

Asian Vegetables

U.S. demand for ethnic vegetables is increasing rapidly — from a growing ethnic Asian population and from health-conscious consumers seeking variety.

Asian vegetables are those that have originated from East Asia (China, Japan, and Korea) and Southeast Asia (Indonesia, Laos, the Philippines, Singapore, Thailand, Vietnam, etc.). Most Asian vegetables are not well-known to American farmers, because they are typically cultivated by the Asian growers exclusively for Asian-Americans. However, some of these Asian vegetables may be considered as options for Midwest producers.

The information below should be considered an introduction to Asian vegetables. More detailed information can be found in the resources section. General pest management recommendations for the crop families described below can be found in the corresponding crop chapters in this Guide. Although not all of the Asian vegetable crops mentioned in this chapter will be associated with pesticides in the crop chapters of this guide, more detailed information can be found on the pesticide label.

Marketing

Growers might consider Asian vegetables in double crop situations (such as following a wheat or early cabbage or sweet corn crop). Growers who want to diversify their farming operations by including Asian vegetables need to be very cautious before beginning production. Marketing information for Asian crops is not widely published. Since Asian crops are niche items, only specialized produce companies deal in them. Most of these buyers deal with restaurants, some chain stores, and specialty food stores.

Do your homework. Establish markets and buyers before buying any seed. Calculate budgets and collect economic data on any crop to determine its profit potential. And remember that all Asian crops are very labor intensive, so you will need a strong and dependable labor force for timely harvest and proper cultural management.

Common Asian Vegetables

Asian vegetables have different names in different languages. You must properly identify the crop to market it properly and to select the appropriate pest control measures.

Cole Crops and Brassica Leafy Greens

Includes Chinese cabbage (Napa cabbage and bok choy), daikon radish.

Chinese Cabbage (Napa cabbage and bok choy): Chinese cabbage has been grown in Asia since the 5th century. Chinese cabbage is a term applied to a wide range of types and varieties. The main types and varieties of Chinese cabbage are:

Group I: Napa cabbage, *Brassica campestris*, is commonly called the pe-tsai group. Its common names also include celery cabbage, Chinese white cabbage, Peking cabbage, pe-tsai, won bok, nappa (Japanese), hakusai (Japanese), pao, and hsin pei tsai. Napa cabbage includes broadleafed, compact-heading varieties of which there are two forms, Chihili and Che-foo.

Chihili forms of Napa cabbage form a cylindrical head 18 inches long and 6 inches in diameter, with an erect, upright growing habit. Some of the varieties of this form are Chihili, Michihli, Market Pride, Shantung, and Shaho Tsai.

Che-foo types form a compact, round head of green-bladed, white petioled leaves. Some varieties in this group are Che-foo, Tropical Pride, and Oriental King.

Group II: Bok choy, *Brassica campestris* is sometimes called *Brassica chinensis*. The most commonly accepted designations are bok choy or pak choy. Many refer to it as Chinese mustard.

Bok choy is a nonheading form of Chinese cabbage, with several thick white leafstalks. The smooth, glossy, dark green leaf blades form a celery-like cluster. There aren't as many varieties as there are of the Napa type: two are Canton Choice, and Long White Petiole.

Chinese cabbage is a cool-season annual vegetable. It grows best with short days and moderate to cool temperatures (60-70°F). Their cultural requirements are similar to those of cabbage and lettuce. Chinese cabbage is fairly quick in maturing. It varies from 40 days from sowing to harvest for some cultivars, to 75 days for the longer maturing ones. Space Napa cabbage 18 inches apart and bok choy types 8-12 inches apart and 24 inches between rows.

Daikon Radish (*Raphanus sativus*, var. *longipinnatus*, also called Chinese radish): This root crop is very closely related to the common radish. The main planting times are spring and fall, but some varieties can be planted almost year-round. Bolting (premature seedstalk) can

be a problem. Plant the seeds $\frac{3}{4}$ inch deep in April for a spring crop or in July for a fall crop. Plant spacing should be 4-6 inches between plants and 3 feet between rows. To compensate for large root size, plant daikon radishes in high raised beds that are amended with organic matter, such as compost. At each cultivation, work the soil higher and higher around the root as it grows. Most daikon radishes reach their useable size in 60-70 days.

