

Horticulture Identification Study Guide

Elementary:

This Achievement Day test will be open to all 4th - 5th grade 4-H members. The judging classes will be comprised of any of the horticulture items listed below.

In addition, contestants will also be required to identify tie breaker specimens which can be taken from any section. Any plant part (fruit, leaves, root, seed, etc.) can be used for this part of the test.

- A. Vegetables - Plant parts most commonly found in grocery stores.
Globe Artichoke, Asparagus, Beet, Broccoli, Brussels Sprouts, Cabbage, Carrot, Cauliflower, Celery, Cucumber, Eggplant, Garlic, Honey Dew, Leek, Cantaloupe, Mustard, Okra, Onion, Parsley, Pepper (hot, bell), Irish Potato, Radish, Rutabaga, Snap Bean, Spinach, Squash (summer or winter), Sweet Corn, Sweet Potato, Tomato, Turnip and Watermelon.
- B. Fruits - Plant parts most commonly found in grocery stores
Apple, Apricot, Avocado, Banana, Blackberry, Blueberry, Bunch Grape, Cherry, Fig, Grapefruit, Kumquat, Lemon, Lime, Naval Orange, Nectarine, Peach, Pear, Pineapple, Plum, Strawberry, Tangerine, Valencia Orange.
- C. Annuals, Perennials (Includes Woody Ornamentals) and Flowering Pot Plants
African Violet, Azalea, Begonia, Boxwood, Coleus, Elm, Geranium, Holly, Impatiens, Live Oak, Magnolia, Marigold, Maple, Nandina, Pansy, Periwinkle, Petunia, Photinia, Pine, River Birch, Salvia.

Junior & Senior

This achievement day test is open to all sixth to twelfth grade 4-H members. Contestants will be required to identify specimens from each section, and judge classes.

The judging classes will be comprised of actual vegetables & fruits along with vegetables & annual (section C) plants.

Five items will be taken from any of the four plant sections and they will only be graded in case of a tie. Plants or plant parts including fruit, root, leaves, stem, seed, etc. may be used.

- 1. Vegetables - Plants or plant parts most commonly found in grocery stores.
Globe Artichoke, Asparagus, Beet, Broccoli, Brussels Sprouts, Cabbage, Carrot, Cauliflower, Celery, Chinese Cabbage, Collards, Cucumbers, Eggplant, Endive, Escarole, Garlic, Honey Dew, Kale, Leek, Cantaloupe, Mustard, Okra, Onion, Parsley, Pepper (hot, bell), Irish Potato, Radish, Rutabaga, Snap Bean, Spinach, Squash (summer or winter), Sweet Corn, Sweet Potato, Tomato, Turnip and Watermelon.
- 2. Fruits & Nuts - Plant or plant parts most commonly found in grocery stores.--Almond, Apple, Apricot, Avocado, Banana, Blackberry, Blueberry, Bunch Grape, Brazil Nut, Cherry, Fig, Grapefruit, Kumquat, Lemon, Lime, Naval Orange, Nectarine, Peach, Pear, Pecan, Pineapple, Plum, Strawberry, Tangerine, Valencia Orange & Walnut.
- 3. Annuals, Perennials & Flowering Pot Plants --African Violet, Ageratum, Begonia, Caladium, Christmas Cactus, Chrysanthemum, Cockscomb, Coleus, Easter Lily, Geranium, Impatiens, Marigold, Pansy, Periwinkle, Petunia, Poinsettia, Portulaca and Salvia.
- 4. Woody Ornamental & Ground Covers-- Azalea, Boxwood, Camellia, Crape Myrtle, Elm, Flowering Pear, Gardenia, Holly, Indian Hawthorne, Juniper, Ligustrum, Liriope, Live Oak, magnolia, Maple, Monkey Grass, Nandina, Photina, Pine, Pittsporum, Privet, River Birch, Rose and Spirea.

4-H Horticulture Identification and Judging Study Guide

Fruits and Nuts

Apple

Apples are round to slightly elongated and red, yellow or green in color. The fruit 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. The flesh is crisp, white, and juicy. Papery membranes surround the seeds. Leaves are oblong to oval, pointed, with serrate margins, soft textured with a fine fuzz giving a dull appearance. Tree size varies greatly but is usually relatively small with an upright to slightly spreading growth habit..

