



## Optimal Fruit & Vegetable Storage

### Temperature & Humidity

| Commodity             | Temperature (°F) | Rel. humidity (percent) | Approximate storage life | Freezing point (°F) |
|-----------------------|------------------|-------------------------|--------------------------|---------------------|
| <b>Fruits</b>         |                  |                         |                          |                     |
| Apples                | 30–40            | 90–95                   | 1–12 months              | 29.3                |
| Apricots              | 31–32            | 90–95                   | 1–3 weeks                | 30.1                |
| Berries               |                  |                         |                          |                     |
| — Blackberries        | 31–32            | 90–95                   | 2–3 days                 | 30.5                |
| — Currants            | 31–32            | 90–95                   | 1–4 weeks                | 30.2                |
| — Elderberries        | 31–32            | 90–95                   | 1–2 weeks                | —                   |
| — Gooseberries        | 31–32            | 90–95                   | 3–4 weeks                | 30                  |
| — Raspberries         | 31–32            | 90–95                   | 2–3 days                 | 30                  |
| — Strawberries        | 32               | 90–95                   | 3–7 days                 | 30.6                |
| — Cherries, sour      | 32               | 90–95                   | 3–7 days                 | 29                  |
| Cherries, sweet       | 30–31            | 90–95                   | 2–3 weeks                | 28.8                |
| Grapes, American      | 31–32            | 85                      | 2–8 weeks                | 29.7                |
| Nectarines            | 31–32            | 90–95                   | 2–4 weeks                | 30.4                |
| Peaches               | 31–32            | 90–95                   | 2–4 weeks                | 30.3                |
| Pears                 | 29–31            | 90–95                   | 2–7 months               | 29.2                |
| Plums and prunes      | 31–32            | 90–95                   | 2–5 weeks                | 30.5                |
| Quinces               | 31–32            | 90                      | 2–3 months               | 28.4                |
| <b>Vegetables</b>     |                  |                         |                          |                     |
| Artichokes, Jerusalem | 31–32            | 90–95                   | 4–5 months               | 28                  |
| Asparagus             | 32–35            | 95–100                  | 2–3 weeks                | 30.9                |
| Beans, dry            | 40–50            | 40–50                   | 6–10 months              | —                   |

Optimal Fruit and Vegetable Storage, Temperature & Humidity  
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| Commodity           | Temperature (°F) | Rel. humidity (percent) | Approximate storage life | Freezing point (°F) |
|---------------------|------------------|-------------------------|--------------------------|---------------------|
| Beans green or snap | 40–45            | 95                      | 7–10 days                | 30.7                |
| Beans, lima         | 37–41            | 95                      | 5–7 days                 | 31                  |
| Beans, sprouts      | 32               | 95–100                  | 7–9 days                 | —                   |
| Beets, bunched      | 32               | 98–100                  | 10–14 days               | 31.3                |
| Beets, topped       | 32               | 98–100                  | 4–6 months               | 30.3                |
| Broccoli            | 32               | 95–100                  | 10–14 days               | 30.9                |
| Brussels, sprouts   | 32               | 95–100                  | 3–5 weeks                | 30.5                |
| Cabbage, early      | 32               | 98–100                  | 3–6 weeks                | 30.4                |
| Cabbage, late       | 32               | 98–100                  | 5–6 months               | 30.4                |
| Cabbage, Chinese    | 32               | 95–100                  | 2–3 months               | —                   |
| Carrots, bunched    | 32               | 95–100                  | 2 weeks                  | —                   |
| Carrots, mature     | 32               | 98–100                  | 7–9 months               | 29.5                |
| Carrots, immature   | 32               | 98–100                  | 4–6 weeks                | 29.5                |
| Cauliflower         | 32               | 95–98                   | 3–4 weeks                | 30.6                |
| Celeriac            | 32               | 97–99                   | 6–8 months               | 30.3                |
| Celery              | 32               | 98–100                  | 2–3 months               | 31.1                |
| Chard               | 32               | 95–100                  | 10–14 days               | —                   |
| Chicory, witloof    | 32               | 95–100                  | 2–4 weeks                | —                   |
| Collards            | 32               | 95–100                  | 10–14 days               | 30.6                |
| Corn, sweet         | 32               | 95–98                   | 5–8 days                 | 30.9                |
| Cucumbers           | 50–55            | 95                      | 10–14 days               | 31.1                |
| Eggplant            | 46–54            | 90–95                   | 1 week                   | 30.6                |
| Endive and escarole | 32               | 95–100                  | 2–3 weeks                | 31.9                |
| Garlic              | 32               | 65–70                   | 6–7 months               | 30.5                |
| Greens, leafy       | 32               | 95–100                  | 10–14 days               | —                   |
| Horseradish         | 30–32            | 98–100                  | 10–12 months             | 28.7                |
| Jicama              | 55–65            | 65–70                   | 1–2 months               | —                   |
| Kale                | 32               | 95–100                  | 2–3 weeks                | 31.1                |

