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How to Improve U-Pick Berry Operations Based on Customer Satisfaction

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During the summer of 2019, Cornell researchers conducted a study sponsored by the NYS Berry Growers Association. The study examined customer satisfaction at u-pick berry operations across farms in Upstate New York. This study aims to give some ways to not only improve sales performance for berry farms but also bring better experiences for customers.

U-pick is a direct marketing channel where customers can harvest fruit and vegetables by themselves, often paying a lower price and receiving fresher products. Crops, such as berries, that need intensive labor are well-suited for u-pick operations. Even though customer satisfaction has been studied in several fields, there are a very few studies focusing on the berry industry especially in u-pick operations. The goal of this study was to provide farmers with more marketing insights using customer satisfaction tools.

Among the six farms participating in the study, two of them were strawberry farms; one, blueberry-only; and three, both strawberry and blueberry. Customer satisfaction surveys were given to u-pick customers among six berry farms from beginning of June to the end of August, as needed given the different harvesting times for strawberries and blueberries. Customers were asked to rate their overall satisfaction and individual satisfaction attributes, using a scale of 1 to 5, with 1 being poor and 5 being excellent. Questions about amount spending, purchase intension, demography, and other variables were also included in survey.

The number of usable surveys was 312. The results are shown in Table 1. Overall customer satisfaction for all farms was very high (4.71), with 225 customers rating the overall satisfaction 5 (excellent), 82 rating it 4 (very good). Only 5 surveys rated it below 4. Twenty-two percent of customers were first-time customers, and 83.9% and 98.7% of customers responded, yes, they would visit this farm again this year and next year respectively. One hundred percent would recommend the farm to their friends. Average spending was $26.58.

Table 1. Descriptive Table of Selected Variables

Description	Mean (or % if indicated)
Overall customer satisfaction (where1=poor to 5=excellent)	4.71
Percent of customers who purchased berries	97%
Average amount spent at u-pick farm	$26.58
Percent of customers visiting farm for first time	22%
Percent of customers who said they will come back this year	84%
Percent of customers who said they will come back next year	99%
Number of other people customer came with	2.51
Percent of customers who brought children under 10	40%
Female	72%
Male	28%
Average customer age	49
Education:	
Less than a High Scholl degree	1%
High School Diploma or GED	13%
Some College/University	18%
College Degree	34%
Graduate Degree	34%
If it is rainy at the day customer visited u-pick	12%
Percent of customers who responded during the strawberry season	66%

Analyzing 14 different attributes into meaningful and usable information can be difficult. Therefore, the individual customer satisfaction attributes were analyzed in a way to group them into 3 general satisfaction factors that are described as experience, retailing and convenience. Table 2 shows the individual attributes into each of the factors and average score of each factor.

Researchers then looked at the relationship between these grouped satisfaction factors and the amount that customers spent at the farms. Differences between the farms, berry type, weather and demographic variables were controlled for.

Table 2. Satisfaction Factors and Attributes of U-Pick Berry Farm Operations

Satisfaction factor	Factor Mean	Survey elements - specific attributes
Experience	4.43	Taste of U-Pick berries
		Availability of berry variety information
		Quality of U-Pick berries
		U-Pick berry prices
		Forms of accepted payment
		Information upon entry
Retailing	4.78	Cleanliness of the farm
		Helpfulness of staff
		Ease of checkout process
		Friendliness of staff
Convenience	4.58	Ease of finding the farm
		Ease of parking
		Farm location
		Finding information to plan your visit

From the results, grouped factors experience and convenience are significantly important. One rating point higher in experience and convenience is associated with $3.14 and $ 5.17 more on the customers' spending respectively. Even though attributes of retailing are significant in customer satisfaction studies such as winery, they are not in this study. One potential reason is because there are not many variations of retailing attributes in the data set. Another one may be related to the nature of u-pick operation. In New York wineries, wine tasting rooms are the major source of wine sales and highly dependent on the services of staffs. However, u-pick operations do not need many staff services. Therefore, retailing attributes may not impact sales of u-pick on berry farms.

