



# Consumer Research

**Presented On: November 28, 2007**

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# Objectives

- Understand how consumers currently use and purchase mangos.
- Determine why consumers are purchasing more or less mangos.
- Determine why previous purchasers are no longer purchasing mangos.
- Determine why infrequent or those who have never purchased mangos are not currently purchasing or purchasing more mangos.
- Establish level of knowledge and understanding about mangos.
- Determine importance of various mango movement strategies.

# Methodology

- In January 2007, two focus groups were conducted in San Francisco and two in Dallas, for a total of four groups.
- Two groups were among occasional mango purchasers and two were conducted among non-mango purchasers.
- Results from these groups were used to help refine the mango “point of sale” strategy and to help design the Mango Attitude & Usage Study.

Results from the Mango Attitude & Usage Study are presented on the following pages.

# Methodology

- A total of 454 households, which consisted of men and women between the ages of 21 and 69, were interviewed from June 11<sup>th</sup> through July 18<sup>th</sup>, 2007, using random digit dialing.
  - A national random sample of 372 U.S. households was completed  
(Sample error =  $\pm 4.3\%$  @ 95% confidence level)
  - A supplemental sample of 82 interviews was completed to ensure a readable sample size of Current Purchasers (180) and Past Purchasers (100) of mangos.  
(Sample error =  $\pm 6.2$  and  $8.3\%$  respectively @ 95% confidence level)
  - All telephone numbers were randomized across the country.

# Definitions of Mango Purchasing Behavior

## ***Current purchasers (35%)***

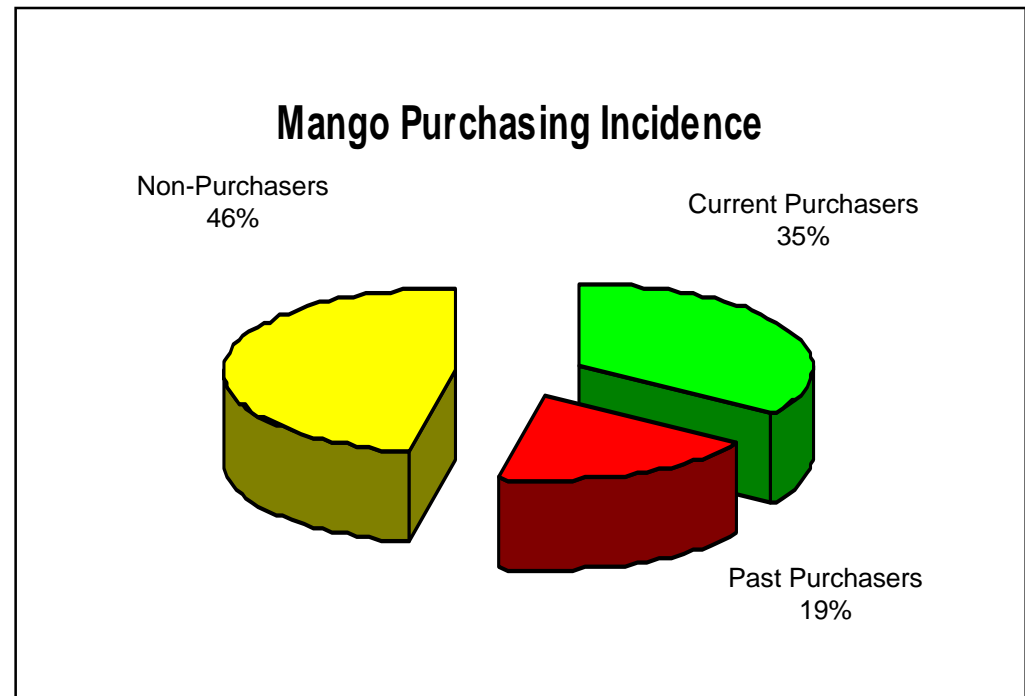
are those who have purchased mangos in the past 6 months and plan to purchase mangos in the future.

## ***Past purchasers (19%)***

are those who have not purchased mangos in the past 6 months, or those who have purchased in the past 6 months but don't plan to purchase in the future.

## ***Non purchasers (46%)***

are those who have never purchased mangos.



Random Sample n=372

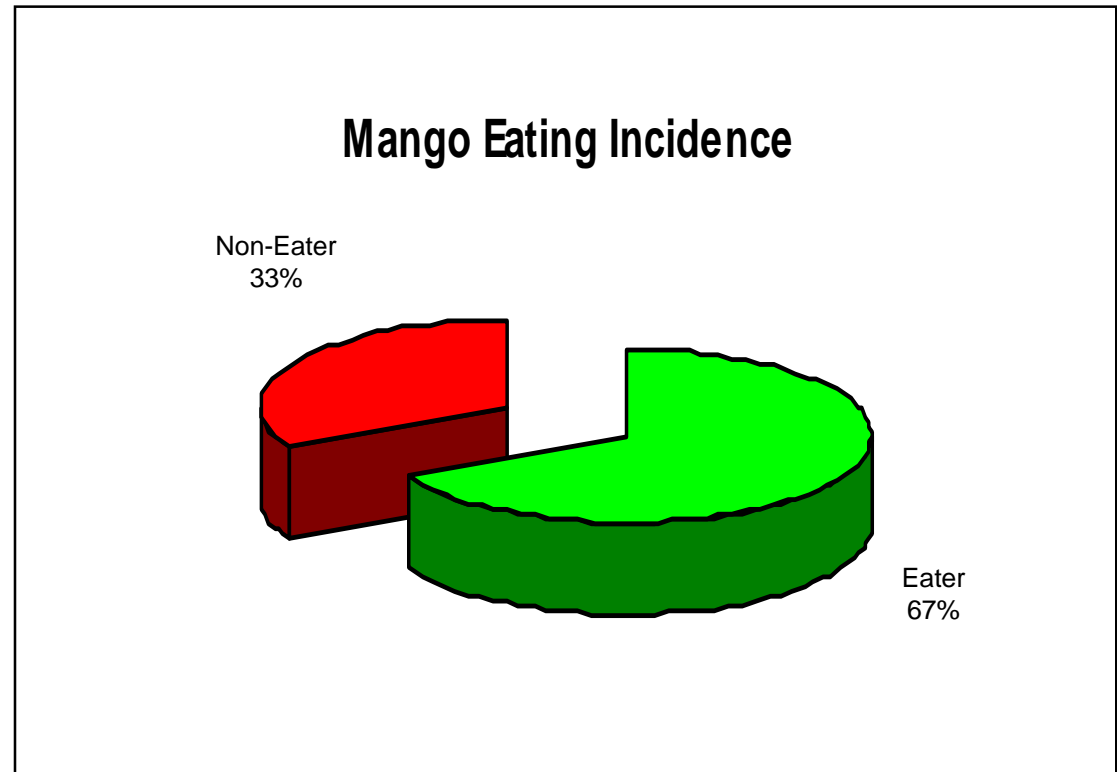
# Definitions of Mango Eating Behavior

## **Eaters (67%)**

are those who have eaten mangos at some time. This group captures households who have eaten mangos in a restaurant or elsewhere, but may not have purchased a fresh mango.