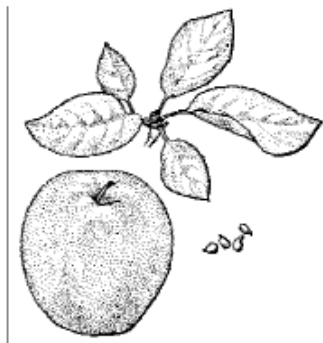
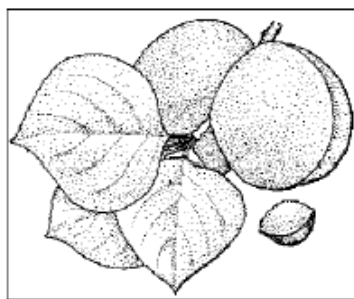


Figure 1. Apple (*Malus domestica*)

Apricot

Apricots resemble small peaches in shape and appearance, usually being yellow or orange with a suture along one side. The skin is smoother than a peach, but is finely fuzzy. The stone is oval, flat, smooth with ridges along one edge. Leaves are heart-shaped, sharp pointed, with finely serrated margins. The leaf petioles have glands. The new growth often has a reddish tint.



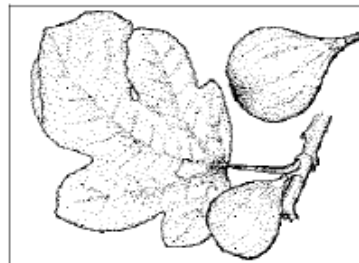
Cherry

Cherries are small, round, yellow, red or nearly black in color, and borne on long stems. The pit is small, round, and smooth, somewhat like a plum seed. Leaves are oval and pointed, with doubly serrate margins and small glands on the petiole. The skin is smooth, shiny and thin.



Fig

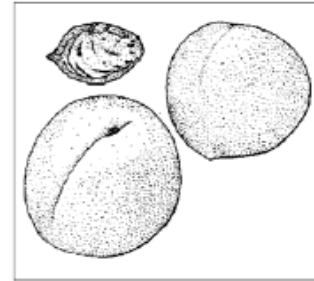
Figs are somewhat "pear-shaped" with a neck at the stem end which broadens towards the blossom end. Fruit may be green, yellow or purple in color. The fruit is fleshy with an "eye" leading to a cavity inside. Seed are either absent or inconspicuous. The leaves are large and thick, palmately lobed (3-5 lobes), shiny above and dull or fuzzy below. The sap is milky, sticky, and may irritate the skin. The tree may grow to 30 feet but is more commonly a multi-trunked shrub.



Nectarine Nectarines are generally the same size, shape, and color as peaches, being essentially peaches without fuzz. However, they may be a little smaller and slightly tarter than peaches. Tree size and shape is identical to peach.

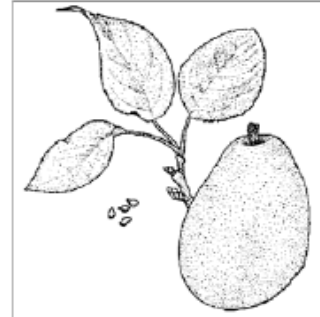
Peach

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 mostly yellow to mostly 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. The tree is moderately small with a dense upright growth habit except when pruned to encourage spreading growth. Leaves are narrow and 4-8 inches long with finely serrated margins.



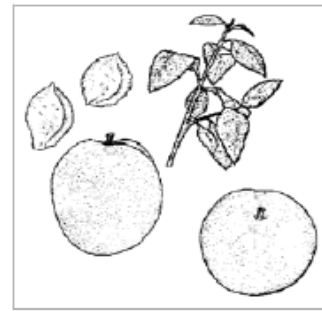
Pear

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. However, some cultivars grown in Florida remain crisp when ripe, much like apples. The seeds and leaves are very similar to apple except that the leaves lack fuzz and thus are smooth and shiny in appearance. Pear trees have very upright habit of growth.



Plum

Plums closely resemble small nectarines in shape, although some may be oval instead of round. The flesh and skin color vary greatly with cultivar (yellow, green, red, blue or purple). The skin is smooth and thin, the stone is usually oval, pointed at one end, and slightly rough. Leaf shape also varies with cultivar but is usually wider and shorter than peach, being more or less ovate (egg-shaped), with finely serrate margins. Tree shape varies from spreading to upright, depending on cultivar.



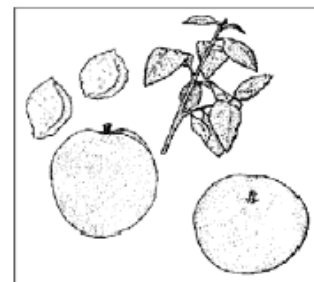
Blackberry

Blackberry is a multiple fruit composed of 20-50 small fruitlets attached to a central core which remains in the fruit when picked. The fruit are dark red to black at maturity and thimble-shaped. The plant is either a vine or shrub with trailing or arching canes which are nearly always thorny. Leaves are trifoliate or pinnately compound with 3, 5, 7 or 9 deeply serrate or toothed leaflets.



