Research Article
Analysis on the Influence Factors of Green Fruit Purchasing by Tangshan Consumers

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Abstract: The purpose of this study was to study the factors Tangshan consumer buying behavior of green fruit. In this study, we investigate the behavior that consumers purchase green fruit in Tangshan City. And we analyzed the main factors that affect the level of consumer purchase. The results show that the degree of consumers to buy green fruit is low. Consumers' gender, income and the trust in green fruit are the main factors that affect the purchasing behaviors.

Keywords: Food security, green fruit, logistic regression model, purchasing behavior

INTRODUCTION

In the world, it is widely used for identification system to provide consumers with more information about the origin, production process, food safety control and so on. "Green food" is the earliest and most widely used identification system in China. But the certification mark system function can be really achieved, must be based on the correct understanding of consumers.

The research of consumer buying behavior of food safety of academician in developed countries is mainly based on the cultural theory of the individual as consumer-center. Research indicates that consumers who bought the identification system level by including demographic characteristics of consumers (such as gender, age, educational level), consumer psychology, consumer culture, policies and other factors (Starbird and Baker, 2004). Backer's research (Baker, 2003) shows that, for example, consumer's gender, whether there are children under the age of twelve family, is the main decision-makers are not household food purchases and other factors, there have a decisive impact on the level of food safety purchase. And Dosman et al. (2001) have found that women, children more and higher income consumers have higher cognitive level of the identification system.

Domestic scholars' studying about consumer purchase of food safety has also begun to start. Zhou Yingheng's study (Zhou et al., 2004) found that level of understanding of food safety certification of the food safety of consumers higher than that consumers do not trust. Through the research of green milk, Zeng et al. (2007) found that sex, education level, occupational characteristics and the green food trust degree are the important factors affect consumers' cognitive level.

As we can see, the results of research in the domestic and international affect consumer purchasing levels decisions factors are not entirely same. Therefore, in this passage, the research objects are green fruit. Using the supermarket of Tangshan City consumer survey data is to further study the level of consumer purchasing green fruits and its influencing factors.

From this study, we intend, through questionnaires, learn the specific circumstances of Tangshan consumer buying behavior for green fruit. And what factors influence the level of consumer buying behavior for green fruits and judging which factors are the main determining factors.

MATERIALS AND METHODS

The basic characteristics of the survey sample: The data used in this study are analyzed from the 2015 survey in May and June of 650 consumers of Tangshan City, 13 counties conducted. Investigation place were supermarkets and shopping plaza. All 650 questionnaires were returned of 624, the recovery rate of 96%. After the recycling questionnaire audit and related project confirmation, we obtained 610 valid questionnaires. Now, based on 610 valid questionnaires, the basic characteristics of the survey sample, as shown in Table 1.

Consumers' buying behavior for green fruit: From Table 2, there are 87.7% of respondents said they have bought green fruit and 12.3% have not purchased green fruit, 75 respondents did not buy. 13 people because

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Table 1: Basic characteristics of the survey sample

Variables and its Classification	Frequency	Ratio (%)
One. Age		
Age under 20 years	45	7.4
20-29 years old	214	35
30-39 years old	148	24.3
40-49 years old	98	16
50-59 years old	57	9.3
60-69 years old	41	6.7
70 years old and above	8	1.3
Two. Sex		
Male	298	48.9
Female	312	51.1
Three. Education level		
primary school	15	2.5
Junior high school	45	7.3
Senior high school	148	24.2
The University	342	56
Graduate and above	61	10
Four. Occupation		
Food service industry	49	8.1
Health industry	24	4
Government organization	59	9.7
Educational and research institutions	110	18
Other	367	60.2
Five. Monthly income		
Below 2000 yuan	68	11.2
2000 -3000 yuan	79	13
3000 -4000 yuan	101	16.5
4000 -5000 yuan	135	22.1
5000 -6000 yuan	117	19.2
6000 yuan and above	110	18

Table 2: Green fruit purchases and assured of their quality and safety degree

Whether purchased green fruit	Frequency	Ratio (%)
Yes	535	87.7
No	75	12.3
Are assured about quality and safety of the existing green fruit	Frequency	Ratio (%)
Totally assured	35	5.7
Basic assured	303	49.7
Worried	159	26
Not clear	113	18.6

there is no green fruit can be purchased nearby, 52 people because "green fruit is too expensive.", 10 people chose the "Other". In selecting the "Other", there are seven people making a answer for detailed reasons, two of which were answered "do not know or do not understand the green fruit." There are four answered "do not believe in green fruit." And only one answered "do not know where you can buy green fruit."

From Table 2, 610 people were surveyed to answer, "Rest assured that the extent of existing green fruit quality" in the "Basic assured" the ratio of 49.7%. There are still a considerable number of people is still not assured the quality of the green fruit. This is largely due to the current certification and quality maintenance system is imperfect. Many violations of national green fruit's certification and regulatory regimes appears. Also with consumers increasingly concerned about food safety are closely linked.