## **Non-eaters (33%)**

are those who have never eaten mangos and never bought mangos for their household.



Random Sample n=372

# Fresh Fruits Unaided Awareness

	Random Sample n=372	Current Purchasers n=180
Apples	74%	71%
Banana/Plantains	69	63
Oranges	57	54
Grapes	50	48
Strawberries	49	46
Watermelon	41	44
Peaches	41	43
Cantaloupe	34	30
<u>Exotic (Net)</u>	<u>31%</u>	<u>36%</u>
Kiwi	27	32
Papayas	9	14
Guava	3	4
Pomegranate	1	1
Kumquats	1	1
Pears	30%	24%
Cherries	26	28
Pineapples	26	26
Blueberries	23	26
Mangos	21	36
Grapefruit	19	14
Plums	18	19
Raspberries	18	19
Nectarines	18	16
Lemons	14	14
Apricots	12	16
Limes	12	12
Blackberries	11	15
Honeydew	10	11
Tangerines	9	9
Coconut	4	3
Cranberries	3	4
Tomatoes	2	1
Other	3	3

# Fresh Fruits Purchased

	<i><b>Purchased Past 6 months</b></i>	<i><b>Purchased Pre Cut Past 6 months</b></i>
<i><b>Oranges</b></i>	<b>85%</b>	<b>10%</b>
<i><b>Watermelon</b></i>	<b>75%</b>	<b>23%</b>
<i><b>Cantaloupe</b></i>	<b>73%</b>	<b>19%</b>
<i><b>Pineapple</b></i>	<b>69%</b>	<b>43%</b>
<i><b>Kiwi</b></i>	<b>47%</b>	<b>4%</b>
<i><b>Mango</b></i>	<b>35%</b>	<b>7%</b>
<i><b>Papaya</b></i>	<b>19%</b>	<b>5%</b>

Random Sample n=372

# Opportunity For Future Mango Movement

**The percentage of mango eaters (67%)  
is nearly double the percentage of  
current mango purchasers (35%).**

**This represents a huge opportunity  
for future fresh mango movement!**

# Like Mango Flavor?

**Q: Whether or not you have eaten mangos, do you like mango flavor?**

Among *random sample* (n=372)

**75% like mango flavor**

Among *non-eaters* (n=139)

**47% like mango flavor**

Among *non-purchasers* (n=174)

**53% like mango flavor**

**Someone who likes “mango flavor” may have consumed a juice, candy or another item with mango flavor without actually eating mango.**

**While only 35% are current purchasers and 54% have ever purchased mangos, 75% of the random sample likes mango flavor. Even more exciting is that 47% of non-mango eaters and 53% of non-mango purchasers like mango flavor.**

# Likelihood to Purchase

**Q: How likely are you to purchase whole mango in the next 6 months?**

Among *random sample* (n=372)

**52% said either they definitely would buy (32%) or probably would buy (20%)**

**Q: How likely are you to purchase whole mango in the next 6 months?**

Among *current purchasers* (n=180)

**95% said either they definitely would buy (72%) or probably would buy (23%)**

**Q: How likely are you to purchase whole mango in the next 6 months?**

Among *past purchasers* (n=100)

**58% said either they definitely would buy (18%) or probably would buy (40%)**

**The majority of all households said they would probably or definitely purchase mangos in the next 6 months.  
Current purchasers are particularly committed to future purchases of mangos.**

# Likes and Dislikes About Mangos

## **Q: What is it you like about mangos?**

*Among current purchasers (n=180) most common answers were:*

***Taste/Flavor (56%)***

***Sweet (41%)***

***Texture (28%)***

## **Q: What is it you don't like about mangos?**

*Among current purchasers (n=180) most common answers were:*

***Preparation (Net) - 15% [Cutting them – 12% and Cleaning/Peeling them – 11%]***

***Has pit/seed (14%)***

***Hard to select/pick ripe ones (11%)***

***Among those disappointed with mangos from random sample (n=70) has a pit/seed (21%) and hard to select/pick ripe ones (20%)***

# Why Haven't You Purchased?

**Q: You indicated you have never purchased a fresh mango - why is that?**

*Among all non-purchasers (n=174) most common answers were:*

***Not familiar with mangos (17%)***

***Do not like them (12%)***

***Not available (10%)***

***Among non-purchasers 45 years old and over (n=113) lack of familiarity with mangos was mentioned even more often (21%)***

**Q: You indicated you have purchased mangos, but not in the past 6 months - why is that?**

*Among all past-purchasers (n=100) most common answers were:*

***I don't think about them (15%)***

***Out of season/not available fresh (15%)***

# Why Unlikely to Purchase?

**Q: Why are you unlikely to purchase whole fresh mango in the next 6 months?**

*Asked of those from the random sample who said they might or might not buy (12%), probably would not buy (14%) or definitely would not buy (20%), most common answers were (n=175)*

***Do not like them (22%)***

***Not available (13%)***

***Lack of knowledge/Inexperienced (13%)***

**Availability and familiarity are common answers when we explore why someone would be unlikely to buy in the future or why they haven't bought in the past.**