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Blueberry

Blueberries are small, round or oblate, blue to bluish black at maturity, usually with a waxy bloom and remains of the calyx at the blossom end. Seeds are few and very small. Leaves are small, ovate, with short petioles, entire margins, and usually a waxy surface giving them a light green appearance. The plant is usually a relatively small, multi-trunked shrub.



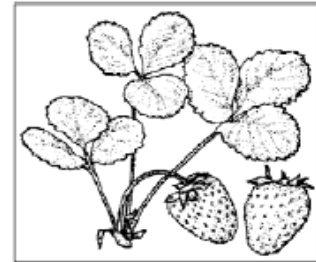
Grape

Grapes grow in bunches or clusters on woody vines. Fruit may be green, red, purple, or yellow when ripe. Individual grapes are round or oval, thin-skinned and juicy, except that muscadine grapes are thick-skinned. Seeds are few or absent, small, round and often pointed at one end. Leaf shapes vary with type and cultivar but are usually large, roundish to heart-shaped, often lobed, with serrate margins. Muscadine grape leaves are not lobed but margins are more deeply serrated than leaves of bunch grape.



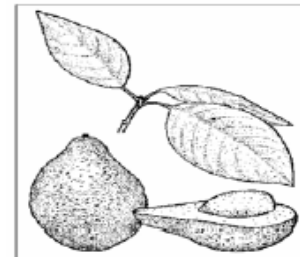
Strawberry

Strawberries are 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. Leaves are compound, consisting of 3 rounded leaflets with deeply serrated margins. The small plant is nearly stemless with a rosette growth habit and often forms stolons on which new plantlets form.



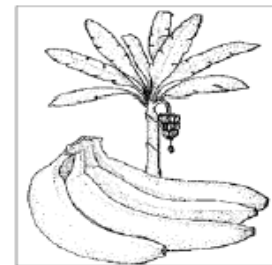
Avocado

Avocados are commonly pear-shaped but they may be rounded or prominently necked. They commonly have smooth, green skins, but other types may have rough leathery skin which is almost black. The flesh is yellow-green being more green toward the skin and more yellow toward the seed. The single seed is large and smooth. Leaves are large, smooth, ovate, broadly pointed and dark green.



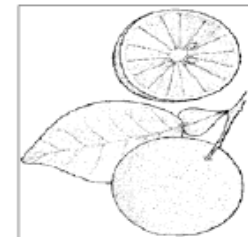
Banana

Bananas 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 of 6-25 or more bananas on stems of bunches of 10-15 hands. Leaves are very large, blunt, wide and long, and sometimes tattered along the edges. The flower bud is reddish-purple, large and pointed.



Grapefruit

Grapefruit is the largest citrus fruit in this group, usually about the size of a softball. The fruit is round but often flattened at each end with a rind that is yellow, or yellow tinged with pink or red. The flesh is buff or pinkish-red in color and slightly bitter and tart in taste. Seeds may be absent, few, or many. Leaves are large, broadly ovate, blunt pointed, with large, winged petioles which are heart-shaped. The tree is moderately large with a dense, spreading canopy.



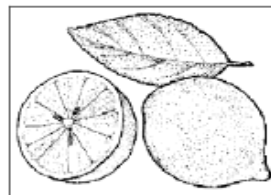
Kumquat

There are several species of kumquat which vary widely in size, shape, and flavor. They are the smallest citrus fruits. They are oblong or round in shape and orange or reddish-orange in color. The rind is thin and pebbly. The flesh is in 3-5 segments, lacking in juice, with rather large seeds for the size of the fruit. Fruit may be tart or sweet, depending on species. Leaves are small, rather narrow and pointed, without petiole wings.



Lemon

Lemons are oblong, yellow, smooth-skinned, with a nipple at the blossom end and may be slightly necked at the stem end. The flesh is buff colored, acid and aromatic. The lemon odor is characteristic of the leaves, rind and juice. Seeds are few, but present. Leaves are ovate-oblong with very narrow or no petiole wings.



Lime

Limes are very much like lemons except they are generally marketed green and they have no seeds. Leaves are somewhat rounder and blunter than lemon leaves.



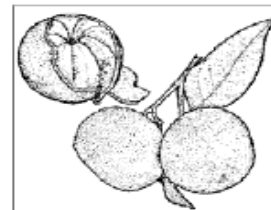
Pineapple

Pineapple is a multiple fruit. It 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. Leaves are grey-green, long, narrow, pointed, V-shaped and often have spiny margins.



