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Specialty Vegetables in Texas



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SPECIALTY VEGETABLES IN TEXAS

Thomas D. Longbrake, Marvin L. Baker, Sam Cotner,
Jerry Parsons, Roland Roberts and Larry Stein*

What makes an unusual vegetable unusual? Nothing really makes a vegetable unusual — it's just that vegetables which are familiar to some people are totally strange to others. To someone living in New England, jicama may seem pretty eccentric, but to a resident of Mexico, it is the equivalent of the potato and to Hawaiians, taro or dasheen is the staple starch food. Or take chayote squash — Creole cooks call it mirliton, South Americans call it mango squash and Floridians call it a vegetable pear. These are all the same vegetable but with many names!



Amaranth
(Chinese Spinach)

Description. Amaranths are green, leafy vegetables and/or grain crops. Leaves of vegetable amaranths and seeds of grain amaranths are high in protein. More commonly known in the United States is the amaranth used as a bedding plant called Joseph's Coat. Amaranth varies greatly in foliage color, leaf shape and plant height. The cloverlike flowers are small but occur in such large numbers that their effect is outstanding.

Culture. Amaranths, both vegetable and grain types, are easy to grow. Order specific edible varieties of amaranth to use as greens. If you do not find *Amaranth gangeticus*, get one of the edible varieties. Some seedsmen promote their varieties as producing edible grain only, while other seedsmen promote their varieties for "greens" or leafy use. This warm season crop grows from 2 to 4 feet or more. The grain varieties are usually erect. Amaranth greens are grown like other green crops. They do well in hot, high light conditions, producing edible foliage in summer conditions. Plant 1/4 ounce of seed for 250 feet of bed to a depth of 1/2 inch or less and cover. Amaranths do best on sunny, raised beds. Thin plants to 6 inches apart. Plants respond to well fertilized soils and irrigation during hot summers.

Selection. Harvest greens 5 to 6 weeks after sowing. As with most greens crops, young succulent leaves are preferred for eating. Greens are tied in bunches and sold in cartons by the bunch or by the pound. Keep amaranth greens refrigerated or iced during shipment or storage.



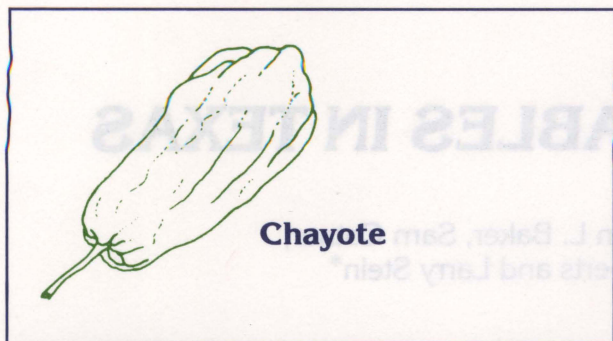
Celeriac
(Celery Root)

Description. This vegetable is cultivated for its root or base instead of for its stalk or leaves. It is a light brown, bulb-type root.

Culture. Celeriac is grown like celery during the cool season.

Selection. Harvest celeriac while small so it will be tender and less woody. Trim side roots and leaves and store in refrigeration at 32° F. with high humidity.

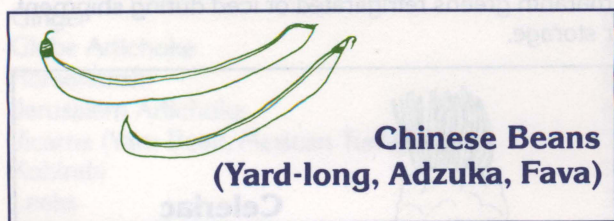
*Extension horticulturist (vegetables), Extension horticulturists, Extension horticulturists (vegetables) and Extension horticulturist, respectively, The Texas A&M University System.



Description. Also known as the vegetable pear or the mirliton, this vegetable is a member of the cucurbit family. Fruits, which are light green and pear shaped, are produced on vigorous growing vines that are cold sensitive.

Culture. The entire fruit is planted in the spring after all danger of frost. Space plants at least 8 to 10 feet apart. Trellis the vine to provide support for maximum production. Avoid heavy fertilization for excessive vine growth reduces yields. As with all cucurbits, male and female flowers are borne on the same plant requiring bees for pollination.

Selection. Fruit should be firm and free of bruises and other damage. For eating purposes, avoid fruit that has started to germinate as evidenced by the emergence of the young seedling from the broad end of the fruit. Like all cucurbits, chayotes shrivel badly if stored under dry conditions regardless of temperature. Place in container or plastic bag before refrigeration to maintain high humidity conditions. Ideal storage conditions are about 50° to 59° F. and 90 percent humidity. Chayotes undergo chilling injury below 50° F.



Description. Yard-long (Asparagus bean), *Vigna sesquipedalis*, pods may be 10 to 20 inches long, but customers prefer them 10 to 12 inches in length and pencil-sized. There are two kinds—red seeded and black seeded, with the black being preferred.

Culture. Yard-long beans are a pole bean related to blackeyed peas. They need support to produce long, straight pods. Plant seed 1/2 to 1 inch deep and 3 inches apart after soils have warmed in late spring. Place wire or twine supports in rows at seeding. Expect 8-foot tall vines.

Selection. Green pods are harvested in 50 to 60 days, or 70 days for dry harvest. For highest quality, pick daily and tie in bunches of 10 to 12 pods per bunch.

Description. Adzuki (Winged bean), *Phaseolus angularis*, pods are shorter, tannish green beans, borne in clusters. Plants form 2-foot high bushes. Mature pods have shiny, red, round beans.

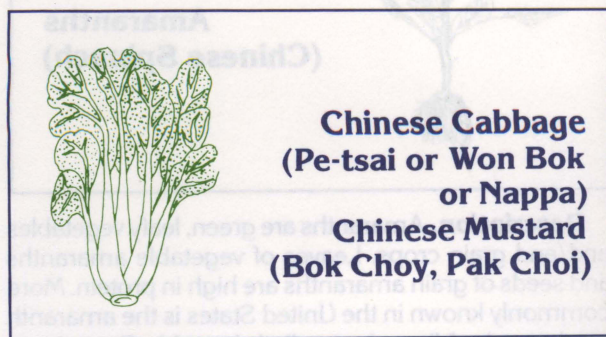
Culture. Plant seed in the spring in warm soils 1/2 to 1 inch deep, 2 to 3 inches apart with rows 30 to 40 inches apart. Plants prefer a pH range of 5.5 to 6.5 and require ample moisture.