# Purchasing More or Less Now?

**Q: Are you purchasing more or less mangos than you were last year?**

*Among current purchasers (n=180)*

**30% said they are purchasing somewhat more (22%) or much more (8%) than a year ago**

**56% said they are purchasing about the same amount as a year ago**

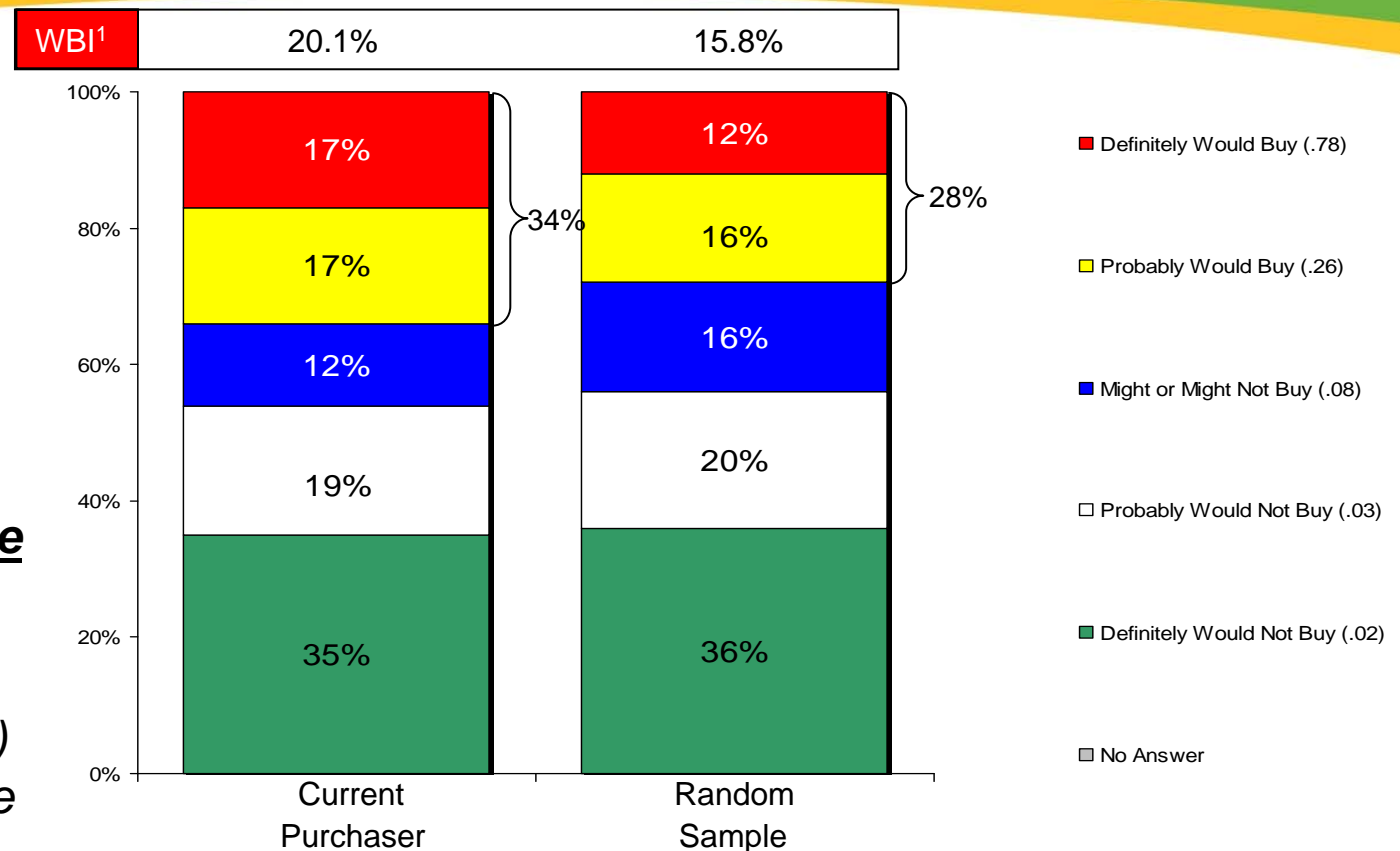
**11% said they are purchasing somewhat less (10%) or much less (1%) than a year ago**

**35% of those who said they are purchasing somewhat less or much less than a year ago cited availability as the reason for purchasing less mangos**

# Likelihood of Purchasing Fresh-Cut Mangos

**Q: If they were available at your local grocery store, how likely would you be to purchase pre-sliced and pre-packaged ripe mangos during the next 6 months?**

*Among current purchasers (n=180) and random sample (n=372)*



**34% of current mango purchasers say they probably or definitely would buy fresh cut mangos.**

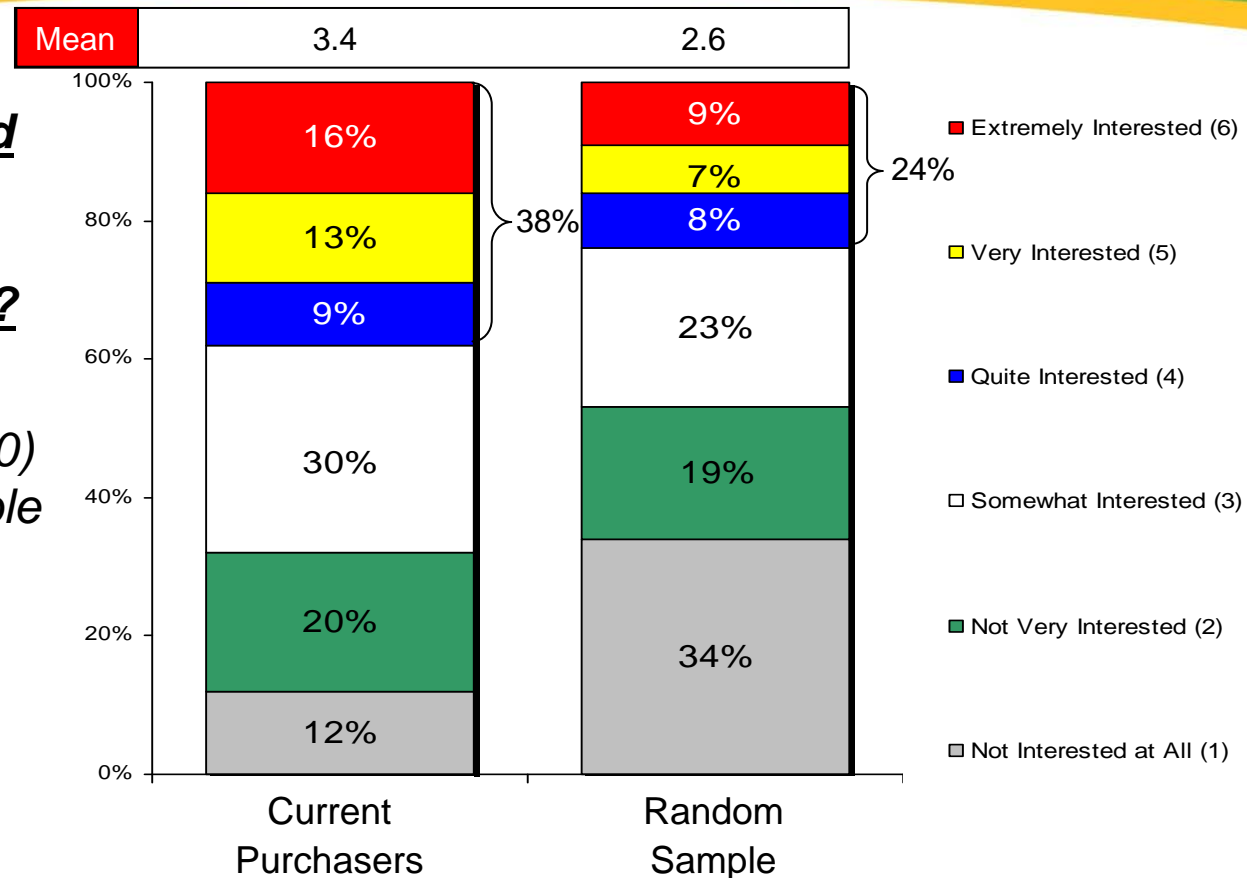
**28% of the random sample say they probably or definitely would buy fresh cut mangos.**

<sup>1</sup> The W.B.I. is calculated as follows: "Definitely Would Buy" = .78, "Probably Would Buy" = .26, "Might/Might Not Buy" = .08, "Probably Would Not Buy" = .03, "Definitely Would Not Buy" = .02. This estimates how many respondents would actually buy the product if it was available. Based on historical industry data, approximately three-quarters of those who indicate that they "definitely would buy" a product actually do purchase it, approximately one-quarter of those who indicate that they "probably would purchase" actually do, etc.

