

Title Carotenoids in watermelon and mango
Author P. Perkins-Veazie
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Abstract

Carotenoids, which impart yellow, orange, and/or red colors to many fruits, have antioxidant health properties. A series of experiments were undertaken to establish horticultural relationships to carotenoids in watermelon and mango in cooperation with U.S. commodity boards. Watermelon was assayed to determine effects of germplasm, storage temperature, and fresh cut on lycopene and beta carotene content. Seedless watermelons were generally highest in lycopene and storage at 21°C increased both lycopene and beta carotene contents. Fresh cut watermelon lost about 6% of carotenoids, probably through oxidation of cut surfaces. Mangos of the five major varieties imported over a 12 month period into the U.S. from Peru, Mexico, Brazil, and Ecuador were ripened at 20-25°C and assayed for beta carotene and vitamin C content. Beta carotene content (mg/kg fwt) averaged 5.0, 7.0, 10.4, 16.8, and 26.1 for ‘Tommy Atkins’, ‘Haden’, ‘Keitt’, ‘Kent’, and ‘Ataulfo’, respectively. Total vitamin C (mg/100 g fwt) was 19.2 (‘Tommy Atkins’) to 126.4 (‘Ataulfo’). Results of our experiments show that U.S. watermelons are a rich source of lycopene while mangos imported into the U.S. offer consumers a new natural source of beta carotene and vitamin C.