

Loquat

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Scientific Name and Introduction

Loquat (*Eriobotrya japonica* L.) belongs to the rose family and is a subtropical evergreen fruit tree. Fruits grow in loose clusters and are round or oval, weighing about 20 to 80 g (0.7 to 2.8 oz). Fruit have a thin but tough skin. Ripe fruit flesh is soft and juicy, varying in color from white to deep orange. Loquat originated in midwestern China and is widely cultivated in the subtropical regions of southern China, Japan, Israel, and the Mediterranean area. In the United States, loquats grow in Hawaii, California, and the Gulf States.

Quality Characteristics and Criteria

High-quality loquat have SSC >12%, moderate TA (0.3 to 0.6%), and low flesh firmness. Loquat cultivars have a rapid rate of fruit softening.

Horticultural Maturity Indices

The quality of loquats is highly dependent on the degree of ripening. Loquats harvested in the fully ripe stage have optimum quality. However, in commercial situations where transport and shelf-life are involved, loquats are generally harvested at the eating-ripe stage before becoming fully ripe. In most cultivars, harvest date is determined by skin color changes described for each cultivar.

Grades, Sizes, and Packaging

Size grades of the cultivar 'Tanaka' are large, >60 g (2.1 oz); medium, 50 to 59 g (1.9 oz); small, 40 to 49 g (1.6 oz); and SS, 30 to 39 g (1.2 oz). Packages commonly employ soft materials because of the fruit's susceptibility to bruising.

Precooling Conditions

In order to maintain quality and storage life, loquat should be precooled to <5 °C (41 °F) within 20 h of harvest (Shinbori and Nakai 1991).

Optimum Storage Conditions

Recommended conditions for commercial storage are 0 to 5 °C (32 to 41 °F) with >90% RH. Loquat fruit can be kept in good condition for 3 to 4 weeks at 0 °C (32 °F) and 2 weeks at 10 °C (50 °F) (Guelfat-Reich 1970, Ding et al. 1998). Use of polyethylene bags retards weight loss and minimizes decreases in organic acids (Ding et al. 1997).

Controlled Atmosphere (CA) Conditions

No information is available.

Retail Outlet Display Considerations

A refrigerated shelf at 5 to 12 °C (41 to 54 °F) is good.

Chilling Sensitivity

Loquat fruit are not sensitive to chilling.

Ethylene Production and Sensitivity

Loquat fruit produce relatively low amounts of ethylene and are not particularly sensitive to ethylene exposure after harvest.

Respiration Rates

Respiration rates of loquat are influenced by temperature and decrease rapidly over the first 4 days of storage. By the fourth day of storage, respiration rates of stored fruit were—

Temperature	mg CO₂ kg⁻¹ h⁻¹
20	80.0
10	30.6
5	12.4
1	11.2

To get mL CO₂ kg⁻¹ h⁻¹, divide the mg kg⁻¹ h⁻¹ rate by 2.0 at 0 °C (32 °F), 1.9 at 10 °C (50 °F), and 1.8 at 20 °C (68 °F). To calculate heat production, multiply mg kg⁻¹ h⁻¹ by 220 to get BTU ton⁻¹ day⁻¹ or by 61 to get kcal tonne⁻¹ day⁻¹.

Physiological Disorders

Fruit are easily bruised and scratched, and the damaged areas usually turn brown or black, so careful handling and packaging during and after harvest are important. Also, internal browning and brown surface spotting occur during long-term or high-CO₂ storage (Ding et al. 1999).

Postharvest Pathology

Cooling fruit and holding them at <5 °C (41 °F) are effective at controlling spoilage.

Quarantine Issues

None are known.

Suitability as Fresh-Cut Product

No current potential exists.

Special Considerations

Loquats must be handled with care to avoid mechanical damage, and low-temperature storage is essential for extending postharvest life.

References

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