After analyzing each attribute separately, we also find among experience attributes, "Taste of u-pick berries" and "Information upon entry" are significant and positively affect amount spent. One score higher in "Taste of u-pick berries" transfers to $2.68 higher in spending. As for "Information upon entry, the effect is $2.57 higher with respect to amount spent. "Ease of parking" and "Farm location" are significant attributes to convenience and one score higher is associated with $3.67 and $2.81 higher in amount spending respectively. In addition, the control variables, education and male are statistically important to amount spent. Customers visiting in the strawberry season spent $8.87 more than those visiting in blueberry season. Graph 1 shows these results.

Graph 1. Significant Factors Affecting Amount Spent on U-Pick Berry Farms
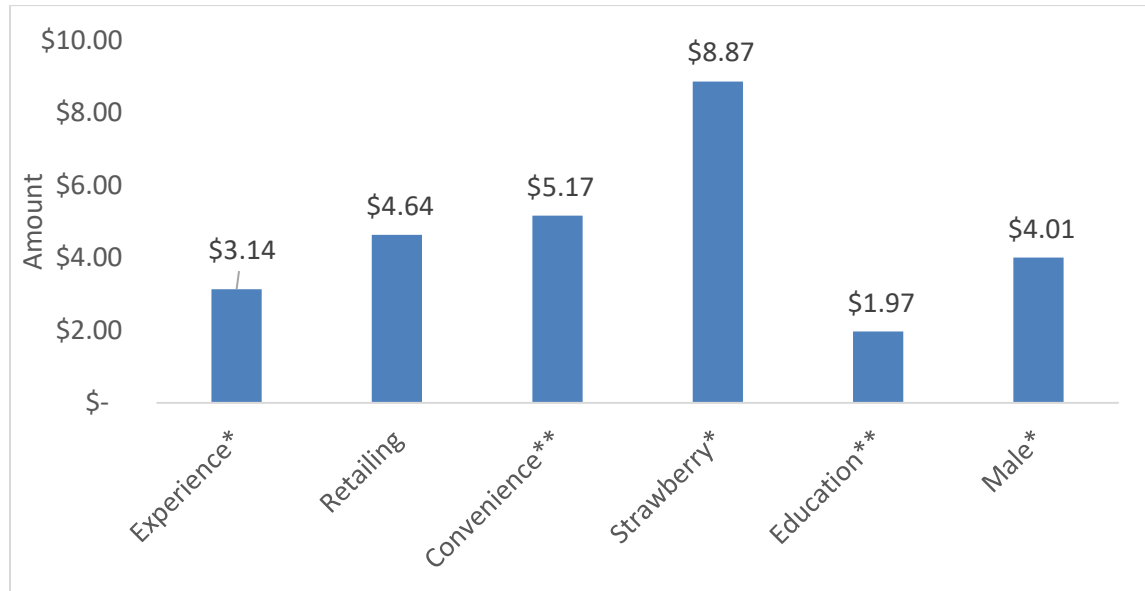
Note: * p-value < .10. ** p-value < .05. *** p-value < .01.

STUDY RECOMMENDATIONS

Given evidence from the analyses, this study suggests that u-pick berry operations should pay attention to the attributes that effect experience and convenience. For example, farm customers usually used Google searches or recommendations from their family and friends when selecting the farm. Using social networks such as YouTube and Instagram to advertise and provide information will link this information with the significant attributes "Information upon entry" and "Farm location" together. In addition, signs such as directions to the farms should be clear to customers upon arrival. When customers arrive at the U-pick operation, information related to parking, amenities, picking directions and berries should be explained by signs or farm staff. Showing a story or history about the farm could be a bonus to generate a more satisfied customer experience. Meanwhile, maintaining good quality berries is always important. Ensuring a high quality of berry could not only affect the berry price but also the generation of word of mouth advertising. Implication suggestions for berry farms can be adjusted to suit for all types of u-pick operations.

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