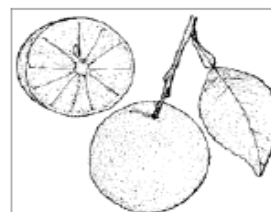
Tangerine

Tangerines (mandarins) are similar to oranges and tangelos but are usually smaller and somewhat flattened, though the stem end may be slightly necked. The rind is thin and easily peeled, reddish-orange and slightly coarse. The flesh is orange, juicy and sweet-tart, in segments which separate readily. The seeds have green cotyledons, unlike other citrus. Leaves are small, narrow, pointed, with narrow petiole wings.



Orange

Oranges are smaller than grapefruit, usually being about the size of a baseball. Fruit are round or nearly so, with a somewhat coarser rind than grapefruit, being yellowish-orange in color. The flesh is yellowish-orange and sweet. Seeds may be absent, few, or many. Leaves are ovate, pointed, with rather narrow petiole wings.



Pecan

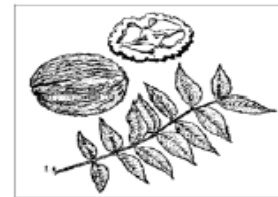
Pecans develop inside a rough green husk that turns black and splits open at maturity. The nut is oblong, brown or tan with black streaks, smooth, thin-



shelled and pointed. The kernel is distinctively ridged. Leaves are compound, with 11-17 leaflets, more or less lanceolate, with serrate or doubly serrate margins. Bark becomes gray, rough, and somewhat scaly on older trees.

Black Walnut

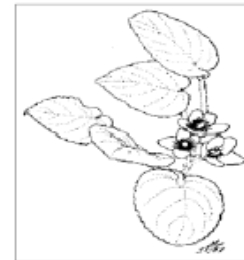
Black walnut develops inside a rough, green husk about the size of a tennis ball. The shell is nearly round, black, very hard, rough and deeply ridged. Leaves are compound, having 15 or more leaflets which are lanceolate with serrate margins.



Flowers and Foliage Plants

African Violet

A small plant with a rosette form. Leaves and stems are very pubescent. Leaves can be oval to heart-shaped with smooth or ruffled edges. Flowers are borne in clusters, can have 5 or more petals and come in different shades and combinations of white, blue and red.



Begonia

An erect or trailing, sometimes climbing herbaceous annual or perennial. Usually succulent in texture. Leaves are simple, alternate, highly variable in size and shape, characteristically asymmetrical, glabrous or pubescent. Male and female flowers are usually borne in axillary cymes, some quite showy. They come in a variety of sizes, shapes and colors.



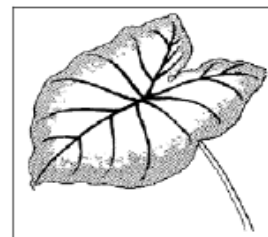
Coleus

A freely-branching, densely-foliated herbaceous perennial. Simple leaves are opposite with margins which may be crenate, serrate, undulate, lobed, etc. They are generally ovate and soft textured. They exhibit many colors and color combinations; patterns of pink, white, yellow, red, green, and maroon are common. The stem is squared in cross section, green or brown, becoming woody with age.



Caladium

A tuberous, stemless perennial herb with colorful leaves, which are simple, basal and entire, ovate to lanceolate shaped; may be up to 14" long. Petioles are longer than the leaf blades. Caladiums show a variety of variegated colors: red, rose, white, green, and pink.



Chrysanthemum

A much-branched, erect, herbaceous perennial with simple leaves which are alternately arranged. The leaves are lobed, entire to coarsely toothed, lanceolate to ovate, often pubescent and thick, with a strong fragrance.



Flowers are heads of various sizes and shapes, clustered with disk and ray florets. Colors are many shades of white, yellow, pink, bronze, and red purple.

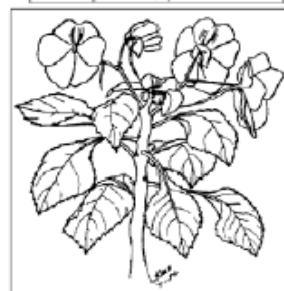
Geranium

Leaves are orbicular, undulate and coarsely crenate with a spicy scent. Flowers are in rounded umbels four to six inches across. The individual flowers are five-petaled. They can be red, pink or white.



Impatiens

An erect, spreading, succulent annual which is very brittle. Simple leaves are glabrous, alternate, sometimes opposite with serrate margins. They are green or reddish-green, ovate-lanceolate to elliptic-oblong in shape. Flowers are solitary and borne on axillary or terminal racemes and are in many forms, doubled, semidoubled, etc. Flowers have a spur which contains nectar and they come in many colors: purple, variegated whites, yellows, reds, and oranges.



