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Final Report

Consumer Perceptions of Florida Strawberries

Florida Strawberry Research & Education
Foundation

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Executive Summary

Florida Strawberry Growers Association/ Consumer Perceptions of Florida Strawberries

APRIL 2014

Introduction

Florida is the top winter producer of strawberries in the United States. Strawberries imported from Mexico have increased over recent years and have started to compete with local produce on grocery shelves. The Florida Strawberry Growers Association (FSGA) is trying to determine ways to better promote their product and differentiate Florida strawberries from imported competitors. The UF/IFAS Center for Public Issues Education developed a survey instrument to explore the attitudes and perceptions Florida consumers associated with both Florida and imported strawberries. This examined (1) consumers' strawberry purchasing behaviors, (2) attitudes associated with Florida and imported strawberries, (3) general strawberry knowledge, and (4) consumers' ability to identify information on the FSGA webpage.

Findings

Key finding from this study include the following:

- Florida consumers indicated that freshness and taste were the most important factors when making strawberry purchasing decisions.
- Over half of the respondents look to see where strawberries are grown, but only 37% make their purchase based off the growing location.
- Respondents were approximately three times more likely to purchase strawberry packages with the Fresh from Florida logo on the label than packages that did not contain the logo.
- Strawberries grown in Florida were considered sweeter, fresher, and safer than strawberries grown in Mexico by Florida consumers
- A large majority of respondents would choose strawberries grown in Florida over those imported from California or Mexico due to associated freshness, taste, and the support of Florida's economy.
- Florida consumers had difficulty navigating the FSGA webpage and could not correctly identify the local strawberry season

Background

According to the United States Department of Agriculture (USDA), Florida is the second-highest strawberry producer in America, growing around 200 million pounds of strawberries in 2012. Due to the warm climate, Florida's strawberry season is during the winter months from December until March, which is California's off-season. California is currently America's largest producer of strawberries, yielding over 2 billion pounds of strawberries during the 2012 season ("Table 4--u.s. strawberry," 2013). Even with these large volumes being produced domestically, the number of imported strawberries has increased over the past few years, despite the exported volume has stayed fairly constant (Wu, Guan, & Whidden, 2012). These imported strawberries have increased by over 300 million pounds in the past decade and are starting to concern Florida growers (Wu, Guan, & Whidden, 2012).

Imported strawberries are typically only sold in American stores when the domestic berries are out of season. However, this dramatic increase in strawberries from Mexico has led to more competition for local farmers. Plant City, FL., is the "winter strawberry capital of the world," harvesting about 11,000 acres of strawberries a year. In early 2013, a supermarket chain began selling imported Mexican strawberries on shelves next to the locally grown Plant City strawberries. The executive director for the Florida Strawberry Growers Association said, "I understand what they are trying to do, but this is just insulting to our community that depends so much on our local crop, and that's the point I am trying to make, that this is just inappropriate," (Shope, 2013). Now that local strawberries are facing competition from imports, it is essential to explore consumers' perceptions of the product in order to create a more effective promotional plan.

This survey specifically examined

- Florida consumers' purchasing habits of strawberries;
- Florida consumers' purchasing decisions impacted by strawberry package labels;
- Florida consumers' attitudes associated with strawberries grown in Florida, California, and Mexico;
- Florida consumer's awareness of the Florida strawberry season; and
- Florida consumer's ability to identify information on FSGA home page.

Methods

The survey was distributed in February 2014 to a sample of Floridians representative of the 2010 Census. Non-probability sampling using quotas was used to construct the sample. The original quota was as follows: Gender (51% Female, 49% Male), Race (12% African American, 74% Caucasian, and 14% Asian, Native Hawaiian, Pacific Islander, or other), Hispanic (12%), and age (17% 20-29 years old, 22% 30-39 years old, 25% 40-49 years old, 18% 50-59 years old, and 18% 60 or older). Qualtrics, a survey software company, distributed the survey to 1,812 Florida residents who were 18 or older. The target sample of 500 respondents meeting the quota became difficult to fill so the numbers were adjusted to allow for an increase the percent of middle-aged white women completing the survey. Non-probability sampling is typically used in public opinion research to create population estimates and has been shown to sometimes yield results better than probability sampling (Baker et al., 2013).

The survey instrument contained both researcher-developed questions and questions adapted from previous studies. Questions concerning consumer perceptions associated with Florida and Mexico strawberries were adapted from the PIE Center food panel instrument (Rumble & Leal, 2013).

Description of Respondents

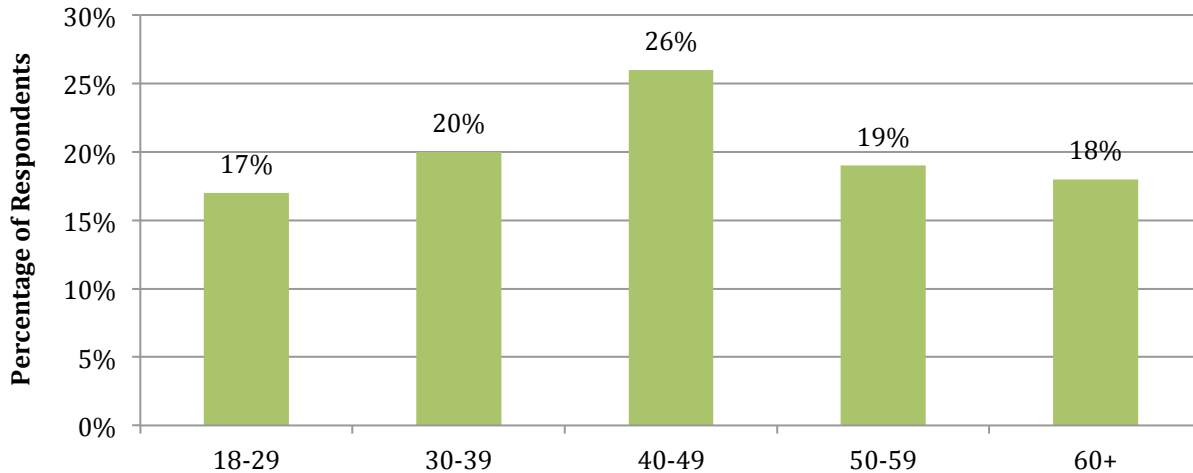
Sex

Of the respondents used in the results of the survey, 38% were male and 62% were female.

Age Representation

A little more than half of the respondents (55%) were middle-aged, ranging from 40-59 years old (Figure 1). Only 18% were over the age of 60 and just over a third (37%) were 39 years old or younger.