# Interest in Purchasing Organic Mangos

**Q: How interested are you in purchasing organic mangos?**

*Among current purchasers (n=180) and random sample (n=372)*



**38% of current mango purchasers are at least quite interested in purchasing organic mangos.**

**24% of those in the random sample are at least quite interested in purchasing organic mangos.**

# Purchase in Spring and Summer?

**Q: Do you purchase mangos during the spring and summer months from March through August?**

*Asked of current purchasers (n=180)*

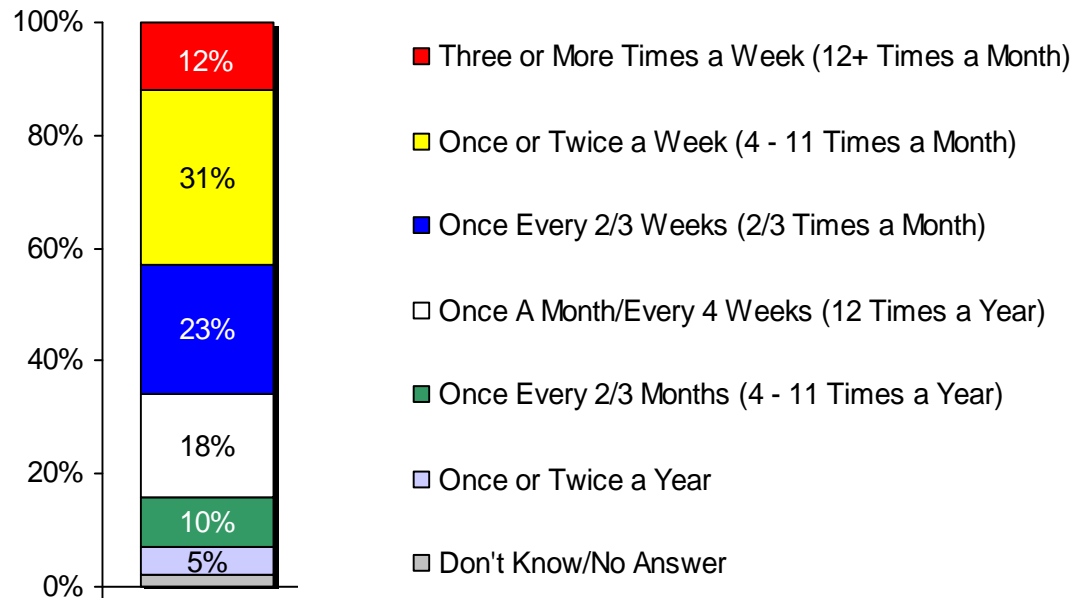


# Usage in Spring and Summer

Mean 4.9

**Q: About how often are mangos served in your home during the spring and summer months from March through August?**

*Asked of spring/summer purchasers (n=163)*



**Over 90% of current purchasers buy mangos during the spring and summer months.**

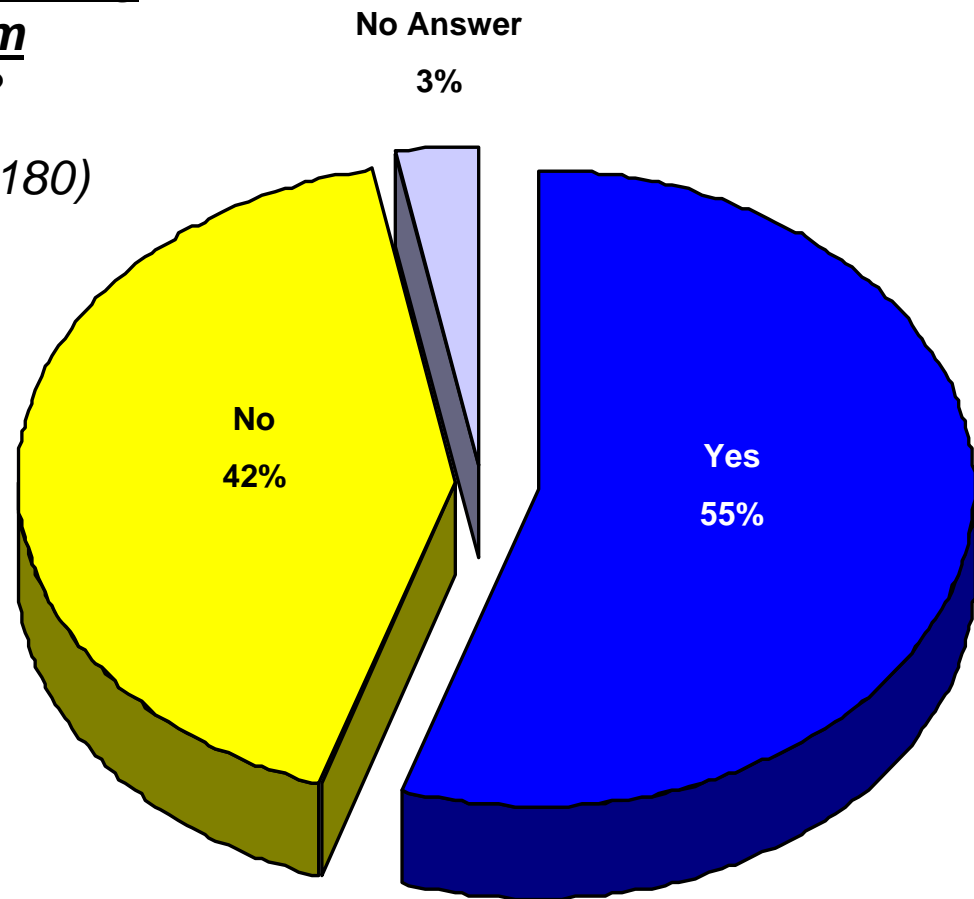
**Of those, 43% are serving mangos once or twice per week or more.**

