Analysis of Consumption Behavior of Vegetables by Residents in Beijing

Huang yinghui

Beijing Research Center for New Rural Construction, School of Economics and Management, Beijing University of Agriculture Beijing 102206, China

Abstract. Vegetable is the important part of the daily consumer market by residents. It is of great significance to analyze consumption behavior of vegetables by residents in Beijing as a metropolis. Taking the residents in Beijing as the research object, the essay made a survey on consumption behavior by the means of combining questionnaires and interviews. The survey shows that the consumption behaviors of vegetables by resident in Beijing are habitual, rational and economical. The safety, convenience, nutrition and price are the factors that the residents focus on when purchasing vegetables. Based on these, some recommendations are made such as expand marketing channels, restrain the prices of vegetables, etc.

1. Introduction
Vegetables are indispensable parts of the dietary consumption of residents and have a great impact on the daily life of residents. And vegetables are also important parts of Beijing's agriculture products, occupying a pivotal position in the development of Beijing's urban agricultural industry. Under the background of large market and large circulation, it is of great practical significance to carry out research on the demand situation of vegetable consumption in Beijing.

2. Research methods and sample description

2.1 Research methods
The analysis data in this paper is mainly based on a questionnaire survey on the consumption and purchase of vegetables in Beijing residents. The survey was conducted according to a random sampling method. A total of 400 questionnaires were distributed and 392 valid questionnaires were collected. The effective recovery rate was 98%.

The content of this survey consists of four parts. It mainly involves the location, expenditure, variety, nutrition, price and other factors that affect the behavior of consumers.

2.2 Sample description
The basic characteristics of the respondents included gender, age, education, monthly household income, etc. The data is analyzed by Spss and the descriptive statistics are shown in Table 1.

| Index     | Range   | Number | Proportion(%) |
|-----------|---------|--------|--------------|
| Gender    | Male    | 123    | 31.38        |
|           | Female  | 269    | 68.62        |
3. Analysis and discussion

3.1 Analysis of the place of purchase

As a daily necessity, the convenience of the purchase location has become the primary consideration for residents to purchase vegetables. Firstly, most residents choose large supermarkets to buy vegetables because large supermarkets are basically concentrated in the neighborhood, which is very convenient for residents. And the environment of large supermarkets is clean and fresh, and the source is traceable. Secondly, the places where residents choose to buy more are farmer's market, morning market and street vendors. The vegetables in the farmer's market are cheap and fresh, but compared with supermarkets, the distance is far and the traffic is not convenient; and the vegetables in morning market and the street side are fresh and close, the varieties are not complete, the prices are relatively expensive, and sometimes there are cases where there are fewer shortages.

![Fig.1 The analysis of residents vegetable purchasing place situation in Beijing](image)

3.2 Analysis of consumer expenditure

As shown in Figure 2, residents buy vegetables at a relatively high frequency. The reason is that most of the residents buy fresh vegetables, and from a nutritional point of view, residents are willing to eat...
fresh vegetables every day, but one of the biggest drawbacks of fresh vegetables is that it is not suitable for a long time. But the residents in metropolitan have a fast pace of life and high work pressure. It is impossible to spend more time on purchasing daily necessities, so they will choose one every other. Correspondingly, residents have a small number of single purchases. Most of consumers choose to buy 1-2kg vegetables at a time.

The frequency with which consumers buy vegetables is inextricably linked to the amount of time consumers spend on vegetables. The more frequently consumers buy vegetables, the less they spend on vegetables each time. According to the survey data, most of consumers spend more than 20 RMB each time.

### 3.3 Purchase variety

According to the product form of vegetables, they can be divided into three types, namely fresh vegetables, dried vegetables and vegetable products. Most consumers choose to buy fresh vegetables mainly because of the freshness of the vegetables, which is related to the current eating habits and nutritional awareness of metropolitan residents. Cucumber, tomato and spinach are vegetables that are often purchased. The results of this survey are basically consistent with the consumption habits of local residents in Beijing and local planting conditions.
3.4 Analysis of other factors

From the perspective of consumer psychology, consumers' purchase of vegetables is mostly rational and economical. Therefore, this paper mainly analyzes the factors affecting consumers' purchase of vegetables from nutrition and price.

3.4.1 Nutritional value of vegetables

With the progress of society, people's nutritional awareness has gradually increased. 3.57% of consumers understand the nutritional value of vegetables very much, and 29.85% of consumers have a better understanding of the nutritional value of vegetables, 55.61% of consumers have a general understanding of the nutritional value of vegetables, 10.97% of consumers do not understand the nutritional value of vegetables. 59.44% of consumers will choose to purchase according to the nutritional value of vegetables, and 40.56% will not.