The determined factor analysis of consumer's purchasing level of green fruit:

Model and variable selection: In order to analyze demographic factors on consumer purchasing green fruit, this study follows the Zhou Jie red (Zhou, 2004) on vegetable safety research method. On the Determining factor purchasing level of green fruit, by Binomial Logistic model doing regression analysis. Questionnaire designed four questions to examine consumers for purchasing level of green fruit. Respectively, whether know green fruit; whether know green fruit logo; whether able to identify green fruit logo. Positive answer to each question is referred to as 1, negative direction recorded as 0. Based on consumer issues to add to the total score. Getting 5 levels PR that purchase degree between 0-4 from low to high. Less than or equal to the median for the purchase of green fruit less degree (zero). Higher than the median for the green fruit big purchase level (one). After the treatment the formation of the variable as dependent variable of binomial logistic regression model analysis. This study assumes that consumers' purchase level of green fruit is relevant with the attention of general food, the consumer's trust degree of the existing green fruit and the consumers' demographic characteristics. Demographic characteristics, including gender, age, marital status, education level, occupation, monthly average income by. Based on above variable selection, we can be obtained two items Logistic regression equation, as follows:

$$\log\left[\frac{P(Y_1)}{P(Y_2)}\right] = \alpha + \beta_1 belief + \beta_2 age + \beta_3 sex + \beta_4 education + \beta_5 occupation + \beta_6 income$$

In the formula, Y1 represents more buy, Y2 to buy less. So Dependent variable identifies the level of consumer purchasing is the regression coefficients of each element.

Empirical results and discussion: This study selected two Logistic regression model interpretation of survey data was 68.2%. Chi-square value reaches the 33.90 (p = 0.000). H-L statistical value is 6.015 (p> 0.05). This shows that the model can fit the overall sample data, another explained independent variable on the dependent variable with good explanatory power.

From Table 3, for the current food safety level of trust (belief), this index's test value at the 0.01 significantly level. In the demographic characteristics of consumers, only Income, its test values at 0.05 test levels were significant, sex's test values are significant at the 0.10 level of inspections and test values of other variables were not significant.

Table 3: The level of consumer purchasing determinants of binomial logistic regression model some estimation results

Variable	B	Exp (B)	Wald
Sex*	-0.361	0.841	3.507
Income**	0.421	2.081	2.650
Belief***	-0.604	0.92	1.075

In Table 3, *: indicates a confidence level of 90% confidence interval, **: indicates a confidence level of 95% confidence interval, confidence level of 99% confidence interval

Level of women for food safety is higher. In China, women more responsible for buying food and paying close attention to the health of family members. So that women might also be necessary to reach more information of green fruit.

Findings: Supporting purchase levels have a significant positive relationship with income. The higher the income level of consumers will be more concerned about the quality of life, the higher the possibility of buying green food. Green fruit on the current level of trust (belief) a significant and negative regression coefficient instructions. The more people trust in the green fruit, the more people who know more about the green fruit.

RESULTS AND DISCUSSION

Through the above analysis obtained the main conclusions, it can be summarized as follows:

Many consumers do not trust green fruit quality and safety. Nearly half of the people for green fruit quality and safety is not assured. There are some consumers don't buy green fruit and the directly reason is "no confidence green fruit."

The major determinants of consumers' purchase of green fruit are gender, level of education, occupational status and degree of confidence in the green fruit. The consumer is woman with a relatively large degree of purchase of green fruit. They have a higher income. Some believe in the green fruit.

Check References binding conclusions of this study shows. The conclusion of this study is consistent with the conclusions of the references. Most consumers lack confidence for green fruit, becoming the reason that part of the consumers refuse to buy fruit. In addition, reference and this study except that this study will determinants of consumers purchase level broken down by sex, education, occupational status, level of trust for green fruit and other factors. Conducted a factor analysis from the aspects of demographic characteristics, it would be a characteristic of this study.

According to the above conclusion, this study argues that the following policy measures should be taken to improve the level of consumer purchasing green fruit:

The first, the states should strengthen the scientific propaganda of the relevant knowledge of green food. Although green in China after 25 years of development, than genetically modified, organic foods have higher visibility and understanding. Green food's rational knowledge need to be strengthened. The Government should vigorously promote the standard, management and implementation status of green food. Through strengthening information is to improve the extent of green awareness of vast number of consumers.

The second strengthen green food certification system. The department should strengthen through the green food certification and supervision and management of enterprise and improve the degree of consumer confidence in the green food.

On the market counterfeit, extended and so on illegal use of green food logo's enterprises to resolutely investigate and clean up and improving market environment of green food. How to improve the impact of green food, improve the quality of green food and raise the level of people's purchase of green food.

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