**66% are serving mangos 2 to 3 times per month or more.**

# Purchase in Fall and Winter?

**Q: Do you purchase mangos during the fall and winter months from September through February?**

*Asked of current purchasers (n=180)*

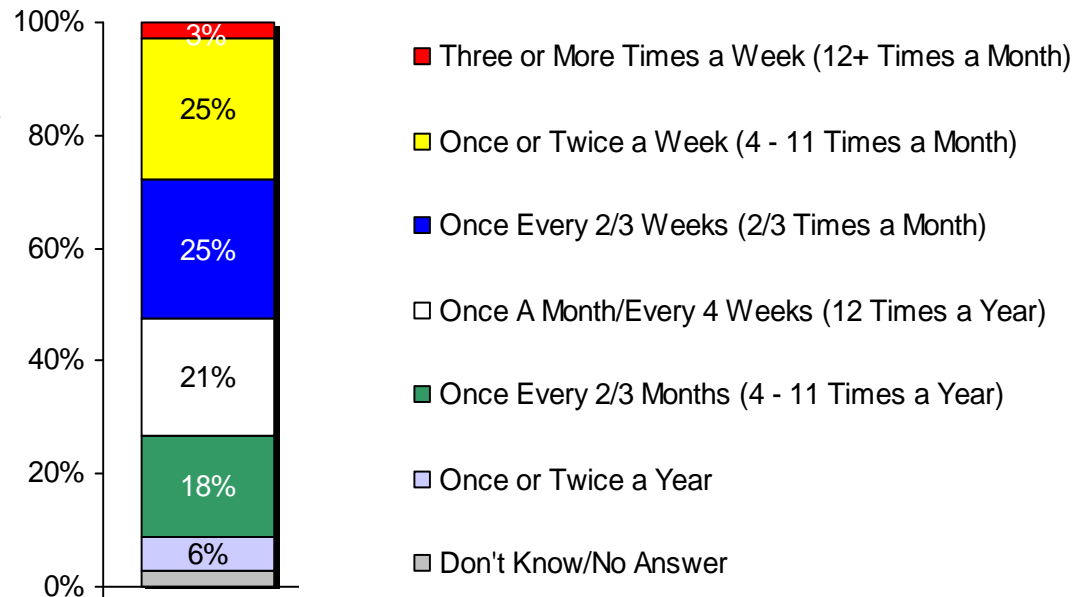


# Usage in Fall and Winter

Mean 3.4

**Q: About how often are mangos served in your home during the fall and winter months from September through February?**

*Asked of spring/summer purchasers (n=99)*



**Just 55% of current purchasers buy mangos during the fall and winter months.**

**Of those, 28% are serving mangos once or twice per week or more.**

**53% are serving mangos 2 to 3 times per month or more.**

**While not displayed above, 56% of respondents disagree with the statement “Mangos are available all year round where I usually buy fruit.”**

# Opportunity To Move More Mangos

**Both the likelihood of purchase and the frequency of serving mangos drops significantly during the fall and winter months.**

**With good quality mangos available from South America during these months, with increased familiarity, there is an excellent opportunity to move more mangos during this period.**

# Agree/Disagree Statements

**Q: When thinking about fresh mangos, please rate the following statements...**

*Among random sample (n=372)*

**56% agree mangos taste great** (39%) strong agreement and (17%) slight agreement

**57% agree mangos are an exotic fruit** (37%) strong agreement and (20%) slight agreement

**53% agree mangos are typically inexpensive** (40%) strong agreement and (13%) slight agreement

**53% agree mangos are healthy and nutritious** (33%) strong agreement and (20%) slight agreement

**52% agree mangos are difficult to slice** (33%) strong agreement and (19%) slight agreement

**50% agree mangos are a special treat** (32%) strong agreement and (18%) slight agreement

# What is a Premium Quality Mango?

**Q: How would you describe a premium quality mango?**

*Among current purchasers (n=180) most common answers were:*

***60% cited texture, either firm (38%) or soft (33%)***

***31% cited color, with red (16%) and green (9%) the two most common colors mentioned***

***27% cited taste or flavor, with 18% specifying sweet***

***21% cited juicy***

***13% cited ripe***

***12% cited smell***

**Shoppers continue to confuse color with premium quality in a mango.  
This is an excellent opportunity for consumer education.**

# Disappointment with Mango Quality

**Q: How satisfied have you been with the overall quality of mangos sold where you usually buy your fruit?**

*Among current purchasers (n=180)*

**54% said the overall quality of mangos was either very good (41%) or excellent (13%)**

**32% said the overall quality of mangos was good**

**Q: How satisfied have you been with the overall quality of mangos sold where you usually buy your fruit?**

*Among past purchasers (n=100)*

**30% said the overall quality of mangos was either very good (27%) or excellent (3%)**

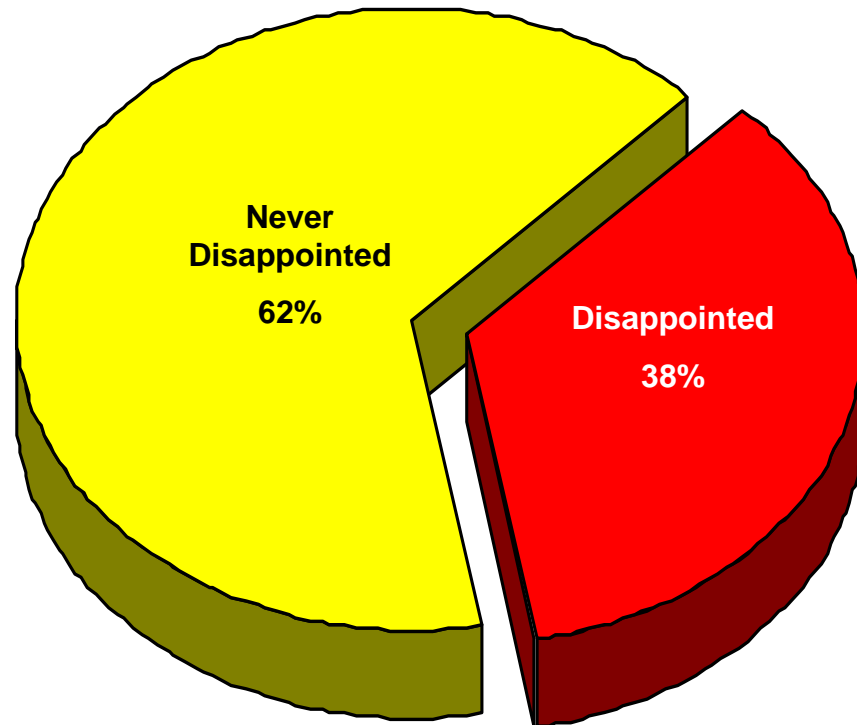
**41% said the overall quality of mangos was good**

