.
- Flowers are greenish-white to yellow panicles borne in terminal clusters.
- Litchi fruits are one-seeded nuts, usually develop in bunches and vary in shape and size. The fruits are usually oval in shape. The fruits have a thin leathery shell (pericarp) which turns bright-red when the fruit is ripe.
- The sweet, juicy flesh is white, translucent and surrounds a large, oval, dark, shiny seed.

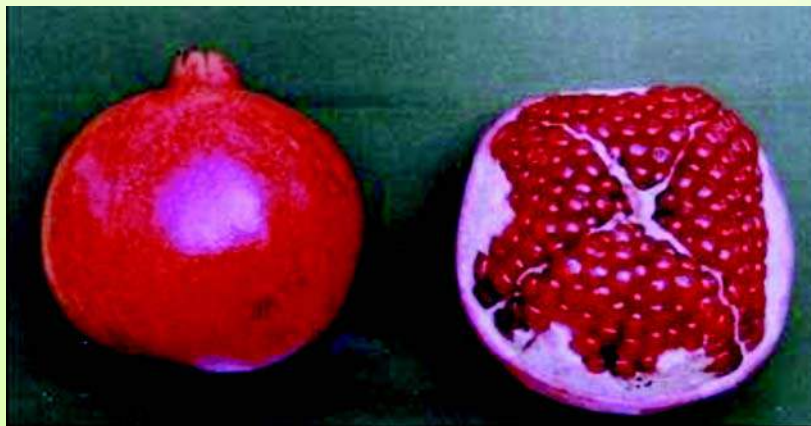




## Pomegranate (*Punica granatum*)

### Family: Punicaceae

- It is a deciduous shrub or tree. Branches are slender and somewhat thorny.
- Leaves are dark green, glossy, simple, opposite or in whorls, small and somewhat narrow, oblong to oval, clustered on short branchlets.
- Blooms are a flaming orange-red, to 2.5 inches in diameter with crinkled petals and numerous stamens. Flowers are borne solitary or in small clusters.
- Pomegranate fruits are berries, brownish red to purple-black, to 5 inches, with a protruding calyx at the blossom end. The skin is leathery.
- The flesh is a juicy, edible, reddish pulp surrounding numerous, small, dark seeds.



## Ber (*Zizyphus mauritiana*)

### Family: Rhamnaceae

- Indian jujube is thorny shrub or small tree. It sheds its leaves in summer after the harvest of the fruits.



- Leaves are alternate, simple, obtuse, broadly oval to rounded-elliptical, slightly equal to the base, densely tomentose underside and have stipular thorns.
- Flowers are small, greenish -cream, fragrant, and borne in the leaf axils.
- Fruit is drupaceous, persistent lower part of calyx often evident, ellipsoid to subglobose, greenish yellow to golden yellow in colour.



### **Fig (*Ficus carica*)**

#### **Family: Moraceae**

- Leaves are simple, large, thick, bright to dark green, with three to five lobes; shiny above but dull or fuzzy below.
- The fruit are somewhat "pear-shaped," with a wide, flat bottom narrowing to a pointed top. When the fruit ripens, the top may bend, forming a "neck."
- Figs can be brown, purple, green, yellow or black, and vary in size.
- The fruit is fleshy with an "eye" leading to a cavity inside. The skin is slightly wrinkled and leathery.

- The fig flowers develop inside the fruit and cannot be seen. Seeds are either absent or inconspicuous.



### Loquat (*Eriobotrya japonica*)

#### Family: Rosaceae

- The tree is symmetrical, evergreen and has a hairy dense crown.
- The ten to twelve inch long leaves are alternate, simple, oblong, leathery, and dark glossy green on the upper surface, rusty-coloured beneath.
- The flowers are white, with five petals, and are produced in stiff panicles of three to ten flowers. The flowers have a sweet aroma that can be smelled from a distance.
- The fruits are borne in clusters, commonly round, oval or pyriform, golden yellow and fuzzy skinned. The fruit skin thick but slightly tougher. The dried flower can often be seen on the bottom of the fruit. There are a few large, shiny, dark seeds in the soft, tart, yellowish flesh.





### **Aonla (*Emblica officinalis*)**

#### **Family: Euphorbiaceae**

- A deciduous tree, small to medium in size; its bark is usually light brown to black, coming off in thin strips or flakes, exposing the fresh surface of a different colour underneath the older bark; in most cases, the main trunk is divided into 2 to 7 scaffolds very near the base.
- Leaves are small sized, simple, closely set in pinnate fashion, making the branches feathery in general appearance. The leaves develop on the determinate shoots after the fruit-set.
- Flowers appear on newly emerged determinate shoots. Male flowers appear first in the form of clusters at the basal part of determinate shoots followed by female flowers in the axil of leaves at the distal end of same shoot
- Fruits, fleshy, almost depressed to globose, primrose yellow in colour.
- The stone of the fruit, six-ribbed, splitting into three segments, each containing usually two seeds; citron green in colour.





