National Mango Board: Mango Benchmark Study

52 Weeks Ending October 6, 2012
Mango key findings

In recent trends, mango has continuously grown in dollars and volume across total U.S.

Despite the growth, the percentage of people buying mangos still ranks well below other fruit categories.

Annual Household Penetration:
- Bananas: 85%
- Apples: 71%
- Mangos: 14%

Opportunity areas:

Increase household penetration:
- Complementary fruits (avocado and stone fruit) have higher annual penetration than mango.

Target strongest mango consumer segments:
- Foodies
- Natural/Organic
- Hispanic

Identify cross-merchandising opportunities:
- Mango buyers purchase other fruits and popular fresh items.

Understand the impact of heavy buyers:
- 73% of mango dollar sales from heavy buyers.

Source: Nielsen Perishables Group FreshFacts® Shopper Insights powered by Spire, 52 weeks ending 10/6/12
Mango sales continuously increased over the past three years

- Mango has a historic trend of growth year-over-year
- Despite continuous sales growth, mango still presents an opportunity for expansion

Mangos Dollar Trend (in Millions)
Total U.S.

- 2009: $111.8MM
- 2010: $141.3MM (up +26%)
- 2011: $152.2MM (up +8%)

Mangos Volume Trend (in Millions)
Total U.S.

- 2009: 122.8MM
- 2010: 153.1MM (up +25%)
- 2011: 162.3MM (up +6%)

Source: Nielsen Perishables Group FreshFacts®, stable stores 2009 through 2011
Mango growth was due to a small group of buyers

Penetration and annual purchase frequency for mango ranked well below mainstream fruits (bananas, apples and grapes)

Source: Nielsen Perishables Group FreshFacts® Shopper Insights powered by Spire, 52 weeks ending 10/6/12

Note: bubble size represents dollar sales
Who is the mango buyer?
Mango reaches 14% of all shopping households, and buyers purchase an average of 2.1 times per year

How much does the mango buyer purchase?
The average mango buyer spends $2.60 per trip on mangos, and purchases 2.1 units per trip

How much does the mango buyer spend in the store?
The mango buyer spends $80 across the entire store when mango is in their basket, while the average produce buyer spends $57 per trip

Source: Nielsen Perishables Group FreshFacts® Shopper Insights powered by Spire, 52 weeks ending 10/6/12
Mango sales driven by foodies, natural/organic and Hispanic households

Of the 14% of households that bought mango, the strongest buyers were:

- **Foodies***: Accounted for 55% of mango dollars sales, but only 46% of total store dollars sales
- **Purchased mango between two and three times per year**

***Foodies consist of high-priced and premium food buyers

Source: FreshFacts® Shopper Insights powered by Spire and Spire’s proprietary Essence™ shopper segmentation; 52 weeks ending 10/6/12
Mango buyers focus on fresh items and are likely to purchase other produce in the same trip.

Fresh accounted for more than half of the most popular items purchased with mangos.

The mango basket is more likely than the average basket to contain the following produce items:

<table>
<thead>
<tr>
<th>Produce Type</th>
<th>Likelihood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avocados</td>
<td>9.9 times more likely</td>
</tr>
<tr>
<td>Pears</td>
<td>7.8 times more likely</td>
</tr>
<tr>
<td>Stone Fruits</td>
<td>7.2 times more likely</td>
</tr>
<tr>
<td>Other Berries</td>
<td>6.1 times more likely</td>
</tr>
<tr>
<td>Blueberries</td>
<td>6.0 times more likely</td>
</tr>
<tr>
<td>Strawberries</td>
<td>5.4 times more likely</td>
</tr>
<tr>
<td>Herb and Spices</td>
<td>5.2 times more likely</td>
</tr>
<tr>
<td>Squash/Pumpkins</td>
<td>4.9 times more likely</td>
</tr>
<tr>
<td>Citrus</td>
<td>4.8 times more likely</td>
</tr>
<tr>
<td>Corn</td>
<td>4.3 times more likely</td>
</tr>
</tbody>
</table>

Source: Nielsen Perishables Group FreshFacts® Shopper Insights powered by Spire, 52 weeks ending 10/6/12
All fruits interact with mango, particularly tropical fruits

Fruits are complements and interact with mango baskets
Higher penetrated fruits with strong interaction can act as a gateway to increase frequency and reach of mangos