Selection. Harvest green when pods begin to show seed development and continue at 5-day intervals. For dried beans, 120 days may be required. Dry beans are used as "bean sprouts."

Description. Fava bean (Dow Fu), *Ficia faba*, is not a true bean but is related to the pea or vetch. The plant is a 3- to 4-foot tall bush. Pods are large, 7 to 12 inches long, contain not more than five to seven large flat seeds and are similar to lima beans but more angular. Flowers are white; pods are light green.

Culture. Fava beans do best in moist, rich soil. Unlike green beans, they do not thrive in hot weather but like cool weather, even tolerating freezing temperatures. Seed in the fall for an early spring crop. Large seeds are planted 2 inches deep, 6 inches between plants on 40-inch row spacing. Germination takes 2 weeks. Plants respond to irrigation.

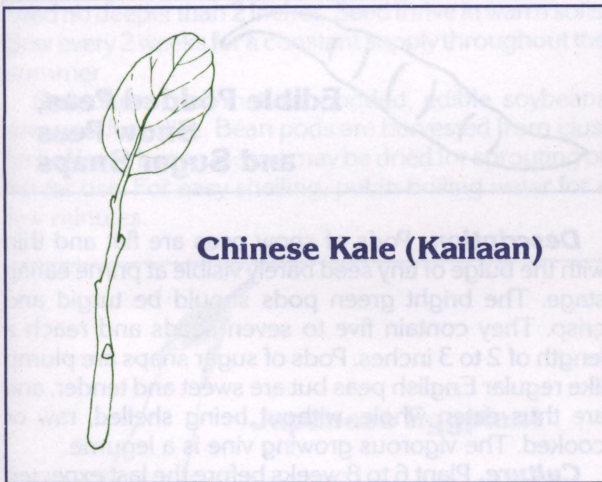
Selection. Fava beans mature in 65 days as a green bean and 90 to 100 days for dry beans. The green bean stage is harvested and handled as regular green beans and sold by the pound. Dried beans are stored and used during the off-season.



Description. Both vegetables are crucifers, related to cabbage and broccoli. The most common form of Chinese cabbage has a cylindrical tight head 4 inches thick and up to 18 inches long. Outer leaves are light green with a white midrib; inner leaves are creamy yellow. Chinese mustard has a loose head and rosette of dark green leaves which are oblong or oval with shiny dark green blades and thick white petioles.

Culture. Both are cool season crops. A spring crop can be grown from transplants set out in early spring. For the fall crop, sow Chinese cabbage seed 60 to 80 days before frost date and 50 to 60 days before frost for Chinese mustard. Well-drained, fertile, moist soil promotes the desirable rapid tender growth.

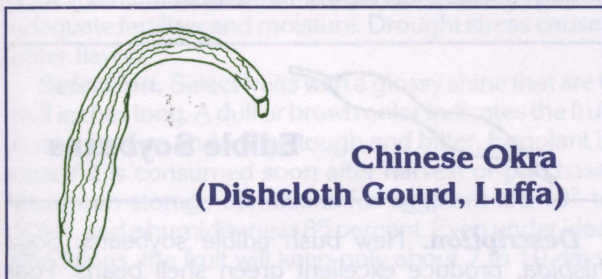
Selection. Quality is clean, crisp leaves and firm heads with no browning or spots on leaves. With bok choy, check center of the rosette to be sure it is free of decay. Wash, place head in plastic bag and refrigerate. Optimum storage conditions are 32° F. and 95 percent relative humidity.



Description. The edible flower stalk and terminal leaves with stems 7 to 9 inches long are used in oriental dishes.

Culture. This vegetable grows best in the cool weather of fall, winter and spring but tolerates warm temperatures into summer. Sow seed with two drills per row and thin later to three or four plants per foot. Plants will be ready for harvest in 60 to 70 days.

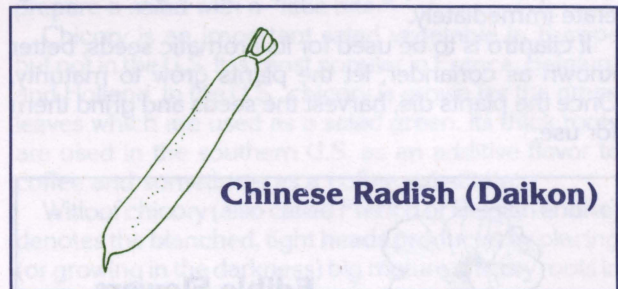
Selection. Well-fertilized plants have thickened stems 1/2 to 3/4 inch in diameter. Cut 7 to 9 inches long, leaving terminal leaves intact. Tie three or four stems in bunches, and store at 32° to 45° F. with 85 percent relative humidity to maintain freshness.



Description. Chinese okra is in the cucurbit family. Fruits are strongly ribbed, elongated and cylindrical shaped and may be more than a foot long. Plants are vigorous growing vines similar to cucumbers and melons. The smooth luffa which is without ribs is commonly known as dishcloth gourd or sponge gourd.

Culture. Plant seed in early spring after all danger of frost. Plant in hills 3 feet apart in rows at least 4 feet apart. For maximum production, trellis the plants. Cultural requirements are the same as for members of the cucurbit family. Fruit for consumption as a vegetable is ready to harvest in about 100 days. Allow another 30 days for the fruit to fully mature if it is to be used as a gourd or as a dishcloth.

Selection. Fruit should be 6 to 8 inches in length and tender if it is to be used as a vegetable. Completely dried fruits are desirable if the spongy inside contents are removed and utilized. Fresh fruit can be stored in refrigeration for several weeks; dried fruit can be kept indefinitely.



Description. Chinese radish is a cruciferous root crop used mainly as a cooked vegetable. It can also be eaten raw. Roots are large, often 2 to 4 inches in diameter and 6 to 20 inches long. There are three distinct shapes — spherical, oblong and cylindrical. Most of the commonly available Chinese radishes are white, but some are yellowish, green or black.

