

## Evaluation of Watermelon fingers from grafted or extra firm seedless watermelon types

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Almost all watermelon in the U.S. is sold as whole fruit or halves. Watermelons cut in cubes suffer from a short shelf life (7 days at 2 °C), usually from excessive drip loss. The introduction of watermelon pops in European fast food restaurants in 2012 offers a new opportunity for a watermelon niche product. One fast food restaurant in the U.S. sold apple fries (raw apples cut into French fry shapes and sold in sealed bags). The purpose of this experiment was to determine suitability of seedless grafted or ungrafted watermelon for watermelon fingers. Watermelon from ungrafted 'WDL9410' (from Charleston, SC) was held for 1, 7, or 14 days after harvest at 12 °C. These fruit were then cut into fingers of about 8-10 cm length x 2-3 cm thickness x 2-3 cm width and stored in plastic bags for 0, 7 and 14 days at 4 °C (a total of 1 to 29 days from harvest). 'Melody' grafted to Shintosa, Carnivor, or Macis (from Sandhills, NC) was used to explore potential of a value added fresh cut product. Fruit were held at 4 °C for 2 days then fingers cut and stored as above for 0, 7 and 14 days at 4 °C. Samples were evaluated for firmness, lycopene content, ssc, and pH. 'WDL9410' samples were exceptionally firm (about 32 N or 8 lbs) and had less than 1% drip loss. 'Melody' fingers were about 12N (3 lbs) in firmness and had up to 30% drip loss by 14 days, regardless of rootstock. Fruit pH was 6.2 in 'Melody' and 5.8 in 'WDL9410'. Lycopene content was slightly higher in 'Melody' fruit from scions grafted to 'Shintosa' or 'Carnivor' rootstocks (58-62 mg/100 g). Lycopene content of 'WDL9410' was 65-76 mg/100 g. The unusual crunchy nature of 'WDL9410' and low drip loss characteristics offers use for a fresh cut watermelon product for the fast food industry that is less messy to eat and will not sit in juice after cutting.