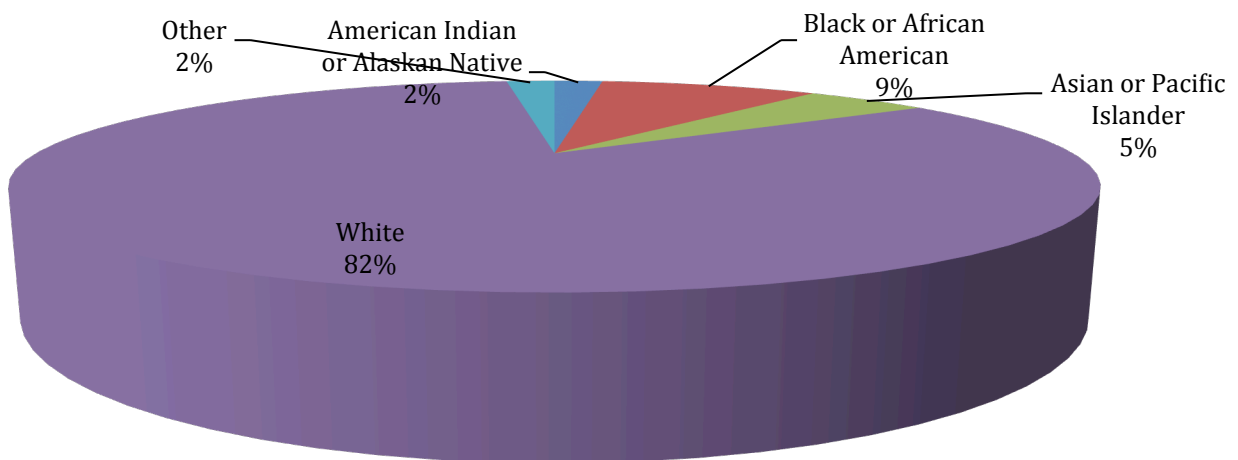
Figure 1. Age Representation



Race/Ethnicity Representation

The majority of respondents were White (82%), followed by African-American (9%; Figure 2). The Asian, Native American, and “Other” racial categories represented 9% of the respondents. Hispanic or Latino ethnicity was identified by 10% of the respondents. Most of the respondents spoke English as the main language in their home (96%) and 4% spoke Spanish as their primary language.

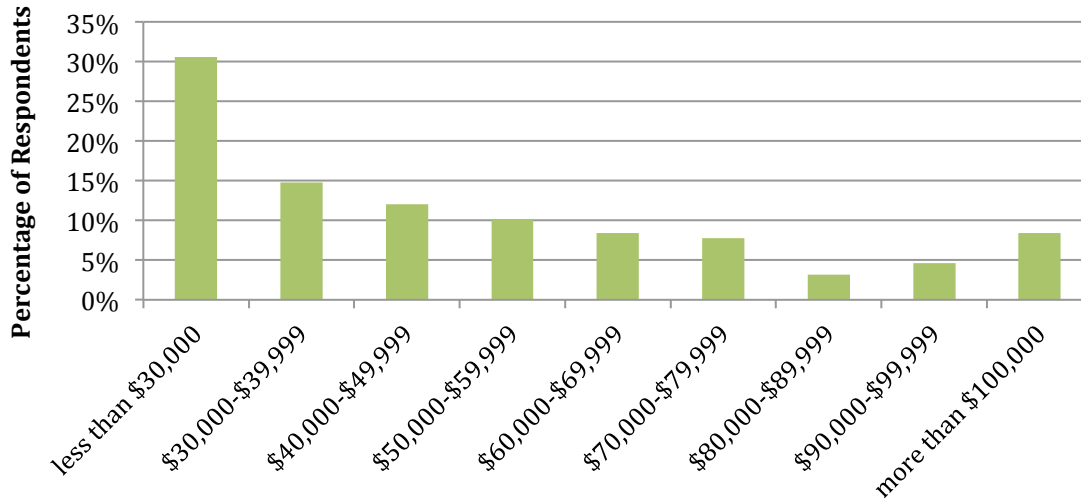
Figure 2. Racial representation



Income Representation

Approximately 30% of the respondents made an annual income of less than \$30,000 each year (Figure 3). Less than 10% of respondents reported their yearly income as above \$100,000.

Figure 3. Income representation



Results

Consumer Strawberry Purchasing Decisions

Respondents were asked questions about what factors affected their strawberry purchasing decisions along with what the strawberries were being purchased for.

How often strawberries are purchased and how they are used

Respondents were asked on average how often they purchased strawberries and were given choices ranging from “never” to “once a week or more.” Figure 4 illustrates the frequency Florida consumers purchase strawberries. About 33% of respondents purchased strawberries 2-3 times a month, while only 13% of respondents bought strawberries at least once a week.

Figure 4. How often Florida consumers purchase fresh strawberries

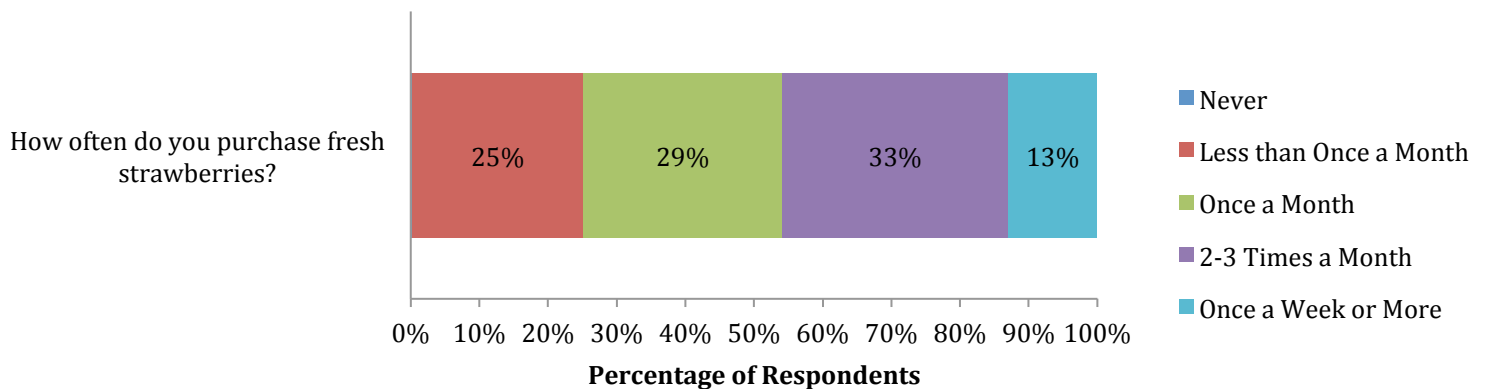


Figure 5 shows how strawberries are being consumed, using the same frequency scale as previously mentioned. A large majority of consumers (50%) were consuming strawberries straight from the container, with no additives or other food products, at least 2-3 times a month. Use of strawberries as an ingredient less than once a month was selected by 35% of respondents and approximately 33% indicated they never used strawberries in drinks.