**14% said the overall quality of mangos was either fair (13%) or poor (4%)**

# Disappointment with Mango Quality

**Q: Have you ever been disappointed with the overall quality of mangos sold where you usually buy your fruit?**

*Among current purchasers  
(n=180)*



# Disappointment with Mango Quality

**Q: What specifically has disappointed you about the overall quality of mangos sold where you usually buy your fruit?**

*Among those who have been disappointed (n=69), most common answers were:*

**56% cited problems with ripeness, either not ripe enough (36%) or too ripe (20%)**

**22% cited disappointment with taste**

**19% were disappointed with texture**

**10% were disappointed because the mangos were out of season or not available fresh**

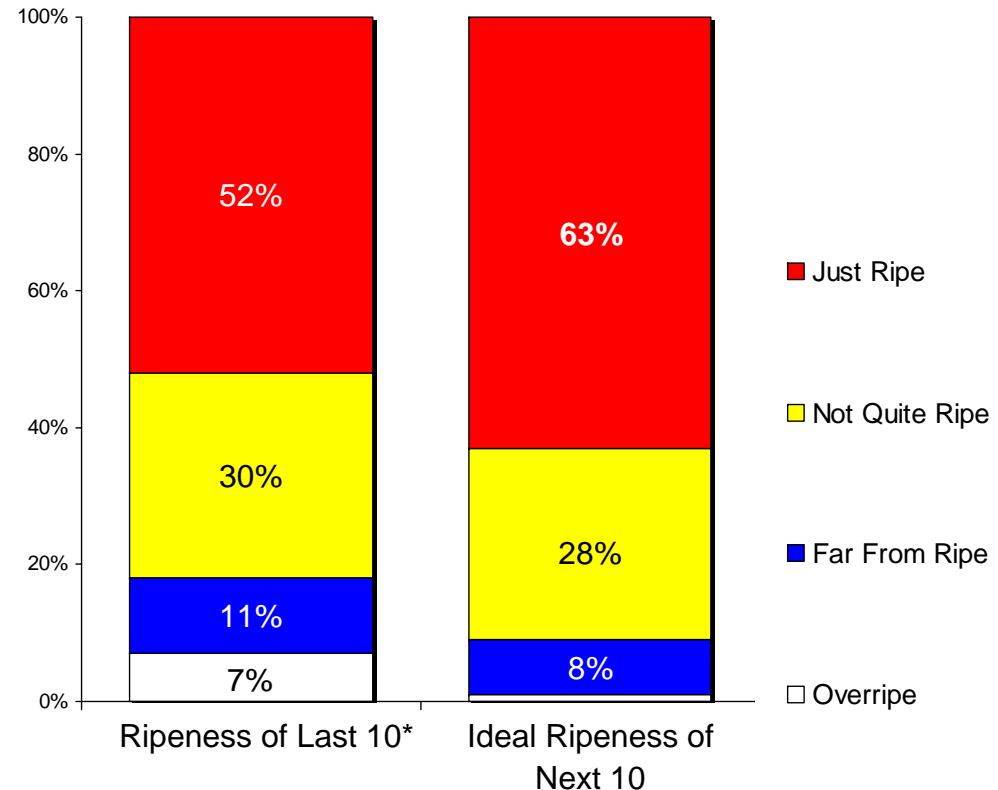
**There is room for improvement on shoppers' perception of mango quality.**

**The greatest opportunity seems to be with fine-tuning levels of ripeness of mangos available for purchase and educating consumers how to select a ripe mango.**

# Ideal Mango Ripeness

**Q: In an ideal world where you could buy mangos to your liking, thinking about the next 10 mangos you might select for purchase, how many mangos would you select that are just ripe, not quite ripe, far from ripe or overripe?**

*Among current purchasers (n=180)*



**Current Purchasers of mangos would like more of the mangos they purchase to be “just ripe” (63% of next 10 vs. 52% of last 10\*).**

\* Percent indicating “Just Ripe” may be overstated, reflecting respondent’s desire to appear more knowledgeable about their ability to select ripe mangos.

# Mango Storage and Ripening

**Q: Which of the following describes how you typically would store a mango to ripen it?**

*Among current purchasers (n=180) most common answers were:*

**63%      *Keep it whole out on the counter***

**22%      *Keep it in a paper bag***

**10%      *Store it whole in the refrigerator***

**Q: Which of the following describes how you typically would store a ripe mango?**

*Among current purchasers (n=180) most common answers were:*

**43%      *Store it whole in the refrigerator***

**22%      *Cut it then store in the refrigerator***

**19%      *Keep it whole on the counter***

# Determining Mango Ripeness

**Q: Please describe how you personally determine if a mango is ripe.**

Among current purchasers (n=180) most common answers were:

**90%      Texture Related Comments (Net)**

**53%**      ***If it is firm to the touch***

**38%**      ***If it is soft to the touch***

**48%      Color Related Comments (Net)\***

**32%**      ***If it is red in color***

**20%\***      ***If it is orange in color***

**16%\***      ***If it is yellow in color***

**11%**      ***If it is green in color***

**Between two-fifths (37%) and one-half (48%) of Current Purchasers determine the ripeness of a mango from the outside color of the mango.**

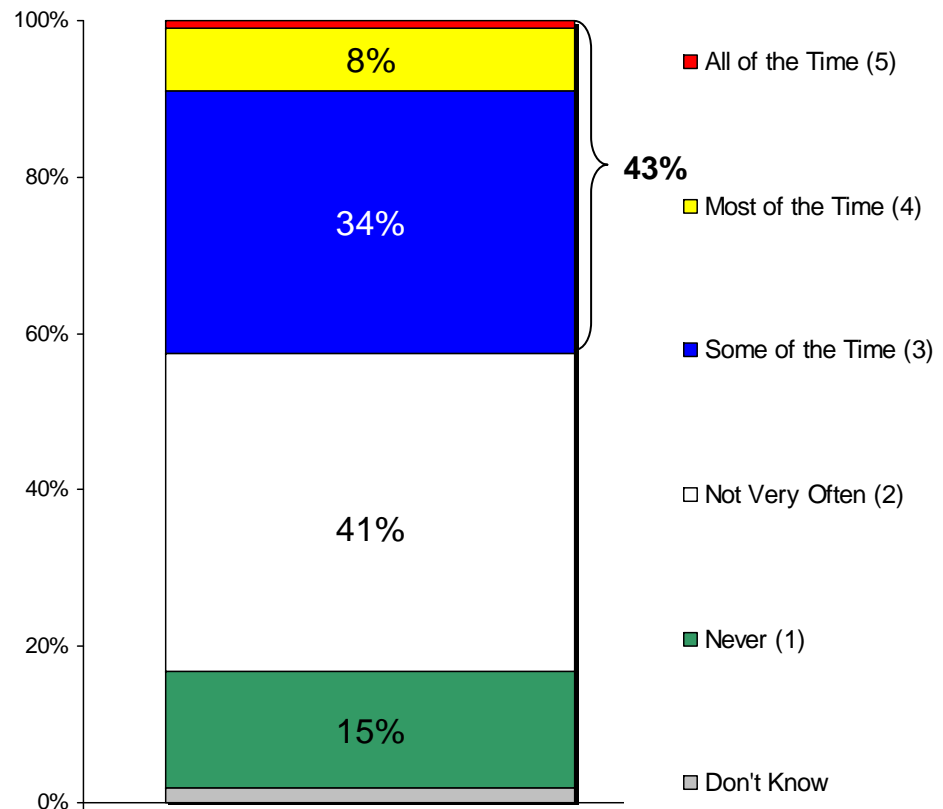
\* Percent indicating “orange” or “yellow” may be indicating inside or outside of mango. As such, the outside color of the mango may be as little as 37% (red/green subnet), or as much as 48% (color net).

