

CNC
YOUR C❄OLEST
REEFER EXPERT

PINEAPPLE



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GROUP


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MATURITY INDICES

Change of shell color from green to yellow at the base of the fruit. Pineapples are non-climacteric fruits and should be harvested when ready to eat. A minimum soluble solids content of 12% and a maximum acidity of 1% will assure minimum flavor acceptability by most consumers.

QUALITY INDICES

- > Uniformity of size and shape
- > Firmness
- > Freedom from decay
- > Freedom from sunburn, sunscald, cracks, bruising, internal breakdown, endogenous brown spot, gummosis, and insect damage
- > Tops (crown leaves): green color, medium length, and straightness
- > Range of soluble solids = 11-18%; titratable acidity (mainly citric acid) = 0.5-1.6%; and ascorbic acid = 20-65mg/100g fresh weight, depending on cultivar and ripeness stage

TEMPERATURE & CONTROLLED ATMOSPHERE

OPTIMUM TEMPERATURE

- > 10-13°C (50-55°F) for partially-ripe pineapples
- > 7-10°C (45-50°F) for ripe pineapples

OPTIMUM RELATIVE HUMIDITY

- > 85-90% (no dehumidification required)

RATES OF RESPIRATION

Temperature	7°C (45°F)	10°C (50°F)	13°C (55°F)	15°C (59°F)	20°C (68°F)
ml CO ₂ /kg-hr	2-4	3-5	5-8	8-10	15-20

Calculate heat production: multiply ml CO₂/kg-hr by 440 to get Btu/ton/day or by 122 to get kcal/metric ton/day

RESPONSES TO ETHYLENE

Exposure of pineapples to ethylene may result in slightly faster degreening (loss of chlorophyll) without influencing internal quality. Pineapples must be picked when ripe because they do not continue to ripen after harvest.

RESPONSES TO CONTROLLED ATMOSPHERES (CA)

- > 3-5% O₂ and 5-8% CO₂
- > Benefits of CA include delayed senescence and reduced respiration rate
- > Postharvest life potential: 2-4 weeks in air and 4-6 weeks in CA 10°C (50°F), depending on cultivar and ripeness stage
- > Exposure to O₂ levels below 2% and/or CO₂ levels above 10% should be avoided because of the potential for development of off-flavors
- > Waxing may be used to modify O₂ and CO₂ concentrations within the fruit enough to reduce incidence and severity of endogenous brown spot