

Cucurbita pepo L.

Standardized Common Name: Pumpkin

Family: Cucurbitaceae

Taxonomy: The term “pumpkin” has no taxonomic meaning, and is at least occasionally applied to large, thick-rinded fruits belonging to four species, including *C. argyrosperma* Huber subsp. *argyrosperma* (also known as *C. mixta* Pang.), *C. maxima* Duch., and *C. moschata* Poir. as well as *C. pepo*. *Cucurbita pepo* subsp. *pepo*, the most common of the cultivated species, encompasses a wide variety of fruits, including zucchini and summer and winter squash varieties as well as many pumpkins. The thin-hulled Styrian Oil Pumpkin, *C. pepo* subsp. *pepo* var. *styriaca* Grebenščíkov, is commonly used in the production of pumpkin oil.

Description: Annual vine, prickly-stemmed, with twining tendrils at the base of some leaves. Leaves alternate, long-petioled, erect, to 30 cm long and broad, palmately lobed, prickly; base cordate; apex and apices of main lobes broadly acute; margins wavy or toothed. Plants monoecious. Flowers unisexual, solitary in leaf axils, long-pedicelled; calyx cup-shaped, bristly, green, 5-lobed; corolla funnel-shaped with 5 erect to spreading lobes, yellow, to 10 cm long. Male flowers with 3 stamens; filaments white, short, free below and fused above; anthers forming a central column, 1–1.5 cm long, yellow, with convoluted surface. Ovary of female flower inferior, 3–5-loculed; styles fused into short column; stigmas 3, yellow, convoluted. Fruit a pepo, with leathery exocarp and thick fleshy edible mesocarp; size and shape extremely variable, the largest exceeding 100 kg in mass; color variable, ranging from green and white to bright orange at maturity; peduncle in fruit strongly 5-angled; seeds numerous, to 2.5 cm long, ovate, flattened, pale.

Parts in Commerce: Seeds

Identification: Most varieties of *C. pepo* are thick-hulled, which is the primitive condition.

- (10–)15–25 mm long, 7–14 mm broad
- Strongly flattened
- Ovate with a narrowed neck, the neck often curved to one side
- Conspicuous smooth, rounded margin around edges; groove or ridge delimiting margin visible on each side of seed
- Groove may be brownish-tinged, but margin itself not darker than face of seed
- Scar at end of neck perpendicular to neck, slightly angled, or rounded
- Surface cream to tan throughout, smooth or with irregular wrinkles

- Seed coat easily broken; interior of seed taken up by whitish embryo surrounded by thin green layer
- Embryo edible, with mild, nutlike flavor

***C. pepo* var. *styriaca*:** The Styrian oil pumpkin and other thin-hulled or so-called “hull-less” varieties are used for oil production due to the increased yield and reduced need for processing to remove hulls. In these seeds, two layers of the multilayered seed coat are missing and others differentially developed, resulting in a very different appearance:

- Dark green due to thicker chlorenchyma and absence of covering layers
- Outermost layer thin, clear and membranous, sometimes peeling
- Edges narrowed, not covered by a rounded margin; instead, a fine pale ridge may be visible running around edge of seed

Other species of “pumpkin”: The following features may be used to distinguish seeds of *C. pepo* from seeds of other commonly cultivated edible species:

C. argyrosperma (variable, with some or all of the following features):

- Typically whitish, sometimes with silvery overtones (rarely golden)
- Margin may be ridged or wavy; color gray or light brown, often darker than face of seed
- Thicker than *C. pepo*, with both faces conspicuously convex and elevated above a narrow margin, often large
- Surface of some varieties may be irregularly cracked, revealing long, narrow epidermal cells like closely packed hairs

C. maxima:

- Usually white, sometimes smooth brown
- Thicker than *C. pepo*, plump; sometimes over 25 mm long
- Scar at end of neck strongly oblique, often entirely on one side of neck and slanting backwards (not to be confused with an oblique appearance caused mostly by a curve in the neck itself, which is found in all species)

C. moschata:

- Margin brownish, darker than face of seed, which is grayish or tan
- Under magnification, margin usually has irregular surface, appearing wavy, corky or stringy

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