



Consumer Research; Measuring the Demand for Mangos

The Big Picture:

Mangos are a mainstay in most U.S. supermarkets, but demand for the fruit depends on many factors, including appearance, taste, and price. Consumers' understanding of the fruit plays a key role in whether or not they'll make a purchase. Consumers' buying habits also vary according to demographic differences like ethnicity, income and education level. For first-time buyers with limited exposure to the fruit, special advertising and promotion events may push them to make a purchase.

In order to successfully market mangos and determine which promotions would be the most effective, the National Mango Board has set up a system to help measure the demand for mangos in the U.S.

Spearheaded by Dr. Ronald Ward of the University of Florida, Gainesville, the NMB has developed an ongoing survey of consumer households to track their mango purchasing behavior. Using the tools in this survey, the NMB is collecting valuable information monthly about which consumers are buying mangos, how many they buy, and how much they pay for the fruit. Tracking this data over a period of time will allow the NMB to determine the effectiveness of promotions and help the board to build overall demand for mangos.

This research is already providing valuable insight into mango purchasing patterns. As of mid-December 2008, the NMB had amassed approximately 18,444 household observations with regard to mangos collected at two-week intervals from March through October. These observations reveal the following notable results:

Overall Findings:

- **Seasonality of mangos is a driving factor in purchasing patterns.** During the height of mango season from April through August, approximately 5% of survey households indicated buying mangos. By early November, when less fruit was available, only 2.7% of households said they were buying mangos.
- **Ethnicity is the single most important demographic that impacts the likelihood of mango purchase.** Currently only about 4% of the white, non-Hispanic population in the U.S. is likely to buy mangos, researchers found. However, this group makes up 61% of the U.S. population. Promoting mangos specifically to this group could help to boost mango demand substantially.
 - Asian consumers were the most likely ethnic group to buy mangos according to the survey, with 19% saying they purchased the tropical fruit. Asians comprise 3% of the U.S. population currently.
 - Nearly 8% of black consumers surveyed indicated they bought mangos. African American consumers make up about 16% of the U.S. population.

- Nearly 7% of Hispanic shoppers surveyed purchased mangos in a two-week shopping period. Hispanics make up about 11% of the nation's population.
- **The price consumers pay for mangos differs by month but is directly connected to the wholesale import price of mangos at the time.** Research found that a typical buyer purchases 2 to 3 whole mangos per trip and spends about \$1 per mango (the amount spent per mango ranged from 76 cents to \$1.35). Consumers' spending on mangos during a given two-week period ranged from a low of \$2.02 to a high of \$3.23.
- **The likelihood of buying mangos generally increases with education while the effects of income are minimal, researchers found.** About 6% of shoppers of all income levels indicated a probability of purchasing mangos.
- **Health issues appear to have little impact on whether consumers decide to buy mangos or not.** Households that indicated various health problems like high blood pressure, diabetes, obesity and high cholesterol showed very little difference from other families' mango purchasing patterns, Ward found. Also, the chances of buying mango seemed to decline among households with people who count calories, but the chances of buying the tropical fruit increased among those who exercise more.
- **People who say they like to experiment with new foods and those who seek out organic foods are more likely to buy mangos than other consumers.** Those who like to try new foods showed a likelihood of buying mangos that ranged from a low of 2.2% to a high of 8.8%. Consumers of organic fruit were more likely to buy mangos than the average consumer, with the likelihood of purchase ranging from 4% to 10%.
- **Sales of fresh-cut mangos vary according to the availability of fresh product.** During peak season, nearly 90% of mangos are purchased as whole mangos, while 10% are bought as fresh-cut product. As the fresh season winds down, sales of fresh-cut product increase. Sales of fresh-cut product in the last year ranged from 3% of sales during peak season to 25% of sales during the off-season.

Looking ahead:

These initial consumer findings are important, but what's even more significant is the ongoing nature of this project. By building a database of consumers' mango buying habits, the NMB opens the door to customized promotion efforts and the ability to forecast demand for mangos.

The board plans to gather consumer information over a five-year period in an effort to develop a "full demand model" that will give it the ability to scientifically measure the results of its promotion efforts. In doing this, the NMB will eventually be able to use simulation techniques to determine how the mango market would likely react to a

planned promotion. The data collected from this project will eventually be used to measure the overall effectiveness of the NMB's programs.

Another significant advantage to this program is that the consumer model could be used to gain insight into unexpected changes in the marketplace. (For example, what if incomes were expected to decline 5% over the next year? How would that affect mango sales?) The ability to gauge future sales based on a number of market factors will help the NMB to anticipate industry changes before they happen.