These radishes are generally marketed in bunches of three or four roots for the small variety and one to three roots for the larger variety, depending on size.

Culture. Culture is similar to the common radish, except that daikons are bigger and need more space and a longer growing season. A deep, loose, moist, fertile soil is required. Plant in late winter or early spring for spring and summer use and in July for fall harvest.

Selection. As with any root crop, look for Chinese radishes that are free of growth cracks and bruises with firm and crisp roots. Chinese radishes keep well in refrigeration if they are placed in a sealed container or plastic bag to maintain high humidity.

Since the pungent flavor of daikon is found primarily in the skin, they are sometimes peeled before cooking.



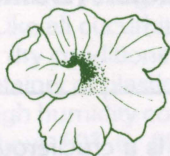
**Cilantro
(Chinese Parsley,
Coriander)**

Description. An annual herb belonging to the parsley family, cilantro has delicate fern-like foliage. Flat clusters of pinkish white flowers and aromatic seeds develop in late spring. Leaves have a unique flavor that is pleasing to many people.

Culture. Sow seed at the same time parsley would be sown in your growing area. Seed fall crops in August and spring crops in February. It needs full sun.

Selection. Cilantro is harvested 60 to 80 days after sowing for use as greens. The inner-most leaf whorls are selected and tied in bunches of 10 to 12. Since cilantro is perishable, place it in plastic bags and refrigerate immediately.

If cilantro is to be used for its aromatic seeds, better known as coriander, let the plants grow to maturity. Once the plants die, harvest the seeds and grind them for use.



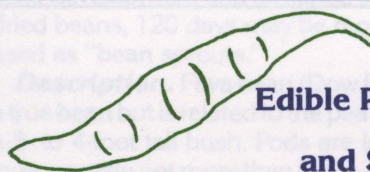
Edible Flowers

Description. Calendulas (pot-marigolds), carnations (pinks), chamomile, chrysanthemums, dandelions, daylilies, gardenias, geraniums, gladiolus, lavenders, lilies, nasturtiums, pansies, peonies, primroses, roses, squash blossoms, sweet violets and yucca blossoms have different edible portions that are nutritious and tasty. Some flowers are not edible, but many are and can be chosen for their desirable uses. Buds, flowers, leaves, stems and roots are selected from designated edible varieties.

Culture. Select common edible flower varieties. Follow all planting and fertilization practices used for garden flowers. Use organic pesticide practices because of label restrictions. Use separate growing areas for edible flowers, and do not plant other annuals or perennials in these areas because pesticides cannot be used legally.

Selection. Fresh, quality, whole flowers of gladiolus, roses, squash, pansies and lilies are now sold at

farmer's markets as edible flowers along with nasturtiums and yucca blossoms. When portions of edible flowers are desired, pull petals or edible portions from fresh flowers and snip off the petals from the base of the flower. Remember to always wash flowers thoroughly and make certain all chemical or organic pesticide has been removed. Give them a gentle bath in salt water and then dip the petals in ice water to perk them up. Drain on paper towels. For later marketing, petals and whole flowers may be stored a short time in plastic bags in refrigeration. Freeze whole small flowers in ice rings or cubes.

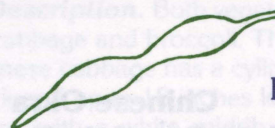


**Edible Podded Peas,
Snow Peas
and Sugar Snaps**

Description. Pods of snow peas are flat and thin with the bulge of tiny seed barely visible at prime eating stage. The bright green pods should be turgid and crisp. They contain five to seven seeds and reach a length of 2 to 3 inches. Pods of sugar snaps are plump like regular English peas but are sweet and tender, and are thus eaten whole, without being shelled, raw or cooked. The vigorous growing vine is a legume.

Culture. Plant 6 to 8 weeks before the last expected spring killing frost. Peas grow best in well-drained sandy soil. Plant seed in single rows about 1 inch deep with seed spaced about 5 inches apart. Trellis the plants to support the vines and keep pods from touching the soil. Maintain good soil moisture during bloom, pod set and pod fill for tenderest, sweetest pods.

Selection. Purchase smooth, thin, crisp pods of snow peas with little or no seed enlargement. Fresh pods are turgid and shiny, not wilted. Sugar snap pods are best when crisp, tender and plump but with little or no string along the suture (top of pod leading to the little point). Wilted or tough pods are not sweet and crisp inside. Edible podded peas can be stored for up to 2 weeks in refrigeration at 40° F. Wash, drain and place pods in plastic bags before refrigerating.



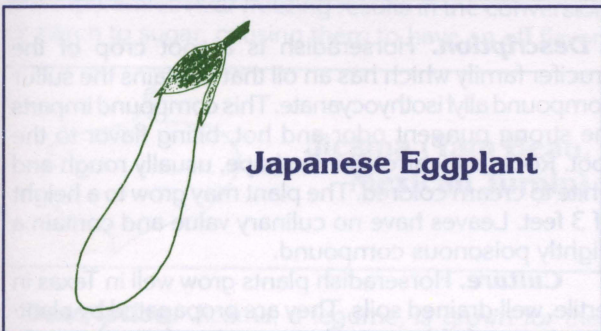
Edible Soybeans

Description. New bush edible soybeans, *Soya hispida*, produce excellent green shell beans. Pods

grow in large clusters of large beans, usually containing three beans in a pod. Edible soybeans are high in protein, with some having as much as 39 percent protein. Commercially produced soybeans do not have the same quality as varieties which are considered to be edible.

Culture. Sow in late spring for outdoor cropping and in winter to early spring for greenhouse growing. Soybeans are a legume and can be inoculated with a special nitrogen-fixing bacteria (takes nitrogen from the air) that is dusted on the seed before planting. In the greenhouse, use a population density of 25 plants per 9 square feet and three or four plants per foot of row. Plant seed no deeper than 2 inches. Seed thrive in warm soils. Sow every 2 weeks for a constant supply throughout the summer.

Selection. Half-mature, podded, edible soybeans are used for relish. Bean pods are harvested from clusters of large beans. Beans may be dried for sprouting or winter use. For easy shelling, put in boiling water for a few minutes.