# Mango Ripening

Mean 2.4

**Q: How often have you cut open a mango thinking it was ripe, and then found out it was more or less ripe than you thought it would be?**  
Among current purchasers (n=180)

**43% of current purchasers have been wrong about mango ripeness at least some of the time.**



# Mango Ripening

**In the area of mango ripening, we have an opportunity to better educate shoppers so they know how to ripen a mango and can accurately predict when a mango is ripe.**

**In the area of mango displays, we have an opportunity to present more ripe and ready to eat fruit to shoppers to meet their preferences.**

# How Have You Eaten Mango?

**Q: In which of the following ways have you eaten mango?**

*Among current purchasers (n=180) most common answers were:*

**88%**      ***By itself as a snack, breakfast or dessert***

**77%**      ***As an ingredient (includes the following)***

***53% In a salsa or chutney***

***51% In a smoothie***

***47% As an ingredient with chicken, fish or pork***

**69%**      ***With other fruit or in a fruit salad***

**The variety of ways mangos have been eaten shows the versatility of the fruit and the opportunity to share new usage ideas with shoppers.**

# How/Where Have You Eaten Mango?

**Q: Thinking about the last 10 times you ate a mango, whether as an ingredient, by itself or mixed with other fruit, how many times were mangos served...?**

*Among current purchasers (n=180)*

- 56% By itself**
- 27% Mixed with other fruit**
- 14% As an ingredient**

**Q: Thinking about the last 10 times you ate a mango, whether as an ingredient, by itself or mixed with other fruit, how many times were mangos served...?**