Marigold

A densely-foliated, freely-branching, erect, herbaceous annual, with odd-pinnately compound leaves, which are opposite with serrate margins, lanceolate. They have glandular dots on the undersides, and are strongly aromatic. Flowers are dense heads to 5" across, solitary, borne on long peduncles. They have few to many ray florets, often two-lipped or quilled, in yellows, oranges, reddish-browns or multi-colored.



Pansy

Pansies grow to a height of 8 inches. The leaves are dark green, drooping, with wavy edges. They have delicately fragrant 2- to 3-inch flowers of five overlapping petals looking like gigantic violets, except that the colors are purple, white, blue, dark red, rose or yellow combined in almost endless variations of stripes and blotches.



Petunia

A densely-foliated, trailing, low-growing herbaceous annual. Simple leaves are alternate with upper leaves sometimes opposite; margins are entire, and shape varies from linear-oblong to spatulate; texture is soft and pubescent. Flowers are axillary and solitary to 5" across, with funnellform corollas which are often deeply fringed or full double. They come in many colors and combinations of whites, yellows, reds and blues.



Poinsettia

Large, upright growing shrub which can reach a height of 12 feet. Leaves are large, alternate, ovate and light green in color. The showy portion of the plant, popularly referred to as the flower, consists of modified leaves, which are called bracts. Bracts may be red, pink, yellow or white. One cultivar has



red bracts with pale pink spots and blotches. The true flowers are small, green and yellow nubs clustered in the centers of the bracts.

Salvia

Herbaceous annual, usually with square stems. Simple leaves are opposite, oval or lanceolate. Margins are toothed or segmented. Flowers are borne in clusters, growing from the axils of small bracts which vary in color from scarlet, purple, blue to white and pale yellow.



Ornamentals

American Holly

A spreading, short-branched evergreen tree. Simple, elliptic leaves are spirally arranged with entire or spined margins. They have a leathery, pliable texture. Flowers are dioecious, white, not showy. The very showy fruits are shiny red berries borne in large axillary clusters.



Azalea

An evergreen, densely foliated, shrub with many branches in a horizontal pattern. Leaves are simple, entire, and elliptic in shape, and are arranged alternately on the stem; they are deep green and very pubescent. During cool weather, they may show a bronze tinge. The new growth on the stem is pubescent. Flowers are funnel form, borne on umbel like clusters of many colors and appear in the spring.



Camellia

A densely foliated evergreen shrub or small tree. Simple leaves have alternate to spiral arrangement with shallowly serrate margins. Terminal flowers are solitary or clustered, and may be single, semi-double or double, possessing many petals and stamens. Flower color encompasses shades of red, pink, and white.



Chinese Elm

A freely branching, symmetrical deciduous tree with a slightly weeping, spreading, open canopy. The simple leaves have serrate margins and are alternately arranged, leathery, shiny dark green and elliptic-ovate in shape. The exfoliating bark is very showy and the young branches are thinly pubescent.



Crape Myrtle

This freely branching, erect, deciduous shrub or small tree has simple, entire leaves, which are subopposite in arrangement, and oblong-elliptic to rounded in shape. The new growth is pubescent underneath and has square pinkish stems. The flowers are borne in terminal and axillary panicles. They have fringed petals to 1 1/4 inches long. Flower colors are white, pink, red or purple. The fruits are brown, globular capsules.



Dogwood

A small deciduous tree with simple leaves which are entire, oppositely arranged, and up to 6 inches long. The surface is crinkled, light green, and the veins are markedly curved. The flowers are small dense heads borne in panicles, which are subtended by four showy petal-like bracts. They are white, obovate and notched. The fruits are red, showy drupes.



Hibiscus

This large, upright evergreen shrub has many branches and is densely foliated. The glossy green leaves have long reddish petioles, are simple and spirally arranged. They are ovate in shape and the margins are finely serrate. The flowers come in many colors. They are borne solitary on long hanging peduncles, with bell shaped calyx. They have five petals and a long, conspicuous column of stamens.



Indian Hawthorn

A dense, rounded, medium textured, evergreen shrub. This shrub is a slow grower and it will take many years for it to reach a mature height of 5 feet. Leaves are simple, alternate, clustered at twig tips, oblong and leathery. Flowers are white or pinkish, 5/8 inch across, and are borne on loose terminal panicles in the spring. Fruit are purplish-black pome about 3/8 inch long.