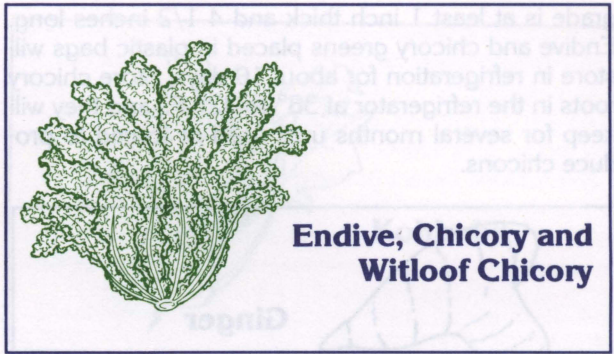


Japanese Eggplant

Description. This miniature model of the eggplant is really just that—a miniature eggplant. In flavor, texture and cooking qualities, the Japanese eggplant is the same as its larger cousin yet the fruit is longer and more slender. Fruits are most commonly purple but may also be white or green and are produced on vigorous-growing plants that often are 4 feet tall.

Culture. The eggplant is a Solanaceous plant like a tomato and responds to the same basic cultural care. Set plants in the garden in early spring after all danger of frost. Maintain the plants in a vigorous growth state with adequate fertilizer and moisture. Drought stress causes bitter flavor.

Selection. Select fruits with a glossy shine that are 6 to 8 inches long. A dull or brown color indicates the fruit is over mature and will be tough and bitter. Eggplant is best if it is consumed soon after harvest or purchase. Optimum storage conditions for eggplant are 40° to 50° F. and a humidity near 85 percent. Even under ideal conditions, the fruit will keep only about 7 to 10 days.



Endive, Chicory and Witloof Chicory

Description. Endive, *Cichorium endiva*, and chicory, *Cichorium intybus*, are members of the Composite family. Endive has two forms — the narrow leaved curly type and the broadleaved one which is often called escarole. The outside leaves of an endive head are green and bitter. Inner leaves are light green to creamy white and are milder flavored. Both types are used in salad mixtures with blander-flavored lettuce to prepare a salad with a “little bite.”

Chicory is an important salad vegetable in Europe but not in the U.S. It is most popular in France, Belgium and Holland. In the U.S., chicory is grown for the green leaves which are used as a salad green. Its thick roots are used in the southern U.S. as an additive flavor to coffee and sometimes as a coffee substitute.

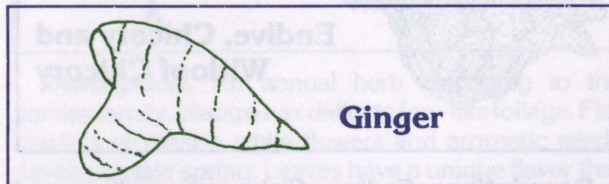
Witloof chicory (also called French or Belgian endive) denotes the blanched, tight heads produced by placing (or growing in the darkness) big mature chicory roots in forcing structures.

Culture. Endive is grown like lettuce. Seed is sown in early spring in the garden. Start plants in the greenhouse and transplant to the garden for an extra early crop. Chicory for greens is grown much the same way. For chicory greens, plant seed in early spring and the leaves are ready for harvesting in about 60 days. The greens are often blanched by tying the leaves together when they are about 10 inches long. Roots for producing Witloof chicory are grown this way. Plant seed after danger of frost in the spring. Harvest the roots in the fall before hard freezing occurs. Remove the foliage and stack the roots in the field. After they are exposed to cold, plant the roots upright in moist sand and force them to grow a new head by keeping the air temperature near 64° F.

Selection. Endive heads should be clean, free of browning, crisp and bright green. Chicory greens resemble dandelion leaves and should be fresh and free of brown streaks or spots. Young, tender leaves are preferred over older, tougher leaves. Chicory heads (called chicons) should be pure white and very tight with only the outer two leaves visible. The chicon size for highest

6 Specialty Vegetables

grade is at least 1 inch thick and 4 1/2 inches long. Endive and chicory greens placed in plastic bags will store in refrigeration for about 10 days. Store chicory roots in the refrigerator at 38° to 42° F., and they will keep for several months until used or forced to produce chicons.



Description. Ginger is a reed-like herb that is grown for its pungent, spicy underground stems or rhizomes. The edible portion is the rhizome which is rough and knotty in appearance.

Culture. Ginger is propagated by planting pieces of the underground stem or rhizome in the early spring. Ginger thrives best in the tropics and in the warmer regions of the temperate zone. Plants thrive in a loose, loamy soil that is high in organic matter. After planting, water sparingly until plants are well developed. In late summer the plants will show signs of maturing such as yellowing foliage and slowness in growth. Harvest by digging up the entire root.

Selection. Ginger roots should be free of bruises and light brown to cream colored. Harvest ginger roots at any stage of maturity because root size is not important. Store fresh ginger in a sealed plastic bag in refrigeration where it will keep several weeks. It can also be frozen for long term storage.

In Southeastern Asia, the leafstalks are used as a food flavoring. The bright canary yellow leafstalks are tied in two to four "hands" for marketing.

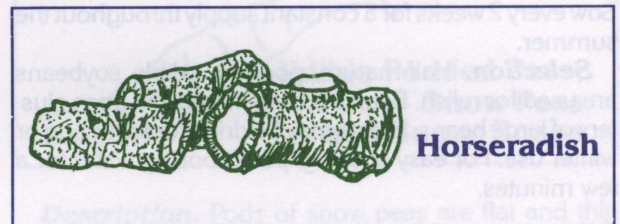
The fresh roots are used in the manufacture of ginger ale.



Description. The globe artichoke is a member of the Composite family, closely related to the thistle. The edible part is from the immature flower bud. If the buds or "globes" are not harvested, 6-inch bluish, thistle-like flower heads develop. The edible portion of the "globe" is composed of the fleshy bases of the flower bracts and the receptacle to which the bracts are attached, known as the "heart."

Culture. The globe artichoke is not grown commercially in Texas, but some home gardeners along the Texas coast grow it. It is grown from crown divisions of parent plants which are planted in rows 5 feet apart with at least 3 feet between plants. First harvest occurs approximately 1 year after planting.