Figure 5. How consumers are consuming fresh strawberries

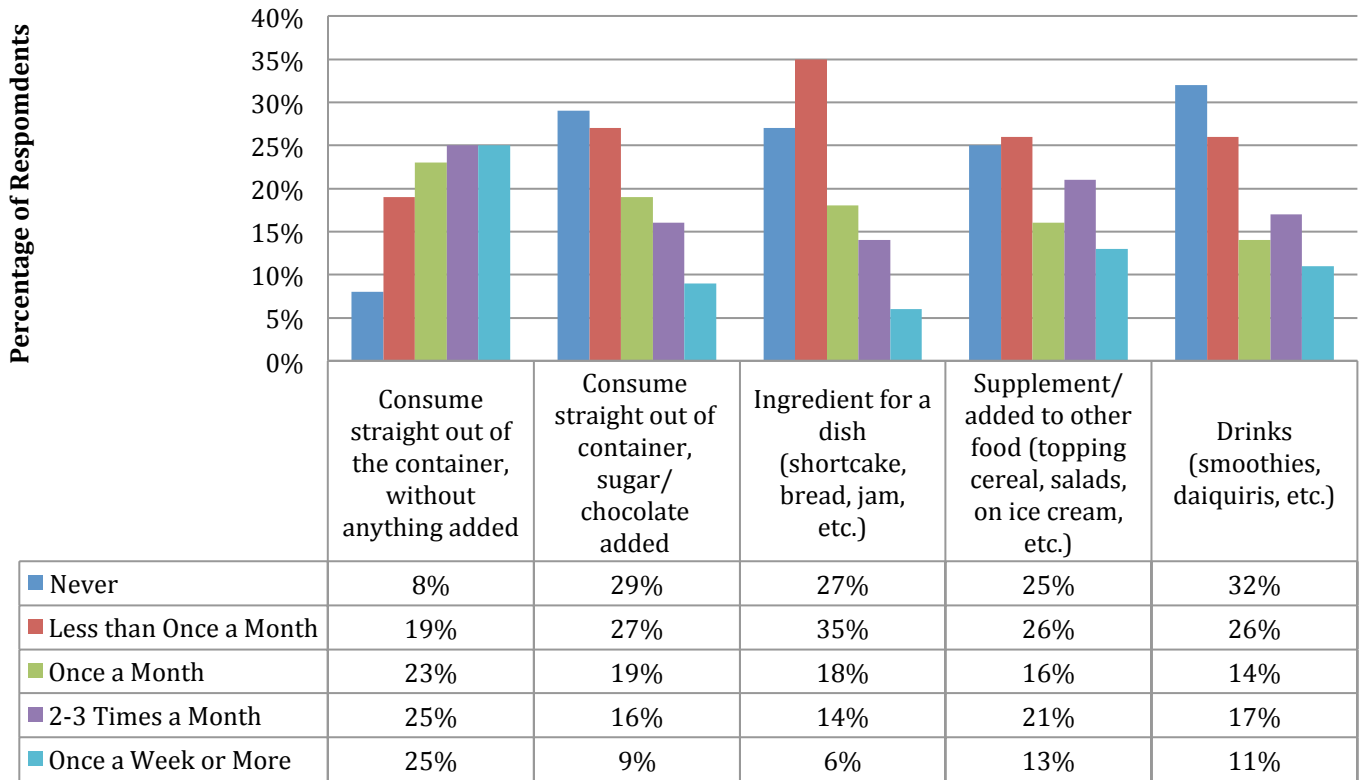
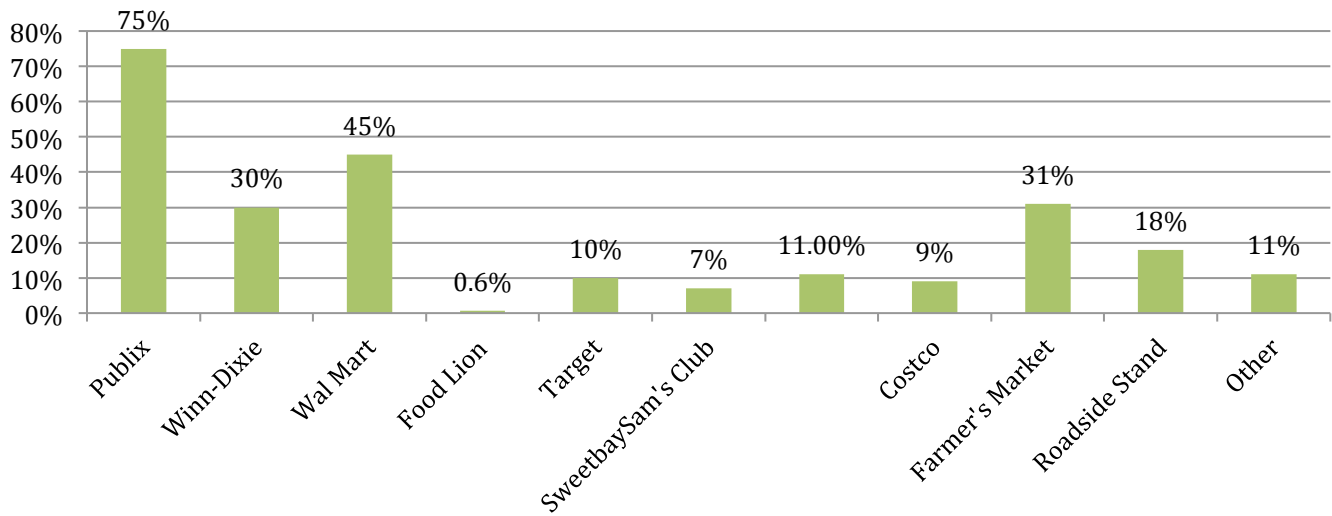


Figure 6 shows the locations Florida consumers choose to purchase strawberries. Publix was the number one store, with 75% of respondents indicating they purchased strawberries there. Wal Mart (45%) and Farmer’s Market (31%) were the second and third most-used locations, respectively. Out of the 11% of consumers who chose “other,” a number of respondents said they made their strawberry purchases at Trader Joe’s and Whole Foods Market.

Figure 6. Strawberry-Purchasing Locations



Factors affecting consumers' decisions to purchase strawberries

Consumers were asked to rank the importance of different factors on their decision to purchase strawberries on a five-point scale (1= Not at all Important, 2= Slightly Important, 3= Fairly Important, 4= Highly Important, 5= Extremely Important) as seen in Figure 7. Respondents indicated freshness and taste as the most important factors with 72% and 70% selecting extremely important respectively.