### EXERCISE 2.3: IDENTIFICATION OF TEMPERATE FRUITS OF OUR COUNTRY

Temperate fruits are the fruits growing in the temperate regions. Temperate regions are the regions where the temperature falls below freezing point during the winter. The temperate trees shed their leaves during the cold season and enter the rest period. A definite chilling temperature is required to break the rest period or dormancy. In general, the temperate fruits are grown in the states of Jammu & Kashmir, Himachal Pradesh, Uttarakhand and North -Eastern states.

#### Apple (*Malus domestica*)

##### Family: Rosaceae

- Apple plant is deciduous without spiny branches. The growth habit of plants which may be with an upright to slightly spreading growth habit. Tree size varies greatly but is usually relatively small.
- Leaves are oblong to oval, alternate, pointed, with serrate margins, soft textured with fine fuzz giving a dull appearance.
- Floral buds are mixed buds borne terminally on spurs and terminally or laterally on long shoot, depending upon the cultivar, age and vigour of tree.
- The inflorescence is determinate having five flowers. Flowers are white or pink or carmine in cymes.
- Apple fruits are round to slightly elongated and red, yellow or green in color. The flesh is crisp, white, and juicy. They are often borne on short stems known as spurs. The blossom end of the fruit may have 4 (sometimes 2 or 3) distinct lobes. The skin is smooth with prominent lenticels, or may be covered with tan corky tissue known as russett. Seed are hard, small, ovoid, pointed at one end, black or brown and shiny. Papery membranes surround the seeds.





**Pear (*Pyrus communis*; *Pyrus pyrifolia*)**

**Family: Rosaceae**

- Pear trees have a very upright growth habit.
- Leaves are alternate, with serrate margins.
- Showy white flowers appear in spring either before or when leaves emerge.
- Pears may be oblong or nearly round. Typically the stem end is narrow, broadening at the base or blossom end.
- Fruit may be green, yellow, yellow with a red blush, or red.
- Like apples, the fruit are usually borne on short stems called spurs.
- The flesh is white, juicy and soft, with slightly gritty stone cells.
- The seeds and leaves are very similar to apple except that they lack fuzz and are smooth and shiny in appearance.







## **Peach (*Prunus persica*)**

### **Family: Rosaceae**

- The tree is deciduous, moderately small with a dense upright growth habit except when pruned to encourage spreading growth.
- Leaves are alternate, narrow and 4-8 inches long with finely serrated margins. They point downward and curve inward.
- Peaches are roundish, sometimes pointed at the blossom end, with a suture along one side. Peaches vary in size but are usually about the size of a tennis ball.
- The skin is fuzzy and its color ranges from yellow to red.
- Flesh color is yellow, or sometimes white.
- The stone or pit is large, deeply pitted, oval or pointed, and tan to brown in color.







**Nectarine (*Prunus persica* var. *nucipersica*)**

**Family: Rosaceae**

- Tree is deciduous, small to medium in size to 20 feet, similar to peach.
- Leaves are bright green, glossy, alternate, and long with toothed margins.
- Nectarines are generally the same size, shape, and color as peaches, just a peach without fuzz. Like peaches, they have a suture or crease. However, they may be a little smaller and slightly tarter than peaches.
- Skin color is mostly red with some yellow.
- Flesh is yellow to white, redder near the center. The stone or pit is oval and deeply pitted.





### Plum (*Prunus domestica*; *Prunus salicina*)

#### Family: Rosaceae

- Tree medium to large, upright growth and deciduous.
- Leaves are alternate, serrate, sharp pointed, medium sized and glabrous.
- Flowers are produced three in a bud on one year shoot or on spur. Flowers perfect, solitary or raceme, usually white in colour.
- Plums closely resemble small nectarines in shape, although some may be oval instead of round. Like nectarines, they have a crease on one side.
- The flesh and skin colour vary greatly with cultivar (yellow, green, red, blue or purple) and unlike nectarines, the color is not mottled.
- The skin is smooth and thin; the stone is usually oval, pointed at one end, and slightly rough.







## Apricot (*Prunus armeniaca*)

### Family: Rosaceae

- The leaves are alternate, heart-shaped and sharp pointed with finely serrated margins. The new growth often has a reddish tint.
- Flowers are solitary, produced in clusters, on short spurs, with 5 petals and 5 sepals and erect stamens.
- Apricot fruits resemble small peaches in shape and appearance, usually being yellow or orange with a vertical dent along one side. The skin is smoother than a peach, but is finely fuzzy. The stone is oval, flat, and smooth with ridges along one edge.