Cross-analysis found that consumers' knowledge level has a strong correlation with the understanding of vegetable nutrition. The higher level of education, the more consumers tend to understand the nutritional value of vegetables.
3.4.2 The price of vegetables
Price is an important factor affecting consumers' purchasing behavior. Understanding the sensitivity of consumers to changes in vegetable prices is necessary to grasp the changes in consumer demand for vegetables. According to the survey, consumers who still choose to buy within 20% of the increase in vegetables account for three-quarters of the total number, and only one-quarter of consumers will accept vegetables for more than 20%. As necessities, vegetables have low elasticity of demand. At the same time, due to the diversity of the vegetable market, many vegetables have strong substitutions for ordinary residents. Therefore, when the price of certain vegetables increases too much, consumers will choose to purchase other types of vegetables.

4. Conclusions and recommendations

4.1 Conclusion

4.1.1 The purchase of vegetables is a habitual purchase, and vegetables are closely related to people's diet and health. Consumers are most inclined to buy vegetables in large supermarkets with good shopping environment and quality assurance.

4.1.2 Based on the consideration of the freshness of vegetables, and in order to protect the needs of household consumption, most consumers purchase vegetables in a small amount and multiple purchase methods.

4.1.3 From the perspective of the type of products purchased, most consumers mainly purchase fresh vegetables; in the specific categories, the choice of vegetables for residents is basically consistent with the dietary habits and market supply conditions of local residents.

4.1.4 Residents purchasing vegetables are rational. About 60% of residents will purchase vegetables based on various vegetable nutrients. The higher the level of education that residents receive, the better they understand the nutritional value of vegetables.

4.1.5 Residents purchasing vegetables are economical. When the price increase of vegetables is small, the consumption situation of most residents will not change greatly; when the increase of vegetables is too high, residents will choose alternative goods.

4.2 Recommendations

4.2.1 Stabilizing the supply of vegetable market and stabilizing vegetable prices
Some policy should be implemented to support the production of local vegetables. It is recommended to promote the use of vegetables in greenhouses and increase the supply during the off-season. And the vegetable planting base will be extended to the surrounding areas of Beijing and there should be contract and orders with other provinces to obtain long-term cooperative relations and stabilize market supply.

4.2.2 Broaden vegetable marketing channels to ensure vegetable safety
It is necessary to support agricultural products into supermarkets and the community. The government should encourage the development of new marketing methods such as e-commerce of agricultural products. At the same time, the government should strengthen the quality and safety management of vegetables.

4.2.3 Establish a correct consumption concept and popularize nutrition knowledge
It is recommended to increase the publicity of the nutritional value of vegetables, popularize the education of health knowledge, so that consumers pay attention to their own health. At the same time,
it is recommended to give low-income residents a vegetable subsidy, so that they can safely eat fresh and nutritious vegetables.

References:
[1] Sun Qian, Mu Yueying. Systematic analysis of vegetable consumption characteristics and consumption demand of Beijing residents. Chinese Agricultural Science Bulletin, 2012(12): 257~263.
[2] Zhang Hongxia, An Yufa, Li Zhibo. Influencing factors and marketing strategies of community residents' purchasing behaviors based on the survey of community residents in Beijing. Research World, 2012(8): 20~23.
[3] Li Wei, Feng Xian, Han Ruijuan. Prediction of Vegetable Consumption Status and Trends of Urban Residents in Beijing. Northern Horticulture, 2015(06): 197~202.
[4] Zhu Aiping, Zhou Yingheng. Analysis of China's vegetable market demand. Journal of Huazhong Agricultural University (Social Science Edition), 2001 (3): 26~31.
[5] Chen Lixia, Wang Duchun. Analysis of vegetable purchasing behavior and its influencing factors among urban residents in Harbin. Chinese Agricultural Science Bulletin, 2014, 30(8): 122~128.
[6] Liu Fengsheng. Analysis of psychological needs of vegetable consumers. Shanghai Vegetables, 2002 (01): 8~9.
[7] Chen Yueying. Status and prospects of vegetable consumption demand of Chinese residents. China Food and Nutrition, 2005 (07): 38~39.
[8] Zhang Hongxia, An Yufa, Li Zhibo. Influencing factors and marketing strategies of community residents' purchase behavior. Research World, 2012(08): 20~23.
[9] Li Zhemin. Changes in food consumption and nutrition development of Chinese residents in the past 50 years. Resource Science, 2007, 1 (29): 27~35.
[10] Tang Yanan, Liu Heguang. Systematic Analysis of Vegetable Consumption Characteristics and Consumption Demand of Urban Residents in Shanghai. Guangdong Agricultural Sciences, 2013(23): 204~208.