Live Oak

This large, symmetrical oak is an evergreen tree with a spread greater than its height. Branches are drooping and low. Simple, entire leaves are spirally arranged, and are elliptic to ovate-shaped with revolute margins. The underside is whitish-grey. Fruits are acorns to 1 inches long, sometimes in pairs, with a shallow cup enclosing the bottom 1/4.



Liriope

A clumping, perennial evergreen herb which forms dense, grass-like mats. Leaves are linear, dark green with parallel veins, 8-10 inches long and 3/4 inch wide, and forming tufts. Purple flowers are small and dense, borne in short racemes which are held on stalks longer than the leaves. Fruits are black, berry-like, small fleshy capsules.



Juniper

An evergreen coniferous shrub with a spreading horizontal growth habit. The tips of the branches point outwards. Leaves are small, scale-like and are tightly compressed in whorls; they are colored grey-green.



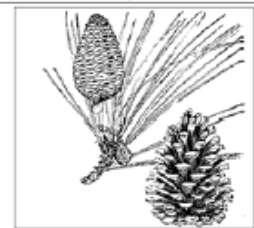
Nandina

This evergreen to semi-deciduous shrub forms clumps and is leafless at the base. The leaves are odd bi- and tripinnately compound, and spirally arranged. Leaflets are entire, elliptic to 4 inches long, with short petioles. They show red fall color. Small, white flowers are 6 petaled, and borne in panicles. Fruits are ovate berries, red, in pendulous, showy clusters.



Pine

Tall, coniferous trees which are evergreen and monoecious. Leaves produced are of two kinds: scalelike, soon falling off the tree, and needle-shaped, long and borne in clusters of 2-5. The fruit is the typical woody pine cone.



Photinia

An evergreen shrub or small tree, upright and freely branching. Simple alternate leaves are 2-3 inches long and elliptic ovate in shape. They are glossy green, leathery and pliable. The new growth is reddish. Flowers are white, 5-pleated, borne on short terminal panicles. Fruits are berry-like pomes, globose, red turning to black.



Red Maple

A low branching, deciduous tree with an open growth habit and oval canopy. Leaves are opposite, palmately shaped with 3-5 lobes. They are unequally crenate to serrate, and 3-6 inches across. Petioles are pink-red and leaves turn red in fall. Fruits are winged, ripening soon after the red flowers fade in spring.



Magnolia

Upright, large trunked, evergreen tree with large, stiff leaves that are alternate, shiny, dark green above and light green or brown below. The spring flowers are large, white and fragrant. Fruits are cone-like, 4-inch aggregates of many dark red seeds.

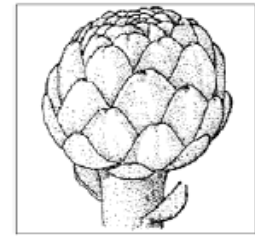


Vegetables

Artichoke

The edible heads are immature, unopened flower buds. Each large bud is globular, bluntly pine-cone shaped and composed of many layers of deep green bracts. The edible parts are the fleshy bases of the bracts and the center or heart to which the bracts and violet colored flower parts are attached. The plant is tall growing, spreading, with deeply notched, pointed leaves which

attach to a stump several inches in diameter.



Asparagus The edible portion is the aerial stem or spear growing from a below-ground crown. Foliage is light green and fern-like. Small fruits are round and berrylike. When young, they are green, turning red when mature; then black when fully ripened. The entire fruit is planted as a seed.



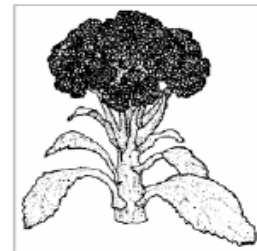
Beet

The leaf blades are dark green with reddish veins, and are attached to long reddish upright leaf stems that form a rosette at their base. The edible root is round, somewhat top-shaped and deep red in color, sometimes yellow. The seed is tan with a rough corn cob appearance, similar to chard.



Broccoli

The plants are cauliflower-like, bearing heads which are clusters of deep green flower buds. Heads are cut with a portion of the tender stalk before the buds open into tiny flowers. Leaves are similar to collards, but much smaller. Seeds are similar to cabbage.



Brussels Sprouts

The plants are upright with a single stalk thickly set with small, firm, cabbage-like heads. Leaves are similar to broccoli and cauliflower, but more circular in shape. Seeds are similar to cabbage.



Cabbage

Large, round, glossy leaves are cupped into large, round, sometimes pointed, firm heads. Color may be dark green, yellowish green or deep red. Leaf texture may be smooth or crinkled. Brownish-black seeds are round and about the size of bird-shot pellets.



