

Flavor, Pigment, and Sugar Evaluation

Carrot SCRI Project 2021 progress

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Importance of flavor, color, and nutritional quality

- Flavor is critical for consumer choices
 - To choose among carrots in the market
 - To choose to eat carrots
- Uniform orange color and novel colors attract consumers
- Orange carotenoids in carrots account for 10-14% of US vitamin A intake
- Purple, yellow, and red pigments in carrots contribute to human health

Novel Carrot Colors



Materials and Methods

- ~750 PIs and USDA breeding stocks
 - Hancock, WI
 - El Centro, CA
- Organoleptic evaluation of 3 plants each entry
 - Harsh and sweet flavor, texture
 - Refractive index, HPLC evaluation of high and low 10%
- Visual evaluation of color intensity
- HPLC evaluation of root pigments in a subsample of plants
 - Carotenoids and anthocyanins
- Data will be submitted to GRIN

Flavor, sugar, pigment methods

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