Figure 7. Importance of factors affecting decision to purchase

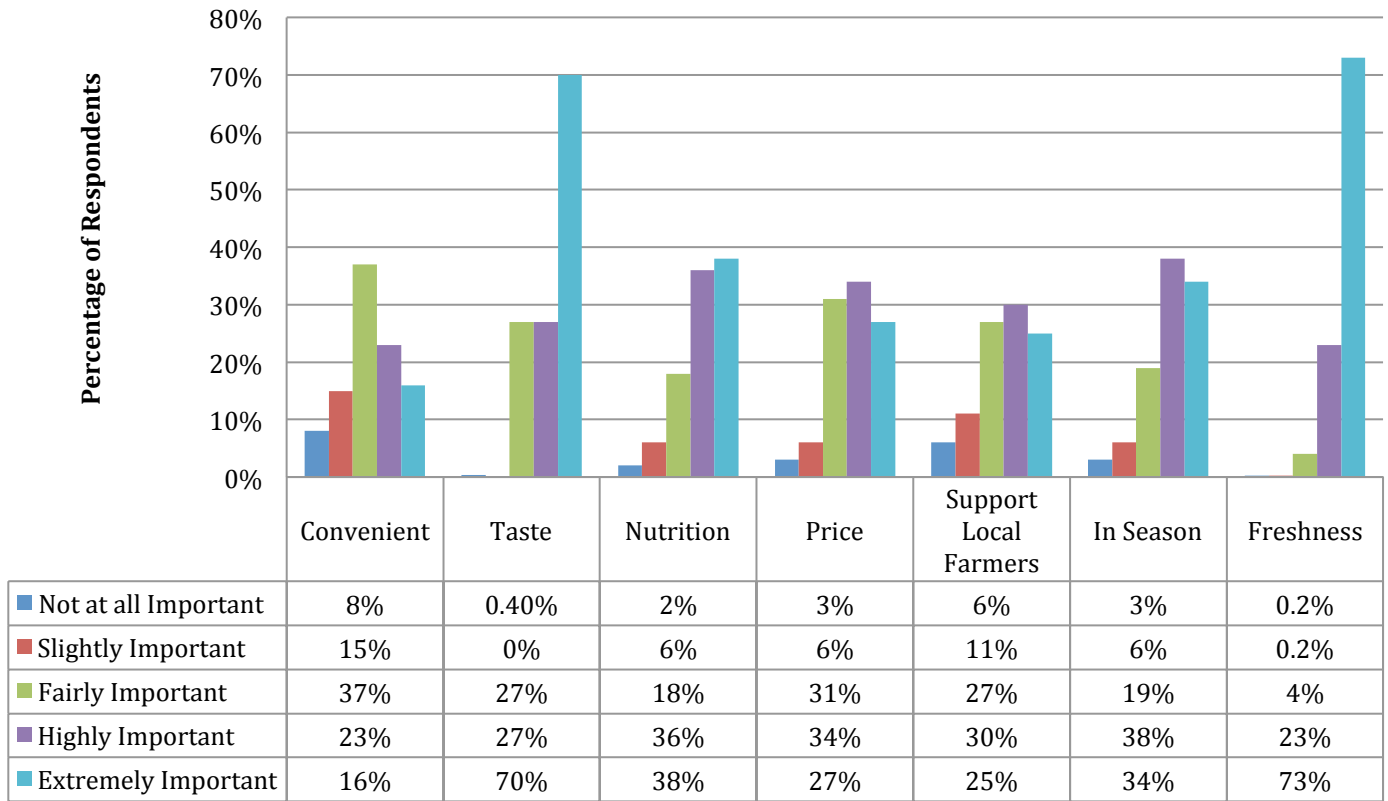
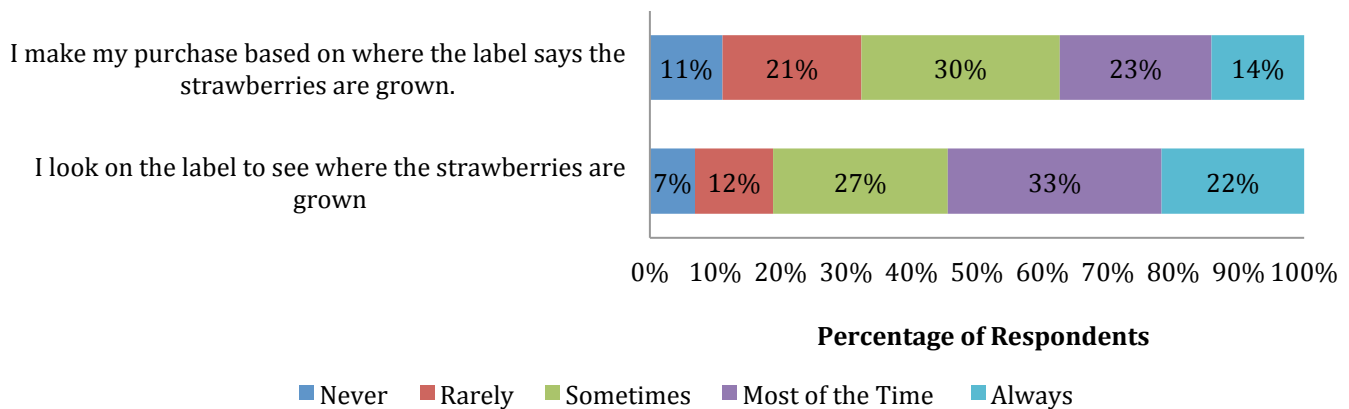


Figure 8 shows frequencies to which consumers look at labels on strawberry packages while making purchasing decisions. Approximately 55% of respondents reported looking on the label to see where the strawberries were grown most of the time or always. However, only 37% of respondents purchase strawberries based off of where the label says they are grown most of the time or every time.

Figure 8. How often location of origin is considered before purchase



Respondents were asked about the ease of finding the growing location of the strawberries on the label (Figure 9). The majority (68%) indicated they agreed or strongly agreed they could easily find where the strawberries were grown.

Figure 9. Growing location visibility

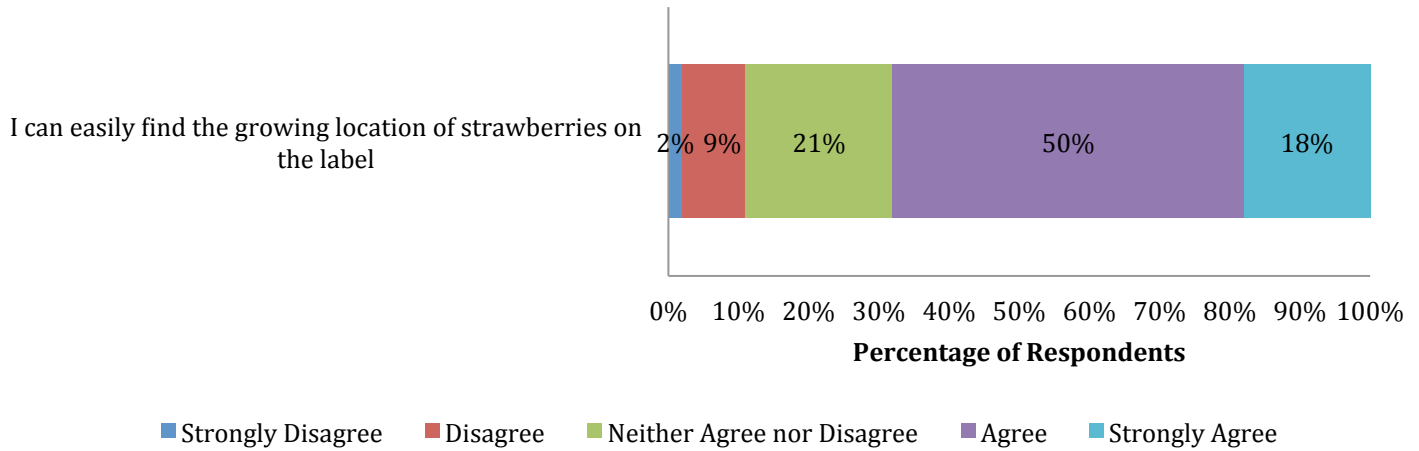
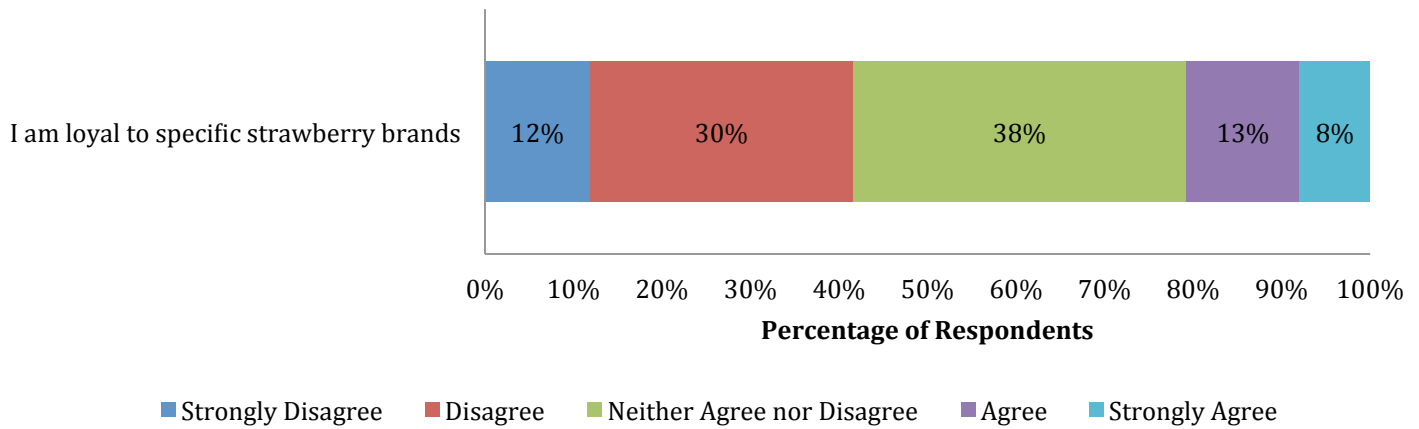