## Sweet Cherry (*Prunus avium*)

### Family: Rosaceae

- Sweet cherry is a tall tree and branches are erect.
- Leaves are large, thin, pubescent beneath and serrated. The petioles are long having two or more swollen glands.
- The floral buds are borne on 2 year old shoot or at the base of 1 year old shoot and found only on lateral, simple flower buds. Flowers are white in colour, raceme on long pedicels and produced in clusters.
- The fruit is cordate in shape, has deep cavity and apex is rounded or pointed. The fruit colour of cherry varies with varieties and may be yellow, red or purplish black.
- The texture of the flesh is tender or firm, sweet and yellow or red or dark purple in colour.



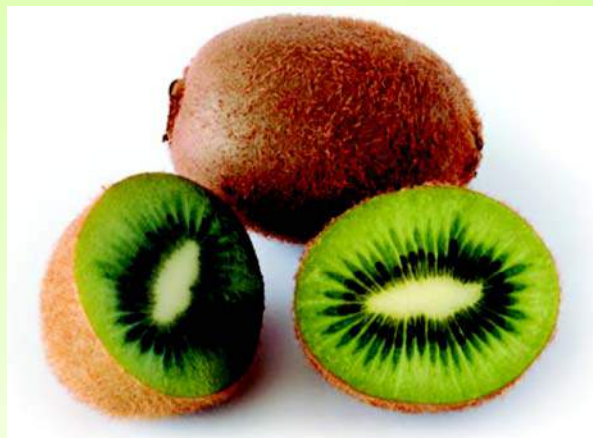


## Kiwi Fruit (*Actinidia deliciosa*)

### Family: Actinidiaceae

- Kiwi fruit grows on a vigorous, woody, twining vine or climbing shrub reaching 30 feet.
- Its alternate, deciduous leaves are oval to nearly circular with long petioles. Young leaves and shoots are coated with red hairs. Mature leaves are dark-green and hairless on the upper surface, with prominent, light-colored veins below.
- The fragrant flowers have five to six petals, white at first, changing to buff-yellow.
- The oval fruit, about the size of a large hen's egg, has russet-brown skin densely covered with short, stiff brown hairs. The fruit has a soft texture, green flesh, edible black seeds and a unique flavor.





## Pecan (*Carya illinoensis*)

### Family: Juglandaceae

- Pecan trees grow seventy to 100 feet in height. Bark becomes gray, rough, and somewhat scaly on older trees.
- Leaves are odd-pinnately compound, with 11 to 17 leaflets, lanceolate, with serrate margins.
- Male and female flowers are on the same tree. The male flowers are in hanging catkins and the female flowers in spikes.
- Pecans develop inside a rough green husk that turns black and splits open at maturity.
- The nut is oblong, brown or tan with black streaks, smooth, thin-shelled, pointed and one to two inches long.
- The kernel is distinctively ridged.







## Walnut (*Juglans regia*)

### Family: Juglandaceae

- The trees are very large, ranging from 50 to 75 feet in height and width
- The leaves are 12 to 24 inches, alternate, and pinnately compound, having 15 or more lanceolate leaflets with serrate margins.
- Fruits develop in clusters inside a rough, green husk about the size of a tennis ball. The shell of the nut is nearly round, black, very hard, rough and deeply ridged. The nut (kernel) is contained inside the shell.





## Strawberry (*Fragaria x annanasa*)

### Family: Rosaceae

- The strawberry is a nearly stemless small plant. It forms stolons on which new plants develop.
- Leaves are compound, consisting of three rounded leaflets with deeply serrated margins.
- The strawberry flower is about an inch in diameter with five white petals and a yellow center.
- The fruit is bright red at maturity, somewhat cone-shaped or flattened cone-shaped, with numerous small, hard, brown seeds scattered on the outside surface in shallow depressions.
- The fruit is fleshy, with a prominent, green calyx at the stem end.





## Persimmon (*Diospyros kaki*)

### Family: Ebenaceae

- This deciduous tree can grow to about 30 feet when mature.
- The broad, stiff leaves are alternate, ovate, dark green and shiny above, lighter below, and leaf margins are often curled.
- The inconspicuous flowers surrounded by a green calyx, and may be white, cream-colored or pink-tinged.
- The persimmon fruit are round to oval, yellowish-green to orange or red in color, and may reach the size of a peach.
- Notice the dried calyx at the top of the fruit. This can help distinguish persimmons from apricots or tomatoes.
- They are sweet, slightly tart fruits with a soft to occasionally fibrous texture. Seeds are large, flat, dark and shiny, if present.



**Exercise 1:** Prepare a scrap book by collecting leaf samples of various fruit plants available in your region.

**Exercise 2:** Record your observations on morphological features of fruit crops of your region as per the data sheet given below.

### Data sheet (Exercise 2)

#### Plant Identification Key of Fruit Plants

Fruit plant	Plant/Stem characteristics	Leaf characteristics (arrangement, type, margins, tip, size, shape, colour, etc)	Flower/ inflorescence characteristics (Type colour, size,)	Fruit characteristics (size, shape, colour)	Other characteristics