The fruit grown commercially in the United States marketed as “cantaloupe” (*Cucumis melo* ‘cantaloupensis’) is actually muskmelon (*Cucumis melo* ‘reticulatus’), though both fruits are members of the same family. The cucurbitaceae family also includes squash, gourds, pumpkins, watermelon, and cucumbers. Cross-pollination within the family does not result in poor melon quality, as an old wives’ tale suggests, but results in seeds to produce an entirely new fruit.

Curcurbits may have originated in the south of Mexico and Central America, but cantaloupe was originally cultivated in the Near East including Turkey, China, India, Afghanistan, and Uzbekistan. Cantaloupe was grown by Native Americans near Montreal in the 1500s and made its way to the U.S. East Coast by the mid-1700s. Commercial marketing of cantaloupe did not begin until in the 1870s.

The average American eats almost 9 pounds of cantaloupe annually and much of this fruit is grown in California, which leads the country in production.

*References: Agricultural Marketing Resource Center, North Carolina State University Cooperative Extension, PennState Extension, University of Illinois Extension.*

### TYPES, VARIETIES & CUTS

While there are many varieties and hybrids of cantaloupe developed for size, sweetness, and hardiness during shipping, types are generally separated into Western or Eastern Shipper.

**Western varieties** include Hale’s Best, Sweet n’ Early, Hearts of Gold, Hy-Mark, Top Mark, Charmel, Charentais, Galia, Impac, Gold Rush, Navigator, Gold Express, Oro Rico, Archer, Gold Express, and Durango. These varieties are usually grown in western states and shipped to markets across the country, though they can be grown anywhere with appropriate conditions. These types are generally harvested at half-slip, when the fruit has only partially pulled away from the stem and can continue to ripen during packing and shipping.

**Eastern varieties** include Allstar, Ambrosia, Athena, Burpee Hybrid, Cordele, Durango, Earligold, Primo, Pulstar, Staticoy, Superstar, Sweet Dream, and Tasty Sweet. These varieties are usually grown for local markets and do not ship long distances.

*References: North Carolina State University Cooperative Extension, Oregon State University, PennState Extension, UC Davis Postharvest Technology website, University of Georgia Cooperative Extension.*
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PESTS & DISEASE

Young cantaloupe plants are particularly vulnerable to aphids as well as striped or spotted cucumber beetles, which carry bacterial wilt. Other common pests include squash vine borers, seed corn maggots, rootknot nematodes, leafminers, and rindworms (cucumber beetle larvae). Cucumber beetles are active in early spring above temperatures of 70°F. Later in the growing cycle, pickleworms become a problem as their larvae burrow into the developing fruit to feed.

In addition to bacterial wilt, cantaloupe is susceptible to fusarium wilt, various types of mosaic, alternaria leaf blight, bacterial fruit blotch, phytophthora blight, and anthracnose. Diseases particular to fruit-sizing include powdery mildew, downy mildew, gummy stem blight, and alternaria stem blight. Application of pesticides, fumigation, crop inspection, careful selection of disease-resistant varieties, and crop rotation are all effective in combating these common pests and diseases.

References: North Carolina State University Cooperative Extension, PennState Extension, Purdue University, Texas A&M AgriLife Extension Service, USDA.

CULTIVATION, STORAGE & PACKAGING

Preharvest:
Cantaloupe can be directly seeded or transplanted. Transplants should be seeded 2 to 4 weeks ahead. Either method requires row widths of 5 to 6 feet with spacing of 18 to 30 inches between rows for a total planting of about 2,200 to 5,500 plants per acre. Ideally, harvest should be from 2,000 to 5,000 cantaloupe per acre on bare ground and from 6,000 to 12,000 per acre on plastic mulch. Smaller varieties of less than 3 pounds each may yield as many as 20,000 per acre.

Planting should take place after frost risk with soil temperatures above 60°F. Average air temperatures should range from 65 to 95°F. Growing conditions should include full sun and well-drained, possibly sandy soil with a 5.8 to 6.6 pH. Constant moisture is needed...
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CULTIVATION, STORAGE & PACKAGING — CONTINUED

throughout the season; drip irrigation is best as it produces less foliage and allows honeybees unrestricted access for pollination. Mulching is ideal to keep soil moisture levels constant and minimize disease.

One honeybee colony placed either beside or within each acre is needed at early flowering. Care should be taken to avoid harming bees when applying insecticide. Hives can be removed when fruit is set. Approximate time from pollination to harvest is 30 to 35 days.

Postharvest:
Cantaloupe is ready to harvest when the fruit surface shows raised, well-rounded netting. Harvest-readiness is determined by maturity, not size. Fruit is hand-picked between half- and full-slip and will ripen after picking but not increase in sugar content. Cantaloupes at full-slip have reached their maximum sugar development. External color varies at this stage and may be slightly greenish. Multiple harvests and frequent picking ensures premium quality. Either bulk containers or 40-pound cardboard boxes of between 9 and 23 loose cantaloupe are used for shipping.

To avoid surface mold, cantaloupe can be treated with hot air or water immersion, then dried thoroughly. Precooling after harvest is important for postharvest quality. Cantaloupe can be stored for up to 21 days at 36°F, but optimal quality is achieved between 36 to 41°F for about 12 to 15 days. Seven days or longer below 36°F may cause chilling injury.

Postharvest quality is maximized between 90 to 95% humidity. Higher humidity may result in stem-scar and surface mold. An oxygen level of less than 1% or carbon dioxide above 20% may impair flavor, ripening, or cause other defects.

References: UC Davis Postharvest Technology website, University of Illinois Extension, North Carolina State University Cooperative Extension, PennState Extension, Purdue University Extension.

GOOD ARRIVAL GUIDELINES

Generally speaking, the percentage of defects shown on a timely government inspection certificate should not exceed the percentage of allowable defects, provided: (1) transportation conditions were normal; (2) the U.S. Department of Agriculture (USDA) or Canadian Food Inspection Agency (CFIA) inspection was timely; and (3) the entire lot was inspected.

Canadian good arrival guidelines (unless otherwise noted) are broken down into five parts as follows: maximum percentage of defects, maximum percentage of permanent defects, maximum percentage for any single permanent defect, maximum percentage for any single condition defect, and maximum for decay. Canadian destination guidelines for asparagus are 15-10-5-10-5.

References: DRC, PACA, USDA.

INSPECTOR’S INSIGHTS

• Cantaloupe has a minimum requirement for soluble solids (brix); to be considered as meeting U.S. No. 1 grade, fruit must meet at least 9% soluble solids
• Liquid in the seed cavity is scored as a defect when fermented or if more than half the cavity is filled with liquid
• Surface mold is not a free-from defect; it is scored as damage when the mold due to density (thinly covered to thick) and color (white to black) materially affect the appearance
• Two types of decay (wet and dry) affect cantaloupe; each type is a free-from defect, scored against the 2% tolerance for decay.

CANTALOUPE: WEEKLY MOVEMENTS & PRICES, USA

Source: Chart by Gallo Torrez Agricultural Price Trends (GTAPT), mgallo@markfinstrat.com, compiled from USDA data.