*Among current purchasers (n=180)*

- 78% At home**
- 11% At a restaurant**
- 8% At a friend's home**

# How Would Mangos be Used or Served?

**Q: If you were to buy fresh mango for members of your household how would they be used or served?**

*Among current purchasers (n=180) most common answers were:*

**45%**      ***For everyday occasions***

**13%**      ***For special occasions***

**12%**      ***On weekdays***

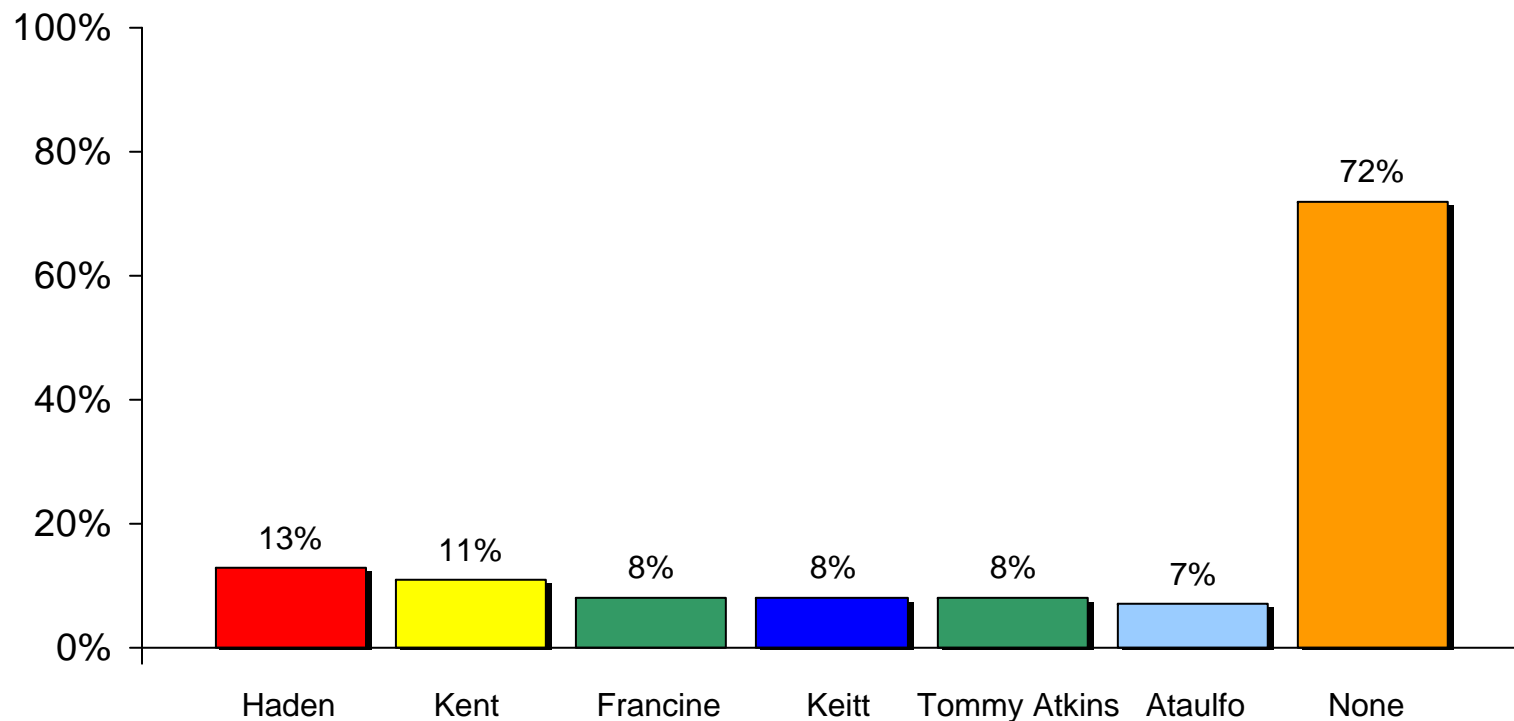
**9%**        ***As a snack***

**6%**        ***For dessert***

**5%**        ***At breakfast***

# Awareness of Varieties

**Q: Which of the following varieties of mangos have you seen or heard of?**  
Among current purchasers (n=180)



**Most mango purchasers are not aware of varieties.**

# Awareness of Producing Countries

**Q: What countries do mangos come from that are sold where you usually buy fruit?**

*Among current purchasers (n=180) most common answers were:*

42% Mexico

23% United States

22% South America, includes the following most common answers

9% Ecuador

9% Peru

9% Brazil

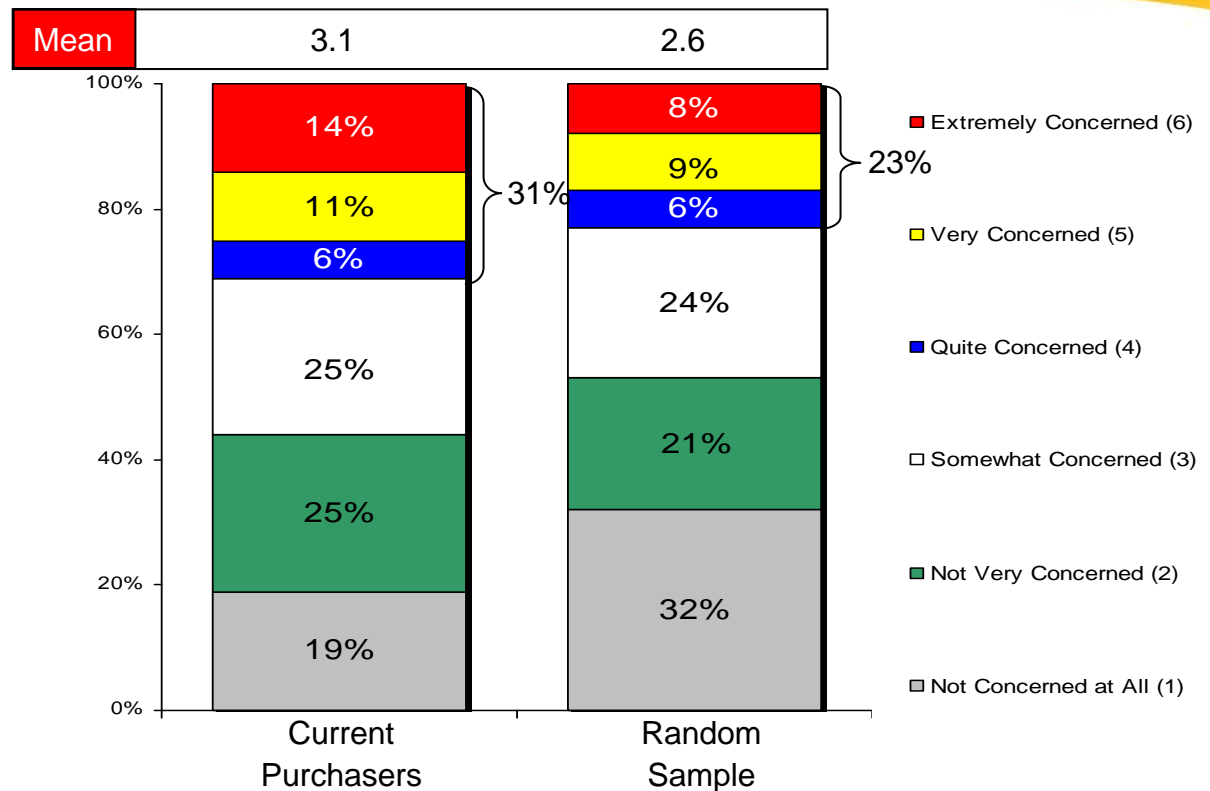
13% Guatemala

17% Don't know/don't remember

# Concerned About Safety of Mangos

**Q: Which of the following describes your concern about the safety of mangos sold in the United States?**

*Among current purchasers (n=180) and random sample (n=372)*



**31% of current mango purchasers are at least quite concerned about mango safety.**

**23% of those in the random sample are at least quite concerned about mango safety.**

# Concerned About Safety of Mangos

## **Q: What concerns do you have about mango safety?**

*Among current purchasers who were somewhat, quite, very or extremely concerned, most common answers were (n=100)*

*43% Chemicals, includes the following answers*

*33% Pesticides*

*12% Chemicals*

*32% Contamination, includes the following answers*

*11% Contamination*

*9% E coli*

*6% Cleanliness*

*5% Diseases*

*4% Bacteria*

*3% Same as spinach scare*

*20% How they are grown/proper handling*

*18% Where they are grown/what country*

# User Profile

## Current Purchaser

Age:	47 Years Old
Gender:	Female
Regions:	South and West
Household Income:	\$71,300
Ethnicity:	Less likely Caucasian than random sample
Education:	Completed College
Fruits Purchased:	Oranges, Cantaloupes, Watermelons
Shopping:	Shopping for groceries and produce at natural food stores and produce/farmer's markets indexes higher for current purchasers
Activities:	Computers, BBQ/Grill, Physical Fitness/Exercise, and Travel. Gourmet/Creative Cooking index higher for Current Purchasers.

# Conclusions/Recommendations

## Education to Improve Consumers' Ability to Better Select Mangos

**One third of mango purchasers are disappointed with the overall quality of mangos.**

**Two-fifths of Current Purchasers indicate that they find mangos more or less ripe than they thought they would be.**

**In addition to the primary source of disappointment being about ripeness, a premium mango, in addition to texture, is described as being red in color. With one-half of Current Purchasers mistakenly considering color in selecting a ripe mango, continued further education to better select a mango is strongly recommended to increase overall satisfaction.**

# Conclusions/Recommendations (Cont.)

## Recipes

**While current purchasers indicate that “as an ingredient” represents only 14% of the last ten times they ate a mango, nearly four-fifths (77%) of current purchasers have eaten a mango as an ingredient (53%) in a salsa, (51%) in a smoothie, and (47%) as an ingredient with chicken, fish or pork.**

**Continued development of recipes to increase awareness, further reinforcing the versatility of mangos as an ingredient, should be considered.**

# Conclusions/Recommendations (Cont.)

## Movement Messages

The sweet taste, juicy texture and that mangos are different are among the most mentioned likes about mangos. Respondents are in strong agreement that mangos are an exotic fruit and that they taste great. They are healthy and nutritious and that they are a special treat. As such, communications should continue to incorporate these descriptions where appropriate.

## Increased Availability

Respondents are in strongest agreement with “Mangos are not available all year round where I usually buy fruit.” In addition, mangos are purchased significantly more in the Spring/Summer and more frequently, further efforts to increase availability and movement in Fall/Winter should be considered.

# Conclusions/Recommendations (Cont.)

## Product Development

**With one-third of Current Purchasers indicating they definitely or probably would buy a pre-packaged/pre-sliced mango, further development of pre-packaged/pre-sliced mangos is recommended.**

**Nearly three-tenths of Current Purchasers are very or extremely interested in purchasing organic mangos. As such, further development of organic mangos should be considered.**