**Peach Lexicon and a Look into Deeper Quality Analyses**

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**Introduction**

The variability in sensory characteristics for peach are not well understood and a standard vocabulary/lexicon for discerning those differences has not been developed.

- Establishment of a lexicon could provide a basis for the evaluation of fruit quality including peaches during preharvest, post-harvest, and commercialization of varieties.
- It would allow comparison among cultivars currently available to be used in breeding applications.

Fruit quality is generally measured by either instrumental methods or sensory evaluation methods. The peach lexicon will help researchers understand the sensory characteristics of various cultivars. This information could then be integrated with physical and chemical characteristics, and consumer acceptance to develop a full quality index.

To develop a universal lexicon for peaches to be used for descriptive analysis, with emphasis on mature, fresh fruits.

**Materials and Methods**

- Six trained panelists evaluated 52 commercial peach varieties grown in the southeastern United States.
- Attributes were developed under appearance, aroma & flavor, textures, feeling factors, and aftertastes.
- The panelists were then collectively defined and referenced on a 0 to 150-point scale for no presence to highly present.
- Lexicon with terms, definitions, and references was developed during 9 weeks.
- Panelists met for a three-hour session each week.

**Results**

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<tr>
<th>Table 1. Peach lexicon with definitions and references for the descriptive attributes</th>
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<td>Attributes</td>
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<td>Aroma</td>
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<td>Flavor</td>
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<td>Texture</td>
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<td>Feeling Factors</td>
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<td>Aftersite</td>
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**Key findings**

Thirty-four attributes were developed to describe the attributes of fresh peaches: blush of flesh, 11 aromas & flavors including three basic tastes, 7 textures, 3 feeling factors, and 4 aftertastes.

- Peach identity, melon, fruity, and sweet were the most common aroma attributes found in varieties evaluated.
- Flavors were mainly represented by peach identity, citrus, fruity, tart, sour, and sweet as the most common.
- Major texture terms included firmness, crispiness, juiciness, melting, and fibrousness; these are associated with melts and non-melting flesh type.

**References**


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**Figure 2. Example of common & unique attributes in 3 peach varieties**