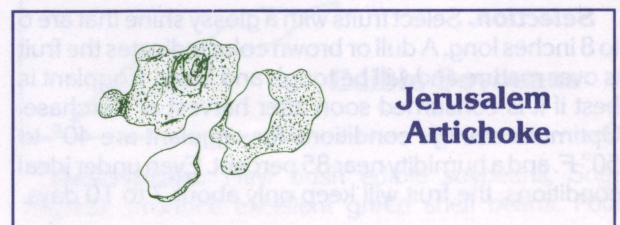
Selection. Select globes that are dark green, heavy for their size and free of blemishes. The globe should be tight and compact. Avoid those that are beginning to open. Good quality globe artichokes can be stored in refrigeration for about 2 weeks without loss of quality. Highest quality is maintained by storing near 32° F. with over 90 percent relative humidity.



Description. Horseradish is a root crop of the crucifer family which has an oil that contains the sulfur compound allyl isothiocyanate. This compound imparts the strong pungent odor and hot, biting flavor to the root. Roots are carrot-like in shape, usually rough and white to cream colored. The plant may grow to a height of 3 feet. Leaves have no culinary value and contain a slightly poisonous compound.

Culture. Horseradish plants grow well in Texas in fertile, well-drained soils. They are propagated by planting pieces of side roots that are taken from the main root following harvest and stored in moist sand in a cool cellar through the winter. Plant the roots in late winter or early spring. Horseradish is difficult to eradicate and can become a weed once it is established. New plants regenerate from root bits left in the soil. Horseradish is harvested in late fall in most areas of East Texas.

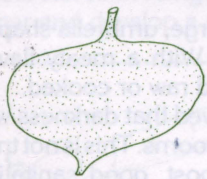
Selection. Look for roots that are free of blemishes and bruises and are creamy white colored. Roots should be fairly turgid and firm. Horseradish is best if utilized shortly after harvesting. It can be stored for an extended period in refrigeration if placed in plastic bags.



Description. The Jerusalem artichoke is in no way related to the globe artichoke. It is a member of the Sunflower family and produces a similar flower. Plants may grow to a height of 6 to 8 feet. It is a perennial living from year to year. The edible tubers resemble potatoes but are rough and knobby.

Culture. The Jerusalem artichoke is widely grown in Texas gardens. It is propagated by spring planting of tubers. Harvest the tubers in the fall for highest quality and refrigerate them immediately. Tubers left in the ground over winter will retain high eating quality for several months without developing sugar. Plants freeze but will grow back in the spring. It can rapidly become a weed.

Selection. Look for tubers that are free of bruises and cracks. Avoid those that are wilted and lack a firm, solid texture. Jerusalem artichoke tubers do not store as well as potatoes. Where the ground does not freeze in winter, it is best to leave them in the ground and harvest as needed. Place the ones you buy in a sealed plastic bag and store them in refrigeration. Long term storage at temperatures near freezing results in the conversion of starch to sugar, causing them to have an off flavor.



**Jicama (Yam Bean,
Mexican Turnip)**

Description. Jicama, a legume, is grown for the large tuberous roots which are eaten raw or cooked and are used as a source of starch. The jicama plant is a vine which grows to a length of 20 feet or more. Roots are light brown and may weigh up to 50 pounds. Most of those on the market weigh 3 to 5 pounds.

Culture. Jicamas are actually perennials and produce their large roots after several years of growth. They are commonly found in frost-free regions. In Texas, plant seed in the early spring and harvest small tubers before the first killing frost.

The root or tuber initiation and development are dependent on photoperiod or length of day. Plants exposed to relatively long days of 14 to 15 hours do not produce tubers. Areas with mild fall or winter temperatures are best suited for yam bean production.

Selection. Jicamas are suitable for consumption at any growth stage (size). Look for well formed tubers that appear fresh and are free of cracks and bruises. Jicamas, like most other root crops, store for relatively long periods in refrigeration. However, conversion of starch to sugar occurs if stored for excessive periods and should be avoided.



Kohlrabi

Description. The kohlrabi is a member of the cabbage (crucifer or mustard) family. The edible part is the enlarged stem from which leaves develop. The enlarged stem is best harvested as soon as it grows to a diameter of 2 to 3 inches. Kohlrabi may be white, green or purple. Leaves of young plants may be used like spinach or mustard greens.

Culture. Kohlrabi is grown as a cool season vegetable and should be planted in very early spring or in early fall. Plant seeds about 1/4 inch deep in rows about 2 feet apart and thin to 4 inches apart in the row. Ample soil moisture and high soil fertility are necessary for rapid growth of quality kohlrabi. Kohlrabi is ready to harvest 30 to 40 days from the date seed is sown.

Selection. Look for fresh kohlrabi bulbs that are less than 3 inches in diameter. Leaf stems should be succulent and tender. Large kohlrabi can be woody and tough. With the leaf stems removed, kohlrabi can be stored in refrigeration for several weeks. Storage life can be extended if kohlrabies are placed in sealed plastic bags.

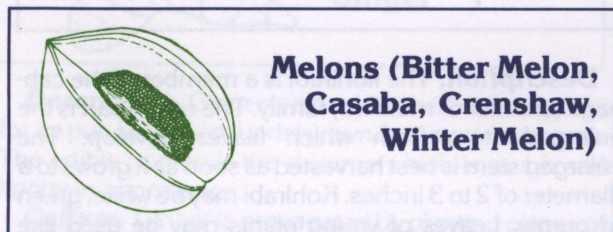


Leeks

Description. The leek is a member of the onion family, but unlike the onion, it does not form a bulb. The thick, fleshy stalk is about the same diameter at the base and resembles a large green onion without a bulb. Leaves are flattened like those of garlic.

Culture. Leeks are grown like onions. Plant seeds or transplants during late fall or early winter. Set plants out in early spring. When they are about the size of a pencil, till up the soil around the plants to make the edible portion longer and whiter.

Selection. Select or harvest leeks that are about 1 inch in diameter and free from blemishes. Tops should be healthy looking and free of discoloration. Leeks keep for several weeks if maintained at temperatures near 35°F. and a relative humidity near 90 percent.



