**TYPES, VARIETIES & CUTS**

Celery, *Apium graveolens*, is a member of the Apiaceae family with carrots, cilantro, and parsley, and grows best in temperate climates. Celery has a number of leafy stalks (petioles) connected by a common base; stalks can grow up to 24 inches each.

The green, long-stalked variety (also called ‘Pascal’) can come in blanched white or red coloring and is most common, though celeriac (celery root) and leaf celery are also popular. Typically only the stalks are eaten, but roots and leaves can be consumed as well (or used for medicinal purposes, the vegetable’s original use before becoming a household staple). For celeriac, although similar looking to celery, only the tuberous base or root is eaten.

Long-stalk varieties include Conquistador, Giant Pascal, Golden, Redventure, Tall Utah, Tango Green, and Ventura; celeriac types include Brilliant, Diamant, Large Smooth Prague, Mentor, and Tellus; for celery leaf, there’s Par-Cel and Safir.

Michigan is credited with the U.S.’s first celery production in the 1850s. California began growing the vegetable in the late 1880s and provides most of the nation’s production, with Michigan a distant second. Celery exports consistently outpace imports; Canada and Asia are the major destination markets for organic celery exports.


<table>
<thead>
<tr>
<th>LOCATION</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
<th>JUN</th>
<th>JUL</th>
<th>AUG</th>
<th>SEP</th>
<th>OCT</th>
<th>NOV</th>
<th>DEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARIZONA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CALIFORNIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLORIDA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MICHIGAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEXAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANADA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEXICO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*References: Cornell University, Michigan Celery Promotional Cooperative, Inc., University of California Division of Agriculture & Natural Resources, University of Florida/IFAS Extension, USDA.*
**PESTS & DISEASE**

**Common Pests:**
Leafminers including the serpentine, vegetable, pea, and cabbage types will lay eggs on celery; larvae create “winding mines” and eventually form brownish pupa approximately the size of a rice grain. Adult leafminers are small with clear wings and black and yellow markings.

Cabbage loopers are gray moths with a silvery mark on their wings that grow from light green caterpillars with yellow lines down their backs. Eggs can be laid on the leaves of many vegetables and the larvae often leave ragged, large holes. The looper is migratory and can be controlled by a number of natural predators.

Other common pests of concern include aphids, armyworms, beetles, cabbage worms, mites, carrot weevils, and whiteflies.

**Common Diseases:**
Anthracnose-leaf curl, a more recent introduction to U.S. crops, affects a large number of fruits and vegetables. Symptoms for celery include curled leaves, some discoloration of leaf margins, as well as twisted and lesioned petioles. Contamination often occurs through affected plant debris and can be limited by careful planting practices.

Leaf blight, categorized as either early or late blight, is caused by fungi and often emerges as isolated dead spots on leaves that later become lesions. Typically, the same treatment will eradicate both types so there is no need to distinguish between the two.

Blackheart is a calcium and moisture deficiency that leads to the leaves at the center of the plant becoming discolored, turning black, and dying. It is slow to develop and can emerge close to harvest time. Enriching the soil with calcium and avoiding water stress can help prevent the disease.

Mosaic viruses, various types of rot (watery, basal stalk, pink, bacterial soft rot, etc.), fusarium, grey mold, rot knot, wilt, and powdery mildew can all affect celery.

References: Cornell University, New England Vegetable Management Guide, University of California Vegetable Research & Information Center, Utah State University Extension.

---

**CULTIVATION, STORAGE & PACKAGING**

**Preharvest:**
Celery is a cool season crop, sensitive to extremes in temperature, and can be challenging to grow. It is typically seeded 8 to 10 weeks before being transplanted in nutrient-rich soil (which should be tested for nematodes before insertion), with the most robust plants together for uniform harvests. For best results, transplants should have a few leaves and well developed roots. It is best to allow ample space between rows (6 to 7 inches apart) to encourage upward growth.

Once transplanted, celery should not be exposed to temperatures below 50°F for any extended period of time to prevent premature bolting. Row covers can be used to protect from frost. Celery prefers steady, continuous growth, should be trimmed, and requires consistent watering (in excess of 1 inch per week).

**Postharvest:**
To prevent decay a sharp blade and attention to minimizing abrasions and damage to cut-ends is recommended. Celery should be stacked and packed carefully after harvest to prevent injury. As it is highly perishable, celery should be cooled (forced air, hydrocooled, or vacuum cooled) immediately after harvest to between 32 and 36°F with high humidity.

Since celery is held and transported near freezing temperatures, freezing injury is occasionally found at receiving point, presenting with a flabby, water-soaked condition of both the leaves and stalks. Freezing injury may also cause circular sunken lesions on the stalk, which will soon become brown. It is important to note the location and stage of freezing injury, as the freezing injury may also have occurred in the field.

Like asparagus, celery continues to grow after harvest: extra horizontal space should be allowed in crates.
CULTIVATION, STORAGE & PACKAGING — CONTINUED

Grades:
Celery is divided into U.S. Extra No. 1, U.S. No. 1, and U.S. No. 2 grades.

High-quality celery will possess similar varietal characteristics and be well-developed, well-formed, well-trimmed, clean, and free from damage and disease. Defects include blackheart, blight, soft rot, brown stem, mold, wilt, or pithiness; stalks should be free from freezing or mechanical damage as well as cracks, scuffing, and insects. Stalks should be green unless specified as blanched.


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.

<table>
<thead>
<tr>
<th>U.S. Grade Standards</th>
<th>Days Since Shipment</th>
<th>% of Defects Allowed</th>
<th>Optimum Transit Temp. (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-2</td>
<td>5</td>
<td>15-4</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>14-4</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>13-3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>11-2</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>10-2</td>
<td></td>
</tr>
</tbody>
</table>

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 are 15-10-5-10-4.

References: DRC, PACA, USDA.

CELERY: WEEKLY MOVEMENTS & PRICES, USA

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