Cucurbit Vegetables

Includes bittermelon, edible luffa gourd, winter melon.

Bittermelon (*Mormodica charantia*): This vegetable is a native of India. Like cucumbers and squashes, bittermelon is a member of the Cucurbit family. It is a warm-season vegetable. It is usually grown on a trellis system and its fruit is about the size of a summer squash. The trellis should be 6-feet high and 4-6 feet apart. The seeds can be directly planted or grown as seedlings with spacing at 1.5-2 feet between plants and 3-5 feet between rows. Bittermelon is harvested green before there is any color change. Bright orange fruits are saved for seed collection.

Edible Luffa: The edible luffas come in two forms: smooth and angled.

Smooth luffa, *Luffa cylindrica*, originated in India and was later taken to China. It is mainly grown for the young squash-like fruits. Some of the luffa cultivars are Smooth Boy, Smooth Beauty, and Southern Winner. If left to mature on the plant, smooth luffa gourd produces the familiar “Luffa sponge” found in stores. Luffa plants are warm-season vegetables and need to be trellised.

Angled Luffa, *Luffa actuangula*, is very similar to the smooth luffa. Luffa gourds are trained on trellises to encourage straighter fruits, which can become more curved if allowed to grow on the ground. Just like smooth luffa, the angled luffa is a warm-season annual vegetable. The quality of this squash as a sponge gourd is not as desirable; however, in stir fries and other foods it excels. Some of the angled luffa cultivars are Hybrid Green Glory, Hybrid Asian Pride, Lucky Boy, and Summer Long.

Legumes

Includes asparagus (yardlong) bean, edible snap sugar peas, snow peas.

Asparagus (Yardlong) Bean (Chinese Long Bean, *Vigna sesquipedalis*): This long, trailing vine should be grown on trellises. This plant is more closely related to black-eyed pea than to the common green snap bean. Dark and light green varieties are available as well as a red type. The darker varieties are generally preferred. It is a warm-season vegetable. Yardlong beans are cut into 2-inch

pieces and added to various stir fries. The paler green is sweeter and more tender than the dark green.

Sugar Snap Pea and Snow Pea (*Pisum sativum*): These cool-season vegetables should be sowed in April for a spring crop or sowed in July for a fall crop. Plants deteriorate quickly in the heat of summer. The plants of sugar snap pea and snow pea grow similarly to bush beans. It is often helpful to grow them on trellises to facilitate picking; however, if grown for the tender shoot tips, they are usually left untrellised.

Fruiting Vegetables

Includes Oriental eggplant.

Oriental Eggplants (*Solanum melongena*): This crop is native to tropical Asia and are very popular in Japan, China, India, Thailand, and the Philippines. Many varieties are available. They can be light or dark purple, brown, or green in skin color; and round and slender in shape.

Eggplants require full sun and well-drained soil. Eggplants must have warm soil to grow well and they take a long time to reach maturity. Hence, it is a good idea to start seedlings in a greenhouse and set the transplants in the field after the danger of frost is over. Transplant eggplants 18-24 inches apart in rows 30-36 inches apart between rows. Eggplants grow best in hot weather. Water the plants during dry spells. Harvest usually begins in mid- to late summer, about 70-90 days after sowing seeds. Harvest eggplants when the fruit reaches the right size and when skin is glossy and firm. Fruit sizes vary depend on the variety.

Resources

“Ethnic Vegetables: Asian,” University of Kentucky Extension, www.uky.edu/Ag/NewCrops/introsheets/asian.pdf.

“Asian Vegetables: Selected Fruit and Leafy Types,” Purdue University Center for New Crops and Plants Products, www.hort.purdue.edu/newcrop/proceedings1996/v3-488.html.

“Asian Vegetables,” Purdue University Center for New Crops and Plants Products, www.hort.purdue.edu/newcrop/proceedings1990/V1-387.html.

Speciality and Minor Crops Handbook, second edition, University of California Agriculture and Natural Resources publication 3346, available from ANRCatalog, anrcatalog.ucdavis.edu.

Manual of Minor Vegetables, University of Florida IFAS publication SP 40, available from IFAS Extension Bookstore, ifasbooks.ifas.ufl.edu.