Melons (Bitter Melon, Casaba, Crenshaw, Winter Melon)

Description. The bitter melon, a member of the squash family, has a taste similar to bland squash but more sour. It's shaped like a cucumber with light green skin but heavily warted. It is widely grown in tropical countries where young fruits are used as cucumbers.

Culture. It is similar to cantaloupe.

Selection. The flesh is silvery green with pale brown seeds when ripe.

Description. The casaba is a winter melon variety with a globular shape and pointed at the stem end. The rind is chartreuse-yellow with longitudinal wrinkles but without netting. Flesh is creamy white and juicy. It averages 4 to 7 pounds.

Culture. It is similar to cantaloupe.

Selection. Flesh should be soft, creamy white, sweet and juicy. Ripeness is indicated by a yellow rind color and slight softening at the blossom end.

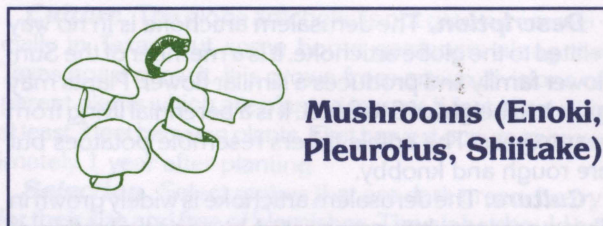
Description. The crenshaw has a rich, golden-pink flesh and is globe-shaped and pointed. It has a slightly wrinkled stem end and averages 4 to 6 pounds. The skin is golden at the peak of ripeness.

Culture. It is similar to cantaloupe.

Selection. Melons are round at the base coming to a point at the stem end. They have a gold and green rind that is smooth with no netting and little ribbing. When ripe, the rind begins to soften at the large end. At full maturity the skin turns golden, and the fruit produces a rich melon aroma.

Description. The winter melon, grown for its thick white flesh, is used for Chinese-style soup and cooking. There are two types—round and oblong. Fruit range from 8 to 12 pounds.

Culture. This warm weather, vining crop is grown as watermelon.



Mushrooms (Enoki, Pleurotus, Shiitake)

Description. The popularity of different species and varieties of mushrooms has increased in the past few years. The most popular variety, *Agaricus bisporus*, has three different strains. All are similar in holding quality and shelf life, differing basically in color. White, off-white and dark brown are the common colors. White mushrooms dominate the fresh market. Other mushroom varieties whose popularity is increasing include enoki, pleurotus and shiitake.

Enoki mushrooms are creamy white with long slender stems that are topped with small round caps. They are mild flavored mushrooms with a slightly sweet taste and can be used fresh or cooked.

Pleurotus mushrooms, also known as oyster mushrooms, are grayish brown with a delicate flavor and texture.

The shiitake mushroom is a large, umbrella-shaped mushroom that is dark brown. With a meaty flavor, shiitake mushrooms can be used raw or cooked.

Culture. It was formerly believed that darkness was required for growing good mushrooms. This is not true; mushrooms need proper compost, good sanitation and, most of all, a constant and suitable temperature with protection against drafts. The climate in the U.S. is not suitable for the commercial production of mushrooms out-of-doors. Therefore they are grown in natural caves or cultured in carefully designed windowless buildings in which temperature, humidity and ventilation are precisely controlled.

Oyster and shiitake mushrooms are grown on oak or elm logs by placing inoculated wood plugs into holes drilled at 4- to 6-inch intervals. Incubation takes 3 to 5 months before the logs sprout edible mushrooms.

The more common white mushroom is grown in sterilized compost which has been specially mixed and inoculated with spores.

Selection. Freshness, color and shape are the three points generally considered when selecting mushrooms. Avoid withered mushrooms as this is a sign of age. Mushrooms which look bright and attractive in the store can be refrigerated for 4 to 5 days with little effect. All mushrooms, however, will eventually oxidize and turn dark. Truffles are related to the mushroom but are bulbous and unimpressive looking. They are used in small quantities to flavor a variety of dishes.



Parsnips

Description. Parsnip is a cold-hardy biennial of the parsley family, grown for the edible root. The cream-colored roots grow to 3 inches in diameter, are carrot-shaped and 6 to 15 inches long depending upon the variety.

Culture. Parsnips require the same basic cultural care as do carrots, including deep, sandy loam or loam soil that is fertile. Best quality occurs when harvested after a hard killing frost. In May or June plant seed in rows about 18 inches apart and thin seedlings to 4 to 6 inches apart in the row.

Selection. Select roots that are free of cracks and blemishes and 1 1/2 to 2 inches thick and 8 to 12 inches long. Roots that are too big and old are woody and should be avoided. Harvest 2 weeks ahead of the time you expect to eat them and refrigerate the roots. Roots stored in refrigeration will convert their starch to sugar and develop a sweeter flavor.



Pigeon Peas

Description. Pigeon peas, which are different from sugar peas, are commercially important in India. Pigeon pea varieties are classified as tree-type, tall and dwarf. New hybrids are similar in height to Southern peas and beans. Pigeon peas must be grown as an annual in most parts of the U.S. since plants are killed by freezing temperatures. The plant is a vigorous, drought-tolerant legume which yields large pods that are easily harvested. This pea is a heavy bearer, yielding sweet-tasting peas. It is suited for early summer planting and grows under hot conditions.

Culture. Culture for pigeon peas is similar to Southern peas and edible soybeans. Plant seed 3/4 to 1 inch deep in late spring after soil temperatures have risen. Place seed 3 to 4 inches apart on raised beds which are 40 inches apart. It is a long season crop requiring approximately 140 days from seeding to the beginning of harvest.

Selection. The condition of the pod is the key to pigeon pea quality. Avoid pigeon peas with poor coloring; a yellowish color on fresh pigeon peas indicates damage or rapid aging. Poor quality pigeon peas are

tough and lack the characteristic sweet flavor. Most are harvested in the dry stage and marketed as dried peas.

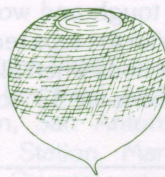


Rhubarb

Description. Rhubarb is grown for its tasty leaf petioles. Leaves are large and somewhat heart-shaped, and the plant may grow to a height of several feet. It is a perennial (comes back after winter-kill), and the young, tender petioles are harvested in the early spring. The leaf blades are cut to within an inch of the petiole tip at harvest, so only a small fraction of the leaf is available in the retail market.