<table>
<thead>
<tr>
<th>Fruit</th>
<th>Household Penetration (%)</th>
<th>Annual Trips per HH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mango</td>
<td>14.0%</td>
<td>2.1</td>
</tr>
<tr>
<td>Papaya</td>
<td>1.9%</td>
<td>2.4</td>
</tr>
<tr>
<td>Kiwi</td>
<td>12.8%</td>
<td>2.0</td>
</tr>
<tr>
<td>Pineapple</td>
<td>13.3%</td>
<td>2.3</td>
</tr>
<tr>
<td>Avocado</td>
<td>31.7%</td>
<td>4.3</td>
</tr>
<tr>
<td>Stone Fruit</td>
<td>48.2%</td>
<td>3.4</td>
</tr>
<tr>
<td>Strawberries</td>
<td>62.0%</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Source: Nielsen Perishables Group FreshFacts® Shopper Insights powered by Spire, 52 weeks ending 10/6/12
Heavy mango buyers drove mango sales by purchasing more often

- Heavy mango buyers accounted for almost 75% of dollar sales and made nearly three more mango trips than medium or light buyers
- Heavy mango buyers spent more in the store ($84) than medium ($77) or light buyers ($70)

<table>
<thead>
<tr>
<th>Shopper Group</th>
<th>% of Mango Dollars</th>
<th>% of HHs</th>
<th>Mango Trips per HH</th>
<th>Mango $ per HH</th>
<th>Mango $ per Trip</th>
<th>Mango Units per HH</th>
<th>Mango Units per Trip</th>
<th>Avg. Store $ per Product Basket</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Mango Buyers</td>
<td>100.0%</td>
<td>100.0%</td>
<td>2.1</td>
<td>$5.55</td>
<td>$2.60</td>
<td>4.4</td>
<td>2.1</td>
<td>$80.29</td>
</tr>
<tr>
<td>Heavy Mango Buyers</td>
<td>73.4%</td>
<td>33.4%</td>
<td>3.9</td>
<td>$12.21</td>
<td>$3.09</td>
<td>9.5</td>
<td>2.4</td>
<td>$84.12</td>
</tr>
<tr>
<td>Medium Mango Buyers</td>
<td>18.8%</td>
<td>33.3%</td>
<td>1.4</td>
<td>$3.13</td>
<td>$2.20</td>
<td>2.6</td>
<td>1.8</td>
<td>$77.33</td>
</tr>
<tr>
<td>Light Mango Buyers</td>
<td>7.8%</td>
<td>33.3%</td>
<td>1.0</td>
<td>$1.31</td>
<td>$1.26</td>
<td>1.2</td>
<td>1.2</td>
<td>$69.95</td>
</tr>
</tbody>
</table>

Source: Nielsen Perishables Group FreshFacts® Shopper Insights powered by Spire, 52 weeks ending 10/6/12
One additional trip by the top third of mango buyers could increase annual mango sales $391 per store

<table>
<thead>
<tr>
<th>Buyer Group</th>
<th>Annual Mango Trips per Buyer</th>
<th>Average Mango Dollars per Trip</th>
<th>Average HHs per store</th>
<th>Annual Mango Opportunity when Purchased One More Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy</td>
<td>3.9</td>
<td>$3.09</td>
<td>126</td>
<td>$391 per store</td>
</tr>
<tr>
<td>Medium</td>
<td>1.4</td>
<td>$2.20</td>
<td>126</td>
<td>$278 per store</td>
</tr>
<tr>
<td>Light</td>
<td>1.0</td>
<td>$1.26</td>
<td>126</td>
<td>$159 per store</td>
</tr>
</tbody>
</table>

The mango opportunity from one additional trip is 41% higher* for heavy buyers than medium buyers

Note: Assumes that the additional trip will be at the average dollars per trip for each buyer group

*Comparison of $391 per store for heavy buyers versus $278 per store for medium buyers

Source: Nielsen Perishables Group FreshFacts® Shopper Insights powered by Spire, 52 weeks ending 10/6/12
Opportunity for mango by focusing on heavy buyers

Despite increased growth year-over-year, mangos are not yet mainstream.

**Findings**

- **Strongest mango consumers:**
  - Foodies
  - Natural/Organic
  - Hispanic

- **Mango buyers purchase fresh:**
  Other fruits were purchased in the same trip with mango

- **Heavy buyers drove mango sales:**
  73% of mango dollar sales from heavy buyers
  Heavy buyers present the largest opportunity ($391 per store) from buying one more time

**Implications**

- Expand penetration beyond the niche strong consumers
- Increase frequency among top buying groups to grow sales

**Tactics**

- Cross-merchandise with other fruits
- Promote to prompt trial and increase frequency
- Provide education and usage ideas that appeal to new and existing buyers

Source: Nielsen Perishables Group FreshFacts® Shopper Insights powered by Spire, 52 weeks ending 10/6/12