

Lettuce (Iceberg) facts:

Lettuce Respiration rate:

- @ 0°C 3-8 ml CO₂ / kg · hr
- @ 5°C 6-10 ml CO₂ / kg · hr
- @ 10°C 11-20 ml CO₂ / kg · hr
- @ 15°C 16-23 ml CO₂ / kg · hr
- @ 20°C 25-30 ml CO₂ / kg · hr



Lettuce Water Content:

- 98% water, Specific heat ((KJ/kg °C) 4.02

Lettuce Other Properties:

- Lettuce ethylene production is very low, <0.1 µL/kg · hr @ 20°C.
- Maturity is based on head compactness.
- For quality after trimming outer wrapper leaves, the leaves should be bright light green colour, crisp & turgid.
- Vacuum cooling is used usually used for iceberg lettuce post harvest cooling.
- Forced -air cooling can also be used successfully.

Lettuce Optimal Conditions:

- Stored at 1 to 2 °C / 96 - 98% RH, lasts from 2 to 3 weeks at 1°C.
- At 5°C shelf life reduces to 14 days with no ethylene in environment.
- Benefit of Controlled Atmosphere, Fair (+14 days).
- Sensitive to Freezing, Russet spotting cause due to presence of ethylene gas in containers or cold room with ripening F&V's and gasoline engines.
- Damages occurs below -0.2°C



Camel Milk Info:

Camel's milk is said to be an 'acquired taste', yet many people around the world depend on it. Its composition is closer to human milk than cow's milk is. Camel milk is slightly saltier than cows' milk, three times as rich in Vitamin C and is known to be rich in iron, unsaturated fatty acids and B vitamins. It also contains antibodies, and these may help fight serious diseases like cancer, HIV / Aids, Alzheimer's and Hepatitis B.

Camel milk is packed with vitamins which clean out the body, externally and internally. As the story goes, Queen Cleopatra was a big fan and used to bathe in the stuff. Just drinking the milk is said to yield a healthy complexion. Camel milk is also said to have many other healthful properties and is claimed to be an aphrodisiac.

Camel milk cannot be made into butter in the traditional churning method. It can be made if it is soured first, churned, and then a clarifying agent is added, or if it is churned at 24-25 °C (75-76 °F), but times will vary greatly in achieving results. The milk can readily be made into yogurt. Butter or yogurt made from camel milk can have a very faint greenish tinge.

Estimated global camel milk output as 5.3 million tonnes, although even this may be a conservative estimate. Lactating camels each produce between 1,000 and 12,000 litres of milk for anywhere between 8 and 18 months.

Camel Milk Properties:

- Camel's milk is generally opaque white.
- It has a sweet and sharp taste, but sometimes it can be salty. The taste generally depends on the type of fodder and availability of drinking water.
- The pH of camel's milk ranges from 6.2 to 6.5 and the density from 1.026 to 1.035.
- Both density and pH are lower than those of cow's milk.

Camel Milk Optimal Conditions:

- Stored at 2 to 5 °C / lasts for 8 to 10 days.
- The above is applicable only if the milk is pasteurized (heat treated), bottled and finally cooled at 4 °C.
- No preservatives added.

Gherkins facts:

Gherkins stowage Factor:

2 to 3 m³ per ton.
70 to 105 ft³ per ton.



Gherkin Respiration rate:

@ 10 °C, 60 watts per ton, 10 ml CO²/kg/h
@ 15 °C, 96 watts per ton, 16 ml CO²/kg/h
@ 20 °C, 141 watts per ton, 24 ml CO²/kg/h
@ 25 °C, 168 watts per ton, 28 ml CO²/kg/h

Gherkin Water Content:

96% water, Specific heat (kJ/kg/°C) 4.06

Gherkin Other Properties:

Ethylene- Low Producer, Ethylene sensitivity - High, Freezes at -0.5 °C
Ice Compatible - No, Optimal RH - 90 - 95%, Impact/Pressure sensitive.

Gherkin Optimal Conditions:

Stored at 7 to 12 °C / 90 - 95% RH, lasts from 10 to 14 days.
Benefit of Controlled Atmosphere, Fair (+7 days).
Sensitive to contamination by fats and oils.



Mango facts:

Stowage factor:

- 2.27-2.55 m³ / t (fruit crates) [1]
- 2.26-2.83 m³ / t [14]

Mango Respiration rate:

- @ 10 °C, 12-16 ml CO²/kg/h
- @ 13 °C, 25-22 ml CO²/kg/h
- @ 15 °C, 19-28 ml CO²/kg/h
- @ 20 °C, 35-80 ml CO²/kg/h

Rate of Ethylene production:

- @ 10 °C, 0.1-0.5 ul C₂H₄ /kg · hr
- @ 13 °C, 0.2-1.0 ul C₂H₄ /kg · hr
- @ 15 °C, 0.3-4.0 ul C₂H₄ /kg · hr
- @ 15 °C, 0.5-8.0 ul C₂H₄ /kg · hr

Mango Water Content:

85-90% water, Specific heat (kJ/kg/°C)

Mango Other Properties:

- Ethylene- Low Producer, Ethylene sensitivity - High
- Exposure to 100-ppm ethylene for 12 to 24 hours at 20 to 22°C and 90-95% relative humidity results in accelerated and uniform ripening of mangoes within 5-9 days, depending on cultivar and maturity stage.
- CO₂ concentration should be kept below 1% in the ripening room.
- Careful handling to minimize mechanical injuries.
- Hot water treatment: 5-10 minutes (depending on fruit size) dip in 50°C ± 2°C (122°F ± 4°F) water.
- Post harvest fungicide (imazalil or thiabendazole) treatment alone or in combination with hot water treatment maintaining optimum temperature and relative humidity during all handling steps.

Mango Optimal Conditions:

- 13°C for mature-green mangoes
- 10°C for partially-ripe and ripe mangoes
- 90 - 95% RH lasts from 10 to 14 days.
- Sensitive to contamination by fats and oils.
- Optimum CA 3-5% O₂ and 5-8% CO₂
- CA delays ripening and reduces respiration and ethylene production rates.
Post harvest life potential at 13°C, 2-4 weeks in air and 3-6 weeks in CA, depending on cultivar and maturity stage.
- Exposure to below 2% O₂ and/or above 8% CO₂ may induce skin discoloration, grayish flesh color, and off-flavor development.



Okra facts:

Okra Respiration rate:

- @ 5 °C, 27-30 ml CO²/kg/h
- @ 10 °C, 43-47 ml CO²/kg/h
- @ 15 °C, 69-72 ml CO²/kg/h
- @ 20 °C, 124-137 ml CO²/kg/h

Okra Water Content:

- 90% water, Specific heat (kJ/kg/°C)

Okra Other Properties:

- Ethylene- Low Producer (<0.5 µL/kg-hr at 10°C)
- Ethylene sensitivity medium.
- Optimal RH - 90 - 95%, impact/chilling sensitive.
- 4-10% CO₂ beneficial for okra storage.

Okra Optimal Conditions:

- Stored at 7-10°C / 95% RH lasts from 8 to 10 days.
- Benefit of Controlled Atmosphere, Fair (+7 days).
- Sensitive to chilling, temperatures below 7°C for a short period of time can result in discolouration, pitting & decay.
- Temperatures above 10°C cause yellowing, toughening and rapid decay.