Culture. Rhubarb does not grow well in any area of Texas. For good growth it requires moist, cool summers and winters severe enough to freeze the ground to a depth of several inches. An unknown variety with large green petioles thrives in the Panhandle north of Amarillo.

Selection. Select petioles that are bright pink, crisp and free of disease or insect damage. Young, dark pink, smaller diameter petioles are sweeter and more tender than thick, long green ones. Cut all the leaf blade from the leaf stem, and they will keep well in refrigeration for about 2 to 3 weeks in sealed plastic bags.

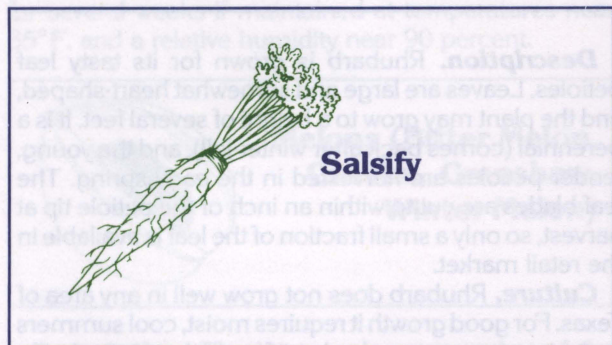


Rutabaga

Description. The rutabaga is very similar to the turnip except that it generally has yellowish flesh and a more dense tap root with more side shoots. They are usually harvested at a larger bulb size. Unlike the turnip, the rutabaga has smooth, waxy leaves.

Culture. Rutabagas require the same growing conditions as the turnip—cool conditions for rapid growth and good quality. Plant in the spring as soon as the ground can be worked. In the fall, multiple plantings can be made but should be stopped for the rutabaga root to form before extremely cold weather occurs. Rutabagas do better in the fall than in the spring because of the longer time needed to mature—about 30 to 45 days longer than turnips.

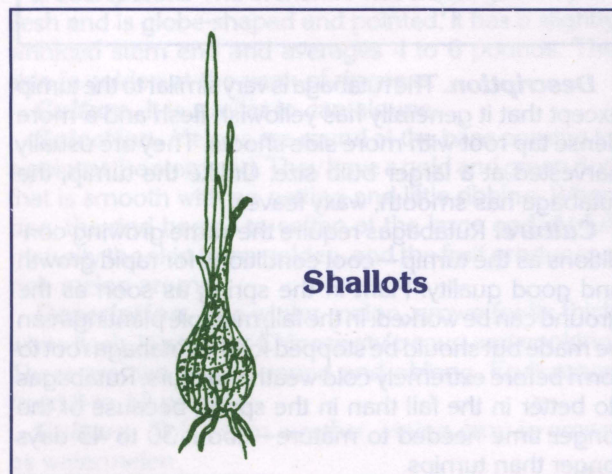
Selection. Mature rutabaga roots should be 4 to 6 inches in diameter and free of bruises and blemishes. Commercially grown roots are often waxed for storage purposes. Rutabagas are seldom sold with tops. If stored between 32° and 35° F. and at a humidity near 90 percent rutabagas will keep for 4 to 6 months. Waxed roots keep under refrigerated conditions for 1 to 2 months.



Description. Salsify is called oyster plant because of its faint oyster-like flavor. It is grown for its edible root which is white, long and slender often reaching a length of 10 to 12 inches. Young shoots or leaves are often called "chards" and are field blanched and eaten in salads.

Culture. Plant salsify from seed in early spring and harvest after the first hard freeze in the fall. Adequate moisture and fertility during the growing season are necessary if high quality roots are to be produced.

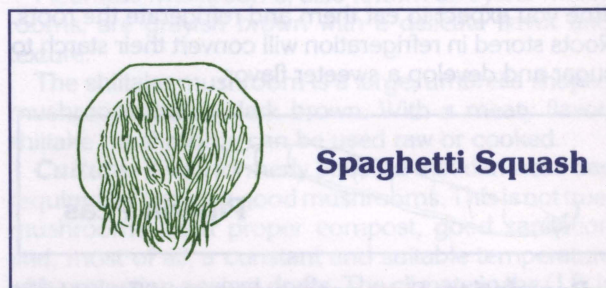
Selection. Select roots that are tender and free of defects. Over mature roots are tough and woody so avoid those that are over-sized. With the tops removed, salsify roots keep for extended periods when placed in refrigeration. Ideal storage conditions are 33° to 35° F. and 90 percent humidity.



Description. Considered to be the gourmet member of the onion family because of its mild, delicate flavor, shallots are very similar to green onions but develop in clusters of small bulbs rather than as individual onions. Shallot bulbs are small, generally elongated and have a distinctively different flavor and odor as compared to onions.

Culture. Shallots are grown similar to onions. Planting is usually done in the fall or early spring. Plant small bulbs about 6 inches apart leaving the growing point exposed above the surface of the ground. Maintain adequate fertility and moisture conditions during plant growth. Harvest in early summer when the leaves turn brown. Save some bulbs for the next season's garden.

Selection. Look for bulbs that are firm and free of rot and bruises. Shallots with yellow skin have a strong flavor. If green shallots are desired, select those that have strong, disease-free tops and healthy stalks. Dry shallot bulbs store well in ventilated, cool but dry areas. Store green shallots in refrigeration and use within about 2 weeks.



Description. The cylindrical fruit are 4 to 5 inches in diameter and 8 to 9 inches long with rounded ends. The rind is hard and ivory colored at maturity. The stringy flesh resembles spaghetti, when scooped out of a cooked fruit, and has a nutty flavor.

Culture. The spaghetti squash is in the cucurbit family. It requires fertile, well-drained warm soil. Cultural requirements are basically the same as for all vine crops. Plant two seeds in groups about 4 feet apart in rows about 8 feet apart or in groups of three on 8-foot X 8-foot hills. Fruits mature on vigorous vines about 90 days after seeding.