Figure 10 illustrates consumer loyalty to strawberry brands. Only 8% of respondents strongly agreed to being loyal to brands, while 38% neither agreed nor disagreed.

Figure 10. Strawberry brand loyalty



Effect of Adding a Fresh from Florida Logo to Strawberry label

Consumers were given a picture of two strawberry labels and told to imagine they were shopping in a grocery store. Respondents were asked to take no more than ten seconds to select the package they would be more likely to purchase. The first package (Figure 13) had a typical strawberry growers label on it while the second package (Figure 12) was identical with the exception of a Fresh from Florida logo under the brand name. Approximately 77% of respondents indicated they would purchase the strawberries with the Fresh from Florida logo instead of the package that did not have it on the label (Figure 11).

Figure 11. Strawberry label choice

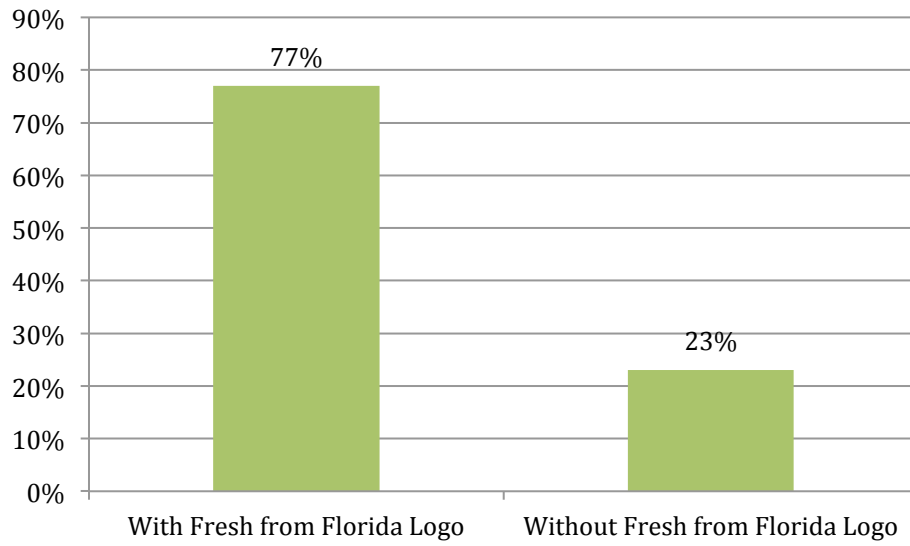


Figure 12. Label with Fresh from Florida logo



Figure 13. Label without Fresh from Florida Logo



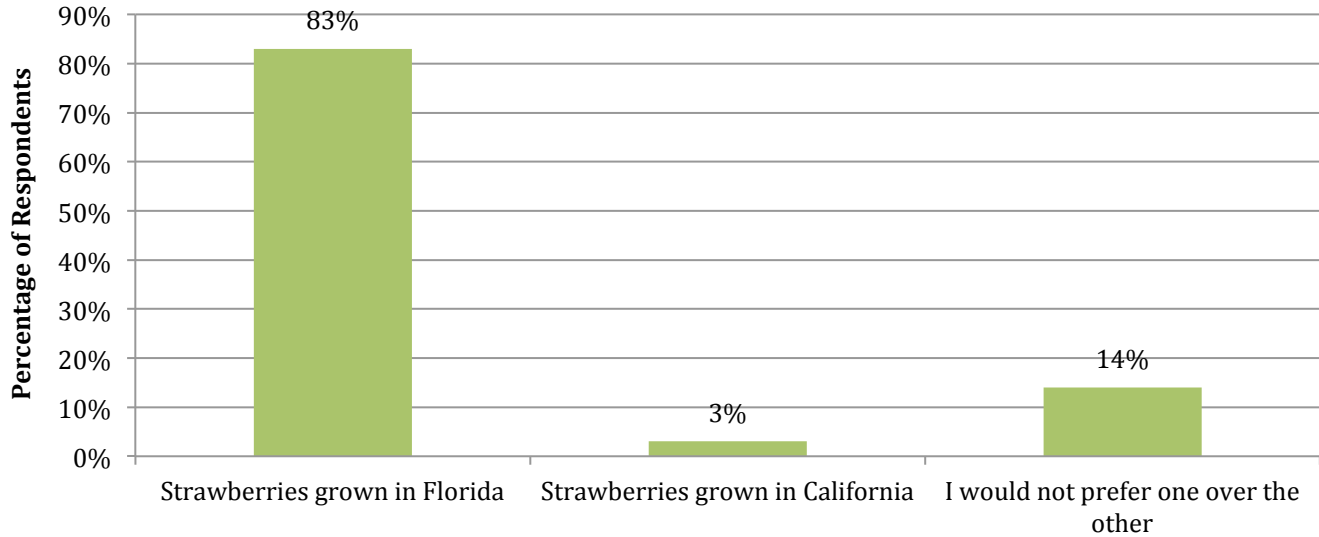
Attitudes associated with Florida and imported strawberries

Respondents were asked a variety of questions to gather their opinions/attitudes associated with strawberries grown in Florida, California, and Mexico.

