Title Modified atmosphere packaging and low temperature storage conditions for shipping of mango cv. Sufaid Chaunsa

Author Omer Hafeez, Aman U. Malik, Muhammad Amin, Rabia Hameed, Abdul Jabbar, Samina Khalid, Muhammad S. Khalid, Muhammad Umar

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Abstract

Modified atmosphere packaging (MAP) technology is getting popularity in the world for its potential of extending shelflife of fresh produce along with better maintained fruit quality. In these studies, the response of modified atmosphere packed (using Xtend® bags) 'Sufaid Chaunsa' mangoes was investigated at two storage temperatures (9 and 11°C; 80-85%RH) in comparison with non-bagged (control). The assessments regarding the impact of treatments on physico-chemical and organoleptic fruit quality and marketability were made at removal after 2, 3, 4 and 5 weeks of low temperature storage and ambient ripening (20°C; 80-85%RH). Modified atmosphere storage was found to exert significant impact on physico-chemical fruit quality, market value and consumer acceptability as compared to control Non-significant impact of MAP was found on disease development at ripe stage. The fruit having skin bruises before bagging showed significant retardation in physical appearance score during storage and ripening. The quality of fruit subjected to postharvest fungicidal application and hot water treatments and stored at 11°C was better with significantly higher TSS/TA ratio and good peel colour and less disease development along with good percentage of marketable fruit. Provided with careful harvest and handling, the cultivar showed potential of 3-4 weeks of storage/shipping, followed by 5-6 days for handling, ripening and marketing.