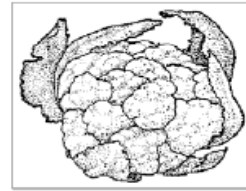
Carrot

Yellowish orange roots vary in shape from long cylindrical to short blunt. The leaves are deeply cut with a lacy appearance. Seeds are small, straw to brown in color, flat on one side and curved on the other, with 4 to 6 ridges on the curved side, similar to celery except much larger.



Cauliflower

Long, tapering, cabbage-like leaves surround a central, terminal, fleshy, creamy white, tightly-formed head similar to broccoli, though individual flower buds are not present. There are green-headed and purple headed varieties. Cauliflower seeds resemble those of cabbage.



Celery

Flat, notched, yellowish-green leaves are attached to crisp, fleshy, smooth-ribbed leaf stems and are joined at the base to form long cylindrical stalks. The striped seeds are very similar to carrot seeds, but much smaller.



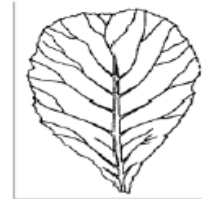
Cabbage, Chinese

Long, cylindrical or round upright heads are formed by tightly bunched leaves with large, fleshy midribs. The base of the head resembles celery and leaves are similar to mustard. Bok Choy is a non-heading type with several fleshy, white leaf stalks tipped with a glossy dark-green leaves. Seeds are round and cabbage-like.



Collards

The plant does not form a head. Glossy, blue-green, cabbage-like leaves are attached by slender stems to an upright, single, round stalk which may reach several feet in length. Seeds resemble those of cabbage.



Cucumber

The plant is vining with large, lobed, green, bristly leaves and long stems. Fruits are elongated, cylindrical, yellow-green to dark green and either spiny or smooth. Size is variable, depending on variety. The lemon cucumber is almost round and bright yellow in color. Flowers are small, yellow and somewhat cupped. A female flower has a tiny cucumber-like appendage which is the undeveloped ovary. Seeds are creamy-white, flat, buttonhole shaped, tapering at both ends and about 3 times longer than wide.



Eggplant

The plant is large, upright and branching. Leaves are broad, smooth and slightly fuzzy. Stems are prickly, especially near the leathery green cap at fruit attachment. Fruits are oblong to round and may be green, white, yellow, bronze, orange, purple or most commonly black. Some varieties have small (1-inch diameter) fruits, while most average about 1 pound. Flowers are small, somewhat star-shaped and lavender in color. Seeds are very similar to pepper seed but are smaller and darker in color.



Endive

The plant has upright to spreading growth similar to leaf lettuce but does not form a head. Leaves are curled, deeply cut and fringed, with white to pale green midribs. The broadleaf type is called escarole. Seeds are elongated, straight, and slender.



Garlic

The plant is bulbing and onion-like in appearance except for green leaves which are flat. Bulbs may be separated into sections (cloves) and have a distinct, pungent odor and white to purplish color.



Kale

The leaves are the same general size as collards, but with very frilled margins. Color is deep green and texture very coarse and crisp. Some ornamental varieties show colorful combinations of red, white, and green. Seeds are cabbage-like.



Leek

The plant is very similar to a large green onion. Leaves are smooth and flat and are arranged in a fan-like fashion spreading in 2 directions. Unlike garlic, there is very little bulb development. Seeds are black and onion like.



Mustard

The plant is erect, 1-3 feet tall, and leafy. Leaves may be elongated or broad with smooth margins or margins may be notched or curly. Texture is lighter than collards and midrib light green and not as fleshy as Swiss chard. Seeds are similar to cabbage but smaller.



Okra

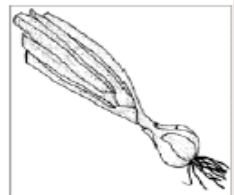
Fruit or pods are pointed at the blossom end, white to dark green, ribbed or smooth, spiny or spineless.

Leaves are broad, notched and fuzzy. Seeds are almost round and dark gray in color with a seed stem scar. Seeds are about buckshot size. Large conical-shaped, light-yellow flowers are violet at the petal base.



Onion

Onions grow as single plants or in bunches. Leaves are slender, dark green and tubular, become red, white, yellow or purple and thickened or bulbous at the base. The base varies from pencil size to round, oblong, top shaped or flat. Fibrous roots extend from the center of the base. Seeds are small and black resembling tiny chips of coal.



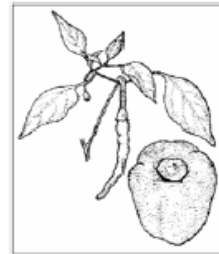
Parsley

The plant is low growing with dark green, curly or smooth foliage of soft, delicate texture. Leaves, which arise from a central crown, are celery-like except they are borne on very slender, green stems. One type has a long slender, white tap-root. Seeds are similar to carrot.