Florida Strawberries compared to California Strawberries

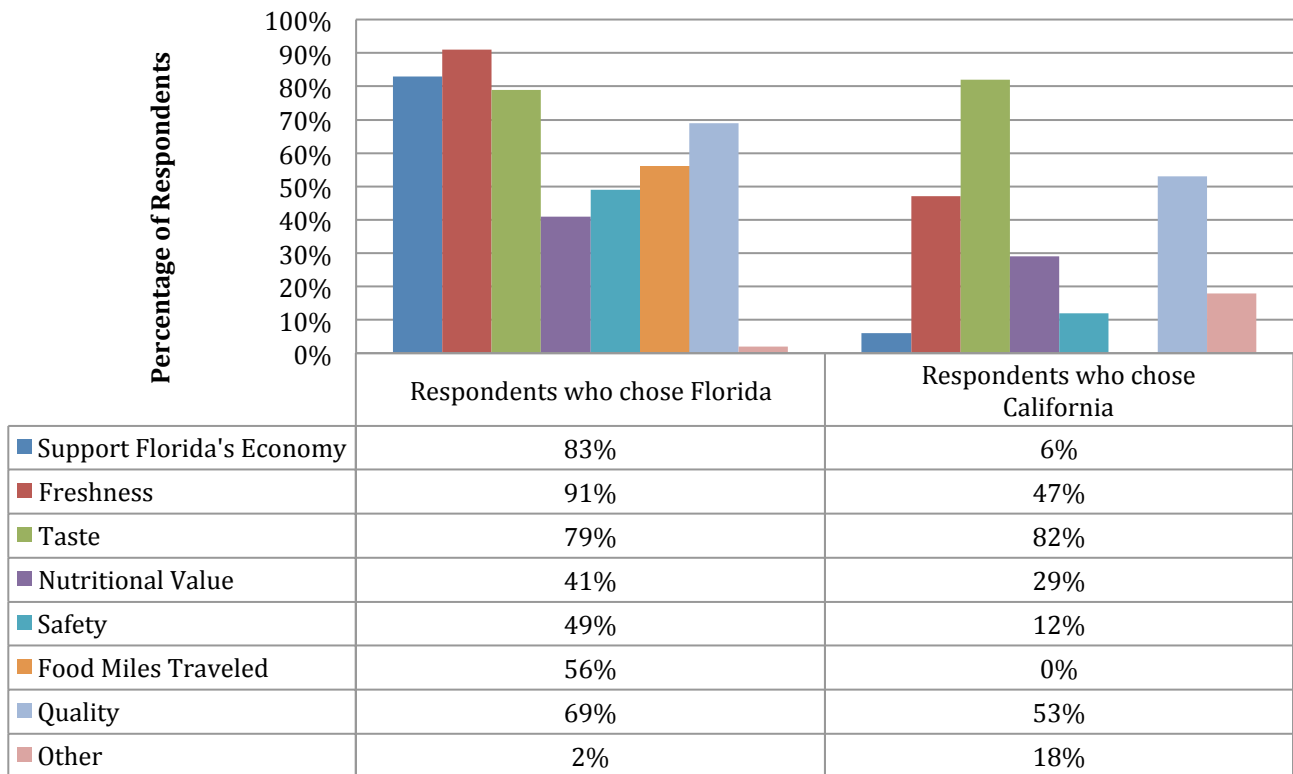
Respondents were asked to indicate which strawberries they would select, if they had the option to choose between purchasing strawberries grown in Florida or strawberries grown in California. A large percentage of respondents, 83%, selected Florida strawberries, with only 14% selecting “no preference” and 3% selecting California strawberries, as shown in Figure 14.

Figure 14. Given the choice, would you rather purchase Florida strawberries or California Strawberries?



The 413 respondents who chose Florida were then asked to select why they made their decision (Figure 15). The top three reasons were to support Florida’s economy (83%), freshness (91%), and taste (79%). The same options were given to the 17 respondents choosing California and 81% specified taste as the main reason for purchasing those strawberries. Quality was the second highest reason selected by 52%, followed by 48% selecting freshness.

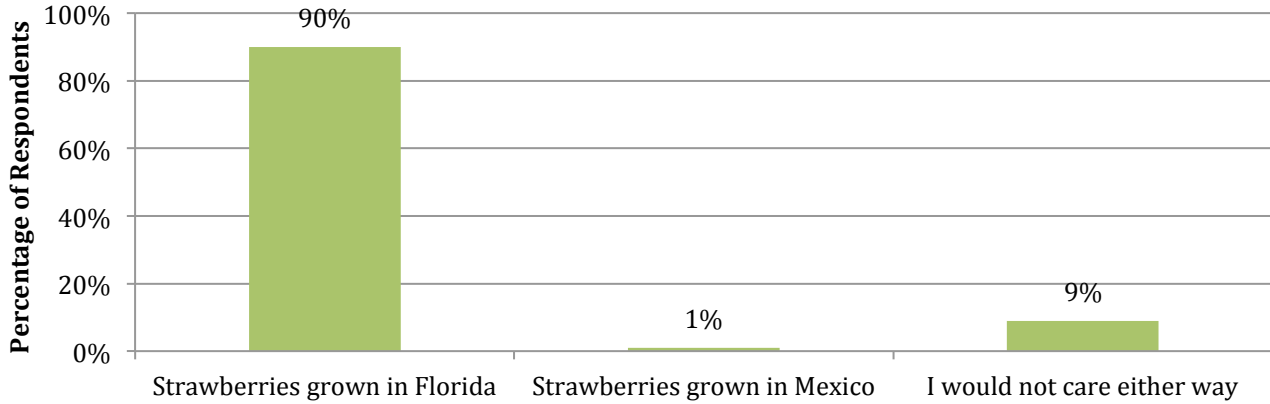
Figure 15. Associated benefits with Florida/California strawberries



Florida Strawberries compared to Mexico Strawberries

Respondents were asked questions about strawberries grown in Florida and Mexico in the same way as described above. Figure 16 shows that 90% of respondents chose strawberries grown in Florida over strawberries grown in Mexico and only 9% had no preference.

Figure 16. Given the choice, would you rather purchase Florida strawberries or Mexico Strawberries?



In Figure 17, respondents who chose Florida ($n = 452$) still had their top 3 reasons being freshness, to support Florida’s economy, and taste. The 1% of respondents who selected Mexico ($n = 6$) indicated freshness as their top reason with 50% selecting this factor.