Selection. Purchase fruit with a hard rind, free of bruises and heavy for their size. Mature fruit are uniformly ivory-yellow and weigh 2 to 3 pounds. Cure freshly harvested mature fruit at 80° to 86° F. and 80 percent relative humidity for 10 days. Store cured spaghetti squash at 50° to 60° F. and a humidity of near 60 percent. If the stem is loosely attached when fruit is purchased, remove it to allow the injured area to heal.

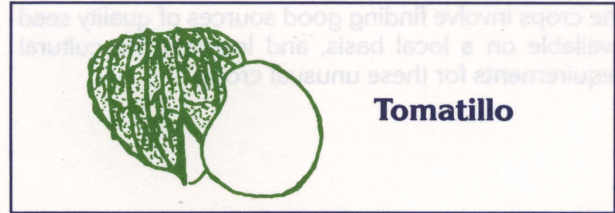


Taro

Description. Taro, the staple food of the Pacific, is a plant grown for its large tubers which are extremely nutritious. Its most common use is in the form of poi, which is made by boiling or steaming the taro root and pounding it into a paste. The starch grains in taro are the smallest in any plant, making them readily digestible.

Culture. Taro is a bog plant, such as the water iris, and should have no more than 3 to 6 inches of water above its soil line.

Selection. Harvest the roots after the foliage dies in the fall. The entire tuber should be very firm. If most of the roots are to be eaten, save the small offsets for next spring's plants. To store in cold climates, place the offsets or pots with roots on their sides in a cool, moist, shady place. It is important not to let the roots dry.



Tomatillo

Description. The tomatillo (toe-ma-tea-o) is of Mexican origin and has been introduced into the United States. It now grows everywhere in the Western Hemisphere and is common in Texas gardens. The husk tomato plant produces an edible fruit enclosed in a thick husk. The husk is brown and the fruit yellowish when it is ripe. Plants grow to a height of 3 to 4 feet.

Culture. The husk tomato has the same cultural requirements as the tomato: fertile soil, ample soil moisture and a long, warm growing season. Plant in full sunlight after all danger of frost. Space plants about 18 inches apart in rows 3 feet apart. Mature fruit are produced in about 90 days.

Selection. The condition of the "husk" is a good indication of the freshness of the fruit. The husk should be light brown and fresh looking, not shriveled and dried. Fruit should be firm and free of defects. Fresh, ripe husk tomatoes keep under refrigeration for about 2 weeks. If longer storage is desired, remove husks and place ripe fruit in sealed plastic bags in the refrigerator. They may also be frozen whole or sliced.

SUMMARY

Numerous fruits and vegetables introduced in recent years were once exotic. Because of their acceptance, however, many have become specialty items and a few have even entered the commodity classification because of their adoption by chefs and the public.

The national development of the Oriental fast food restaurants has created a real demand for a new series of crops such as napa cabbage, pak-choi, bamboo shoots, water chestnuts, daikon radish and many more crops previously unknown to the average American consumer or farmer.

Another factor which has influenced the public demand for "exotic" fruits and vegetables is the rapid increase in numbers of U.S. travelers to the Orient, mainly Japan, China, Hong Kong, Singapore, Indonesia, India and more recently into Korea.

Perhaps a greater cause for the boom in demand for Oriental cuisine is the immigration to the U.S. of whole families from Japan, China, Singapore, India, Vietnam and other countries. These immigrants have settled

beyond the West Coast, where the major Oriental population has lived, and are settling in places such as Houston, San Antonio, Dallas, Austin and Bryan/College Station. Many of these immigrants, who operate Oriental restaurants, now demand the proper variety of ingredients they were accustomed to using in their native country.

Some of the categories of fresh vegetables and a few examples of each are:

Roots, bulbs and tubers - celeriac, daikon, ginger root, jicama, leek and shallot

Legumes - bean sprouts, chinese longbean, fava bean and snow peas

Leafy vegetables - bok-choy, flowers, kohlrabi, napa, parsley, radicchio and watercress

Fruiting vegetables - bitter cucumber, winter melon, chayote, tomatillos and water chestnut

Herbs - basil, caraway, chives, cilantro, epazote, marjoram, sage and thyme.

The challenges facing growers to produce many of

the crops involve finding good sources of quality seed available on a local basis, and learning the cultural requirements for these unusual crops.

This publication includes what is currently known about these vegetables, and then to add to that knowledge as new research information is revealed.

Description: The tomato (*Lycopersicon*) is a fruit of the nightshade family and has been introduced into the United States. It now grows everywhere in the Western Hemisphere and is common in every garden. The fruit of the tomato plant produces an edible fruit enclosed in a thick husk. The husk is brown and the fruit yellowish when it is ripe. Plants grow to a height of 3 to 4 feet.

Culture: The husk tomato has the same cultural requirements as the tomato. Fertile soil, ample soil moisture and a long warm growing season. Plant in full sunlight after all danger of frost. Space plants about 18 inches apart in rows 3 feet apart. Mature fruit are produced in about 90 days.

Selection: The condition of the husk is a good indicator of ripeness of the fruit. The husk should be light brown and have a leathery, not papery, and hard fruit should be firm and free of defects. Fruit that are soft and have a leathery husk are not suitable for storage. If longer storage is desired, remove husks and store the fruit in cool places. Husks will rot and the fruit will be lost. Husks should be removed when the fruit is ripe and the husk is leathery.

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Some of the varieties of fresh vegetables and a few examples of each are:

- Asparagus - green, white, purple
- Artichoke - globe, French
- Bean sprout - Chinese, French
- Broccoli - Italian, Calabrese
- Brussels sprout - Belgian
- Cauliflower - Italian, Romanesco
- Chicory - French, Belgian
- Chokeberry - Chinese
- Chrysanthemum - Japanese
- Chinese cabbage - Napa, Bok Choy
- Chinese eggplant - Japanese
- Chinese radish - Daikon, Mooli
- Chinese water chestnut - Chinese
- Chinese yam - Chinese
- Chives - Spanish
- Chives - Chinese
- Chives - Japanese
- Chives - Korean
- Chives - Mexican
- Chives - Thai
- Chives - Vietnamese
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Educational programs conducted by the Texas Agricultural Extension Service serve people of all ages regardless of socioeconomic level, race, color, sex, religion, handicap or national origin.

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