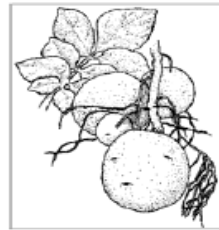
Pepper

The plants are much branched with glossy green (sometimes purple) leaves. Fruits are hollow pods with many white, flat, roundish seeds attached to the central core. There is much variation in size, shape (from long, thin to large, roundish), color (green, red, yellow) and taste (from mild to hot). Flowers are small (½-inch diameter) pale yellow to white, with the corolla tightly held by a green calyx.



Potato, Irish

The leaves are compound, soft green in color with a slightly rough texture. Edible tubers are oblong to round in shape, red, green or brownish in color and smooth skinned with slight indentions (eyes). Small (½- inch diameter) flowers range from white to purple. Fruits resemble tiny green tomatoes.



Potato, Sweet

The plant is a trailing vine with heart-shaped or deeply notched, glossy green leaves that may have a reddish tint. The edible roots vary in shape from long, slender to round with most being pointed at one or both ends. Root color may be cream, red, yellow, or purple. Flowers are typical morning-glory shape.



Radish

The edible roots are spherical or elongated, may be red, pink, white or black in color. A rosette of fuzzy green leaves on slender stems grows from the top of root. The seeds are off-round, rose-colored, very hard, about size of match head. Some of the large winter radishes may reach 20 pounds or more.



Rutabaga

The edible roots are smooth, larger than turnips, slightly oblong and white or pale yellow with or without purple at the top. The leaves are collard-like. Seeds are similar to cabbage.



Spinach

The plants are compact, upright to slightly spreading with tender dark green leaves forming a rosette. Leaves are glossy, may be smooth or crumpled and are usually pointed. Seeds are straw colored and similar in size to radish seed. Seed shape varies from round, smooth to prickly, pointed.



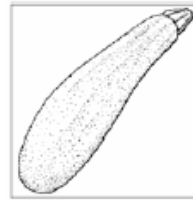
Squash, Butternut

Fruits are very firm with tough outer skin making them suitable for storage. The beige-yellow fruits average 1-3 pounds and have a hollow seed cavity. Fruits are usually bell-shaped, but sometimes blockyround. Tan seeds are flat with indistinct edges.



Squash, Zucchini

Fruits are thin-skinned with solid, crisp succulent interiors. There is no seed cavity. Fruits are elongated, somewhat larger at the blossom-end, and range in the color from dark green to bright yellow. Some are striped while others are solid color. The large, yellow flower blossoms are both male and female. While the zucchini grows on a bush, the stems may appear viny at times. Leaves are large, deeply notched, and show a mottling of light green on a darker green background. The white, flat seed has a double margin-ring, typical of all pepo types.



Sweet Corn

The plant is upright, often growing to a height of 8 feet or more. The 1-2 inch diameter stem has several internodes which are nearly smooth in the upper part, but somewhat grooved lower on the plant. Leaves, called "blades," are long, sharp-edged, pointed and covered with hairs on top. Ear shoots develop at the base of internodes. The ear (female flower) is wrapped with leaves and contains a slender "cob" covered with rows of kernels (seeds), each attached to a threadlike "silk." The male flowers are in the tassel at the top of the stalk. The seed kernel is plump and smooth when fresh, but may be hard and wrinkled when dried. Seed color varies from white and yellow to hues of red.



Tomato

The plants are succulent, fuzzy-stemmed, bushy or vining. Leaves are compound, green and soft-textured. Fruits vary in shape (round, pear, oblong); in color (red, pink, yellow, green, white); and in size (cherry size to 1 pound or more). The seed is small, fuzzy, tan in color and resembles eggplant and pepper seed. Flowers are small (½-inch diameter or less) with yellow open corolla attached to a green calyx.



Turnip

Both tops and roots are edible. Leaves are green and fuzzy, notched but not curly, and attached to slender succulent stems that often show purple coloration. Roots are globular or flat and all white or white with a purple top. The flesh is smooth, crisp and white. Seeds are cabbage-like. Turnips most closely resemble radish and mustard.



Watermelon

The plants are vines with deeply notched leaves and many tendrils. Fruits range in shape from oblong to round and vary greatly in size. Exterior color is light to dark green and may be striped or solid. Interior is white when immature, turning red, pink or yellow at maturity. Seeds are oval, flat and smooth varying in color from creamy white to speckled to black.