Figure 17. Associated benefits with Florida/Mexico strawberries

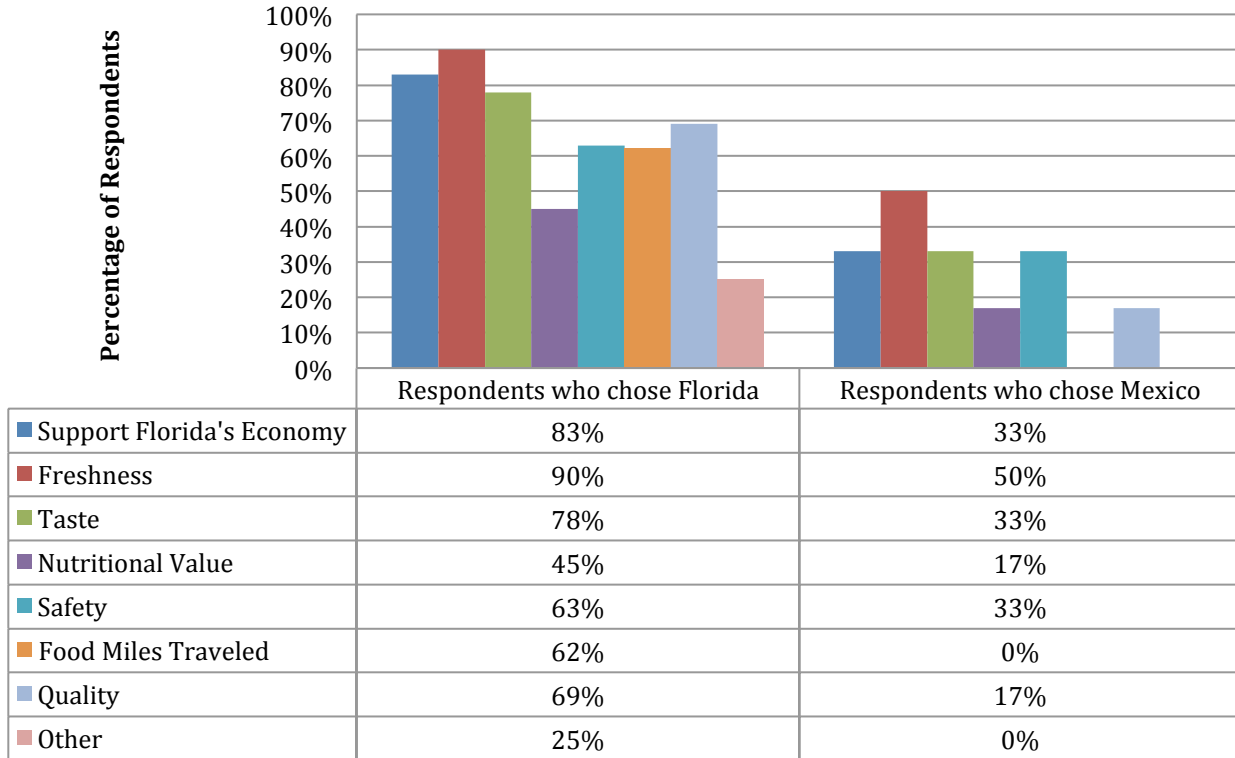


Table 1 show results from a five-point bipolar, semantic differential scale of attitudes associated with Florida and Mexico strawberries. Negative adjectives like “unsweet” were assigned a one while positive adjectives like “sweet” were given fives. Respondents ranked Florida strawberries favorably with associated sweetness having an average of 4.47 and safety with a mean of 4.61. These are higher than perceptions associated with Mexico strawberries. The average for sweetness was 3.48 and the average for safety was only 2.92.

Table 1. Strawberry Perceptions, Florida vs Mexico

Adjective	Florida (mean)	Mexico (mean)
Sweet/Unsweet*	4.47	3.48
Unsafe/Safe	4.61	2.92
Fresh/Not Fresh*	4.68	2.99
From large farm/from small farm	2.89	2.59

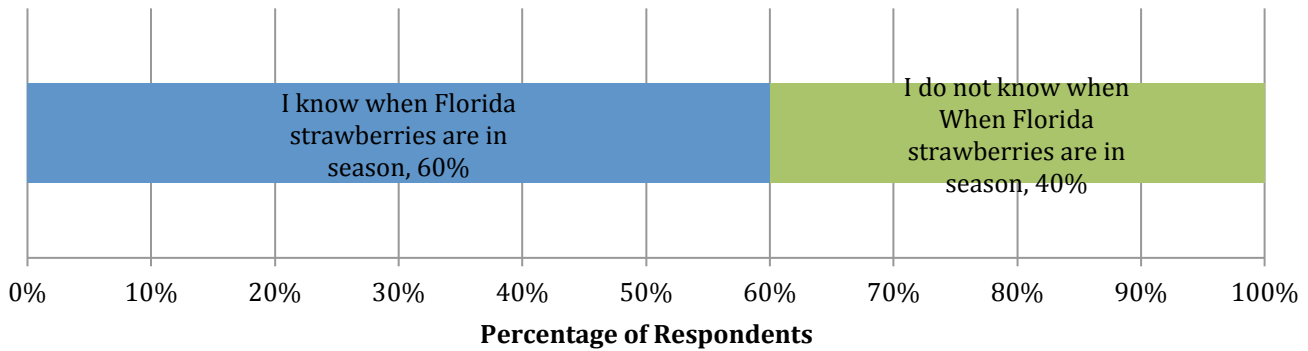
Note. Based on semantic differential scale; 1= Unsweet, 5= Sweet

*Indicates reverse coded

Florida Consumer Strawberry Knowledge

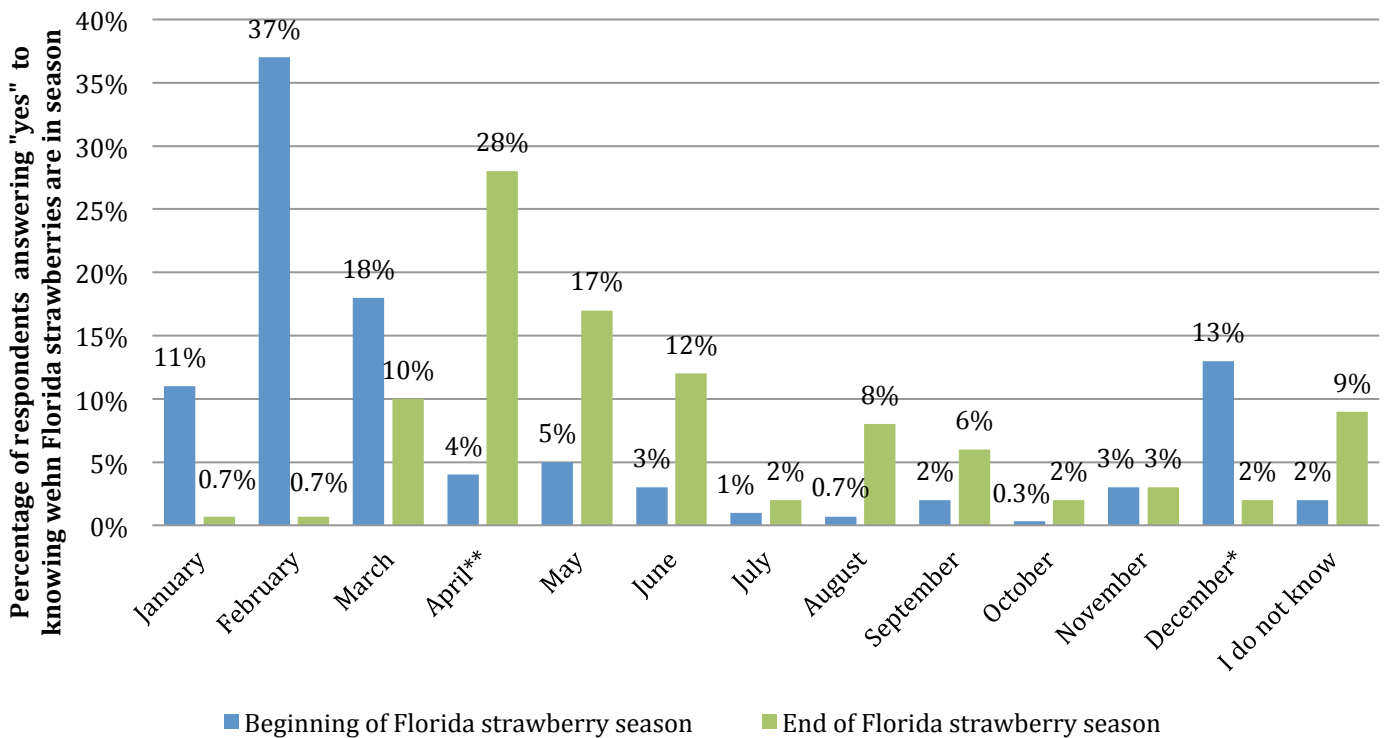
Respondents were asked if they knew when Florida strawberries are in season. Figure 18 indicates that 60% of Florida consumers knew when strawberries are in season.