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| Commodity                | Temperature (°F) | Rel. humidity (percent) | Approximate storage life | Freezing point (°F) |
|--------------------------|------------------|-------------------------|--------------------------|---------------------|
| Kohlrabi                 | 32               | 98–100                  | 2–3 months               | 30.2                |
| Leeks                    | 32               | 95–100                  | 2–3 months               | 30.7                |
| Lettuce                  | 32               | 98–100                  | 2–3 weeks                | 31.7                |
| Melons                   |                  |                         |                          |                     |
| — Cantaloupe (3/4 slip)  | 36–41            | 95                      | 15 days                  | 29.9                |
| — Cantaloupe (full slip) | 32–36            | 95                      | 5–14 days                | 29.9                |
| — Casaba                 | 50               | 90–95                   | 3 weeks                  | 30.1                |
| — Crenshaw               | 45               | 90–95                   | 2 weeks                  | 30.1                |
| — Honey Dew              | 45               | 90–95                   | 3 weeks                  | 30.3                |
| — Persian                | 45               | 90–95                   | 2 weeks                  | 30.5                |
| — Watermelon             | 50–60            | 90                      | 2–3 weeks                | 31.3                |
| Mushrooms                | 32               | 95                      | 3–4 days                 | 30.4                |
| Okra                     | 45–50            | 90–95                   | 7–10 days                | 28.7                |
| Onions, green            | 32               | 95–100                  | 3–4 weeks                | 30.4                |
| Onion, dry               | 32               | 65–70                   | 1–8 months               | 30.6                |
| Onion sets               | 32               | 65–70                   | 6–8 months               | 30.6                |
| Parsley                  | 32               | 95–100                  | 2–2.5 months             | 30                  |
| Parsnips                 | 32               | 98–100                  | 4–6 months               | 30.4                |
| Peas, green              | 32               | 95–98                   | 1–2 weeks                | 30.9                |
| Peas, southern           | 40–41            | 95                      | 6–8 days                 | —                   |
| Peppers, chili (dry)     | 32–50            | 60–70                   | 6 months                 | —                   |
| Peppers, sweet           | 45–55            | 90–95                   | 2–3 weeks                | 30.7                |
| Potatoes, early crop     | 40               | 90–95                   | 4–5 months               | 30.9                |
| Potatoes, late crop      | 38–40            | 90–95                   | 5–10 months              | 30.9                |
| Pumpkins                 | 50–55            | 50–70                   | 2–3 months               | 30.5                |
| Radishes, spring         | 32               | 95–100                  | 3–4 weeks                | 30.7                |
| Radishes, winter         | 32               | 95–100                  | 2–4 months               | —                   |

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| Rhubarb                | 32               | 95–100                  | 2–4 weeks                | 30.3                |
| Rutabagas              | 32               | 98–100                  | 4–6 months               | 30                  |
| Salsify                | 32               | 95–98                   | 2–4 months               | 30                  |
| Spinach                | 32               | 95–100                  | 10–14 days               | 31.5                |
| Squashes, summer       | 41–50            | 95                      | 1–2 weeks                | 31.1                |
| Squashes, winter       | 50               | 50–70                   | 1–6 months               | 30.5                |
| Sweet potatoes         | 55–60            | 85–90                   | 4–7 months               | 29.7                |
| Tomatoes mature, green | 55–70            | 90–95                   | 1–3 weeks                | 31                  |
| Tomatoes firm, ripe    | 55–70            | 90–95                   | 4–7 days                 | 31.1                |
| Turnips                | 32               | 95                      | 4–5 months               | 30.1                |
| Turnip greens          | 32               | 95–100                  | 10–14 days               | 31.7                |
| Watercress             | 32               | 95–100                  | 2–3 weeks                | 31.4                |

### Storage Tips

- **High Humidity** - To achieve high humidity conditions in your cooler, without using internal humidifiers, one can store the produce item in an airtight container. The humidity is provided by the moisture present in the freshly harvested produce item. The tighter the seal, the more effectively the high humidity can be maintained.
- **Storage Groups**
  - Cold storage (temperatures 32 to 36°F).
  - Cool storage (temperatures 40 to 55°F).
  - Warmer storage (temperatures 55 to 60°F).

### References

- Hardenburg, R.E., A.E. Watada and C.Y. Wang. 1986. *The Commercial Storage of Fruits, Vegetables, and Florist and Nursery Stocks*. USDA-ARS Agriculture Handbook Number 66 (revised) 136p.