

Title Consumer preference quality attributes of melon fruits
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Abstract

Sweet melons (*Cucumis melo* L. plus *Citrullus lanatus* L.) are the most popular fresh fruit, based on per capita consumption, in the U.S.A. *Cucumis melo* (muskmelons) are the only fruits in the U.S.A. to have a 2.3 fold increase in consumer demand over the past 35 years. Preference attributes expressed by consumer panelists of whole, fully mature muskmelon cultivars, following harvest and commercial storage, evaluated for appearance, color, flavor, odor, sweetness, texture, and overall acceptability are highly discernable for specific sensory attributes. Muskmelon attributes that correlated most strongly with overall fruit acceptability were flavor ($r = 0.97^{**}$) coupled with fruit sweetness ($r = 0.97^{**}$) followed closely by fruit texture ($r = 0.95^{**}$). Flavor was highly correlated with fruit sweetness ($r = 0.99^{**}$) and fruit sweetness was highly correlated with soluble solids concentration ($r = 0.61^{**}$). Fruit flavor is the first quality attributes to be altered during whole muskmelon fruit storage, and in the now popular fresh-cut product. Maintaining desirable muskmelon fruit sensory attributes along with microbial safety and human wellness compounds (e.g. β -carotene, folic acid, vitamin C, and potassium) in whole as well as fresh-cut fruit throughout distribution and marketing is a challenge. But these attributes can be managed through cultivar selection (orange-flesh honey dew better than orange-fleshed netted melon), production location (clay better than sandy soil), enclosed in plastic, and storage temperatures (4°C better than 10°C).