Figure 18. Consumer awareness of Florida strawberry season



The respondents who answered yes ($n = 300$) were then asked to specify the start and end month of strawberry season, results shown in Figure 19. The majority of people incorrectly believed the season to begin in February (37%) and only 13% correctly selected December as the start month. However, April was selected by highest percentage of respondents (27%) for the end of strawberry season and is correct.

Figure 19. When consumers believe Florida strawberry season begins and ends



*December is correct starting month

**April is correct end month

Consumer Ability to Identify Information on the FSGA Webpage

Respondents were shown the following picture of the Florida Strawberry Growers Association’s website (Figure 20) and asked to click the area where they would find information about when Florida Strawberries are in season and where to find nutritional information about strawberries. Heat mapping of regions was used to determine how many respondents could navigate the webpage to find correct information.

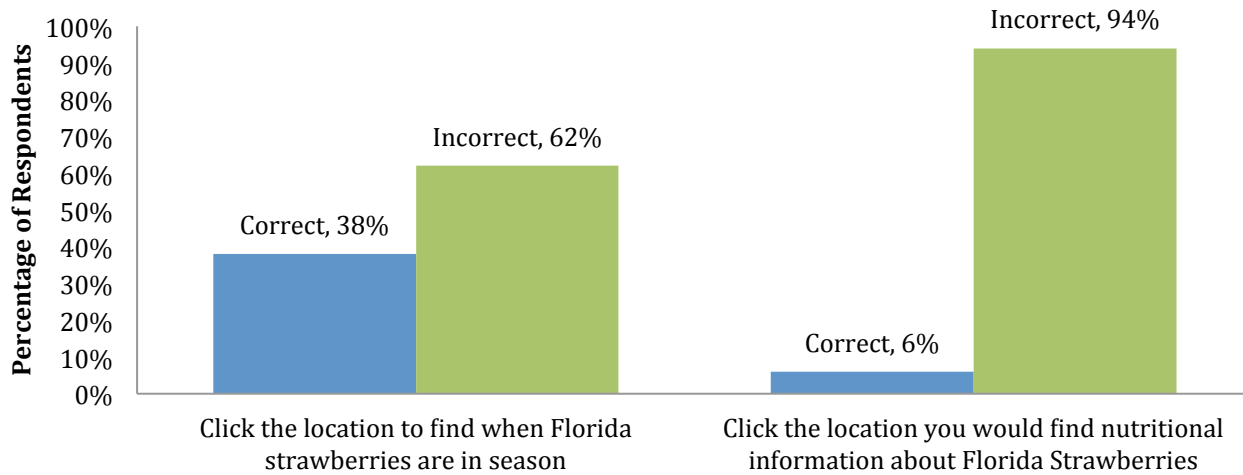
Figure 20. FSGA Webpage



Figure 21 shows that only 6% of respondents chose the correct area to find nutritional information. These areas are boxed in red in Figure 20. It should be noted the box that said “Eat More Strawberries” is an article found under the “News and

Events” tab and is not always on the front page. If a consumer went to the webpage today, the article would not necessarily be on the home page. They would have to click the “News and Event” tab and only 0.6% of respondents correctly identified this as where to look for nutritional information. Figure 21 shows that 38% of people located the area that identified the Florida strawberry season (highlighted in a purple box on figure 20).

Figure 21. Consumer ability to locate information on FSGA webpage



Findings

Consumer strawberry purchasing habits

- The majority of strawberries purchased in Florida were from Publix Super Markets, Inc.
- Respondents typically are eating strawberries straight from the container with no additives. Strawberries were not often used as ingredients in dishes or drinks.
- Florida consumers indicated that freshness and taste were the most important factors when making strawberry purchasing decisions
- Only about a quarter of participants were loyal to strawberry brands.
- Over half of the respondents look to see where strawberries are grown, but only 37% make their purchase based off the growing location.
- Respondents were approximately three times more likely to purchase strawberry packages with the Fresh from Florida logo on the label than packages that did not contain the logo.

Florida strawberries compared to competitors

- Strawberries grown in Florida were considered sweeter, fresher, and safer than strawberries grown in Mexico by Florida consumers
- A large majority of respondents would choose strawberries grown in Florida over those imported from California or Mexico
- Respondents who chose strawberries grown in Florida over imports did so because of associated freshness, taste, and the support of Florida’s economy.

Consumer knowledge of Florida strawberries and webpage use

- The majority of respondents said they knew when Florida strawberries are in season. Over a quarter of those respondents knew the correct end month of the season and only 13% knew when the season began.
- Only 6% of respondents correctly identified where to find nutritional information concerning strawberries on the FSGA webpage.
- Respondents were only correct 38% of the time locating information about the Florida strawberry season on the FSGA webpage.

Recommendations

Focus on freshness and supporting Florida's economy

Consumers indicated their main reasons for purchasing Florida strawberries over imports was because they perceived them to be fresher and that they were supporting the local economy. If the FSGA and individual growers promote these two points, they will create stronger points of differences (PODs) from the competition. Because the products are so similar, it is essential to create these PODs in the consumers' minds. By promoting the perceived benefits of Florida strawberries, the consumers will begin to create a stronger and more positive relationship to the "Florida" branding of the product.

Incorporate the Fresh from Florida logo onto strawberry labels

More consumers indicated that they make their purchasing decisions based off of the growing location of the strawberries rather than what company grew the strawberries. While company brand is important, in order to promote local strawberries, growers, and/or distributors should consider adding the Fresh from Florida logo to their labels under their brand name. Consumers were three times more likely to purchase strawberries with the Fresh from Florida logo easily visible, than packages that had the growing location written under the brand name. Florida strawberries were associated as being fresh, flavorful, and safe. Therefore, by branding strawberries as "Fresh From Florida," consumers will associate these positive attributes to the product and differentiate Florida strawberries from those with less-desirable attributes. This will increase their likelihood to purchase Florida strawberries over imported strawberries.

Additional Promotions during Strawberry Season

A large number of consumers stated they did not know when Florida strawberries are in season. Out of those who said they did know the season, the majority incorrectly identified the start and end month. To help increase awareness, additional promotions during the season are suggested. A possible option could be partnering with Fresh from Florida with their commercials which have strawberries in it. The addition of "in season now" to these commercials could boost awareness of Florida strawberry season.

Create a "Strawberry Facts" tab on the FSGA webpage

Consumers had difficulty locating information about strawberries on the FSGA webpage and had little knowledge about when Florida strawberries are in season. In order to increase the usability of the website as well as general consumer knowledge, a "Strawberry Facts" tab would be helpful. This should contain information such as nutritional facts and the Florida strawberry season. The addition of a facts tab will make it easier for consumers to find standard information about Florida strawberries. Making the webpage easier to navigate will help increase consumer knowledge of the product. Further in-depth usability testing with consumer audiences is also recommended to continue increasing webpage efficiency and effectiveness.

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