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Zhang M.Y., Wu L.P.

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CONSUMER DEMAND FOR RABBIT MEAT IN URBAN CHINA:2011-2018

Zhang M. Y., Wu L. P.*

School of Economics and Management, China Agricultural University
No.17 Tsing Hua East Road Haidian District, 100083, Beijing, China
*Corresponding author: wulp@cau.edu.cn

ABSTRACT

This study assess and report on Chinese consumer perceptions, knowledge and behaviors related to rabbit meat, using a dataset from a series of surveys during 2011-2018. The survey results show that the rabbit meat consumption in urban China is increasing gradually in terms of the quantities and willingness consumed, but the overall consumption is still on the low side. Additionally, more than half of consumers surveyed have no consumption habits on the rabbit meat due to lack of knowledge on the nutrition and health attributes of rabbit meat. Consequently, it is necessary to strengthen media propaganda on nutritional characteristics of rabbit meat and use rabbit meat as functional foods for changing behavior patterns towards the long-term development of the rabbit meat market.

Key words: Rabbit meat, rabbit products, consumer behavior, demand.

INTRODUCTION

In recent years, the rabbit meat output of China has continued to go up. In 2017, the rabbit meat output reached to 735 thousand tons, accounting for 46.9% of the world's total rabbit meat output. It is unique that less than 3% of Chinese rabbit meat is exported while 97% of it is sold in the national market over the past decades. The proportion of exports of rabbit meat has a continuous decrease in China, and only 0.8% of rabbit meat was exported in 2007 (Wu et al.,2018). However, China is still the largest nation in the production, consumption and exports of rabbit meat in the world.

From the perspective of the total meat consumption in urban China, rabbit meat consumption accounts for a small proportion. Although Chinese rabbit consumption has undergone fast growth during the past decades, it still accounts for less than 5% (Shi et al.,2018). In general, the rabbit meat is less consumed by the Chinese urban residents, suggesting that the market of rabbit meat has a large potential in the future in China (Wang and Wu, 2013).

The objectives of this article are to analyze consumer behavior changes in meat consumption using a series of survey data from 2011 to 2018, and to evaluate consumer purchase preferences and constraints on rabbit meat. It is necessary to provide information for the establishment of investment strategy of rabbit industry processing and sales enterprises and the development of product consumption market.

MATERIALS AND METHODS

This study is a descriptive analysis on the dataset from a series of sample surveys on the consumption of rabbit meat in urban China conducted during 2011-2018. These surveys are typical interviews by face-to-face. Table 1 reports the main characteristics of the survey. More exactly, it should be noted that the data cover a wide range of cities from 2011 to 2012, and the sample cities selected from 2013 to 2018 are mainly located in several representative cities that have more than one million habitants, where the consumption of rabbit meat was more than the rest of cities in China. As shown in table 1, the average age and household size of respondents are basically similar among these surveys.

Table 1: Main characteristics of sample surveys during 2011-2018 in urban China

Items	2011	2012	2013	2014	2015	2016	2017	2018
No. of cities selected	11	10	5	7	6	6	6	7
Sample size	1043	1092	463	410	554	424	612	672
Age of respondents	41.3	42.6	37.6	39.4	39.2	41.4	39.3	42.5
Household size	3.7	3.5	3.6	3.7	3.4	3.4	3.3	3.4

Data source: calculated from the datasets of sample surveys during 2011-2018.

RESULTS AND DISCUSSIONS

Meat consumption of urban residents

As shown in table 2, the average household consumption of pork is 63.09kg/year, which accounts for more than half of quantities consumed of meats, the consumption of poultry and beef is 24.65 and 13.95kg/year, respectively. What's more, the total consumption of mutton and rabbit meat is less than 5.00kg/year. The findings from the data are consistent with official statistics on the consumption of meats of urban population as a whole. Official statistics from the National Bureau of Statistics of China (NBSC) indicate that the consumption of pork is the largest, the consumption of poultry and beef is the second, and the consumption of mutton and rabbit meat is very few.

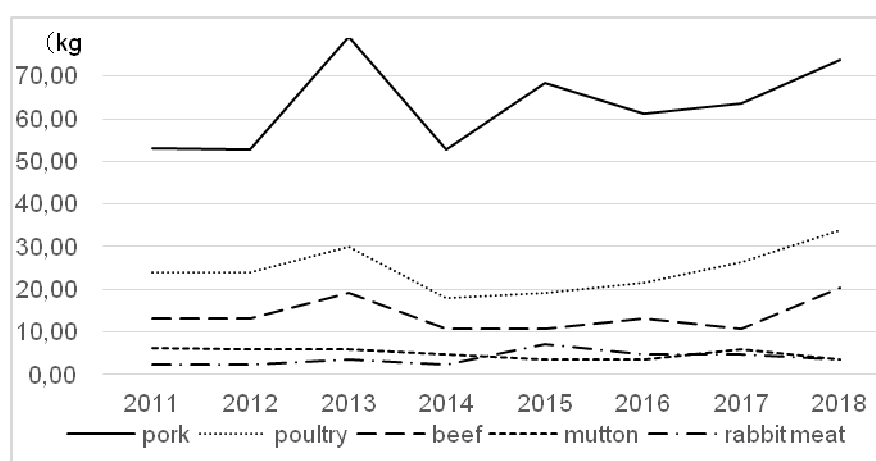


Figure 1: Average households meat consumption during 2011-2018 in urban China (kg/year/household)

Rabbit meat consumption of urban residents

Several findings are as follows:

First, as is shown in table 2, the proportion of the households that consumed rabbit meat during 2011-2016 increased considerably, increasing from 36.1% in 2011 to 54.0% in 2016. However, the proportion of rabbit meat has a slight decrease during 2017-2018. Although the intention of future consumption fluctuates year by year, it is more than 40%. By 2018, the consumption intention of rabbit meat went up to 64.3%. The results indicate that there is a potential for rabbit meat consumption to keep growing in the future.

