Ripening of climacteric fruits initiated at low ethylene levels

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Abstract

Mature, unripe mango, peach, custard apple, kiwifruit and tomato were stored at 20°C in air containing ethylene at <0.005, 0.01, 0.1 1.0 and 10 L/L. The time to ripen of all the climacteric fruits increased linearly with logarithmic decrease in ethylene concentration over the whole concentration range examined. Similar observations were also obtained with kiwifruit and custard apple held at 0 and 14°C, respectively. However, the sensitivity of fruits to ethylene varied with banana and kiwifruit > custard apple and mango > tomato, avocado and peach. Since the ethylene level around horticultural produce during marketing is always >0.005 L/L, the time climacteric fruit can be held in an unripe condition is currently less than optimal but intervention to limit ethylene action would appear to be only warranted for the most sensitive fruits.

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