Table 2: Proportion of the households that consumed rabbit meat as well as intention of the households in the future during 2011-2018 in urban China (%)

	2011	2012	2013	2014	2015	2016	2017	2018
Proportion of the households that consumed rabbit meat	36.1	38.6	44.5	46.3	49.8	54.0	46.1	43.8
Intention of future consumption	40.6	44.0	53.8	43.5	48.9	51.9	69.0	64.3

Data source: calculated from the datasets of sample surveys during 2011-2018.

Second, there are 38.0% of the respondents who demonstrated a positive attitude to the consumption of rabbit meat, less than 15% of the respondents who had a negative attitude to rabbit meat consumption, and nearly half of the respondents who were indifferent to rabbit meat consumption. The results suggest that consumers are not averse to rabbit meat while they didn't understand the nutrition and health value of rabbit meat which led to low consumption of rabbit meat in current China.

Third, what are the barriers in the rabbit meat consumption in China? As is shown in table 3, "have no habit of eating rabbit meat" and "lack of knowledge of rabbit meat" are the main factors in influencing consumers to eat rabbit meat. Moreover, "not available to buy", "don't like the taste of rabbit meat", and "can't cook" are the barriers of consumption of rabbit meat. Actually, the data show that only a few consumers refused to eat rabbit meat because of the "price is expensive", or "fewer species of rabbit meat", or "have no nutritional value". Thus, the results indirectly suggest that the consumers know little about rabbit meat.

Table 3: Barrier of consumption of rabbit meat during 2011-2018 (%)

	2011	2012	2013	2014	2015	2016	2017	2018	Average
Lack of knowledge of rabbit meat	32.1	40.1	41.9	42.8	32.0	37.9	47.2	39.4	39.1
Not available to buy	17.0	17.8	29.8	24.3	27.7	35.4	21.5	22.2	24.5
Price is expensive	6.1	5.9	9.3	5.9	7.9	2.1	2.6	3.4	5.4
Don't like the taste of rabbit meat	31.8	33.0	17.1	18.9	21.9	19.5	26.1	24.1	24.0
Fewer species of rabbit meat	1.9	4.3	5.4	1.8	4.0	3.6	5.5	2.7	3.7
Can't cook	17.1	21.0	26.0	18.5	26.3	25.6	36.2	16.1	23.4
Have no habit of eating rabbit	50.7	51.0	58.5	64.0	55.8	56.4	65.8	74.1	59.6
Have no nutritional value	0.3	0.6	4.7	2.3	0.1	2.6	5.2	1.6	2.2

Data source: calculated from the datasets of sample surveys during 2011-2018.

Finally, table 4 reports the consumer's average evaluation on the attributes of rabbit meat from 2013-2018. The results that the consumers pay more attention to freshness, no chemical additions and taste, when they made their food purchase. Nevertheless, the respondents seldom attach importance to the appearance, brand, price and nutrition of rabbit meat. More specifically, the consumers pay more attention to the low fat, low cholesterol, and high protein attribute within in a variety of nutritional values of rabbit meat.

Table 4: The average evaluation of the importance of the attributes of rabbit meat (2013-2018) ^a %

Price	Appearance	Freshness	Low calories	High amino acids	High protein	High digestive rate
3.3	3.1	4.2	3.3	3.3	3.6	3.4
Taste	Brand	Tenderness	Low fat	Product certification	Low cholesterol	No chemical additions
4.0	3.1	3.7	3.6	3.8	3.6	4.2

^a1-5 represented not important, not very important, average, important, very important. The indexes are included in the questionnaire from 2013. Data source: calculated from the datasets of sample surveys during 2013-2018.

CONCLUSIONS

The main conclusions as follows. First, the rabbit meat consumption in general accounts for a very small portion of total meat consumption, which rabbit meat account for less than 5 percent. Second, rabbit meat consumption in urban households is not common in China. However, the demand for rabbit meat has improved in recent years and is expected to continue to rise. Third, the barriers of rise in the rabbit meat consumption are composed of lacking of knowledge on rabbit meat and having no habit of eating rabbit meat. Finally, consumers attached great importance to freshness, taste, and quality of rabbit meat when they bought rabbit meat.

Based on the above survey results, the following suggestions are proposed. First, rabbit meat as a "functional" food, to provide consumers with a variety of rabbit meat processing products. Rabbit meat has excellent nutritional properties. As a "functional" food, it can greatly increase the added value of rabbit meat. Second, it is necessary to promote consumers' awareness of the nutritional properties of rabbit meat through appropriate publicity. Finally, promoting the cooking skills in the sales process and improving the eating habits of rabbit meat can increase the purchase of rabbit meat.

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CONSUMER DEMAND FOR RABBIT MEAT IN URBAN CHINA:2011-2018

Zhang M.Y. *, Wu L.P.**.
Email: ** wulp@cau.edu.cn



*, ** photo of attending author(s)

Context : China is still the largest nation in the production, consumption and exports of rabbit meat in the world. However, rabbit meat consumption accounts for a small proportion of the total meat consumption in urban China.

Table 1: Main characteristics of sample surveys during 2011-2018 in urban China

Items	2011	2012	2013	2014	2015	2016	2017	2018
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Household size	3.7	3.5	3.6	3.7	3.4	3.4	3.3	3.4

Objectives: To analyze consumer behavior changes in meat consumption, and evaluate consumer purchase preferences and constraints on rabbit meat.

Methods: Descriptive analysis.

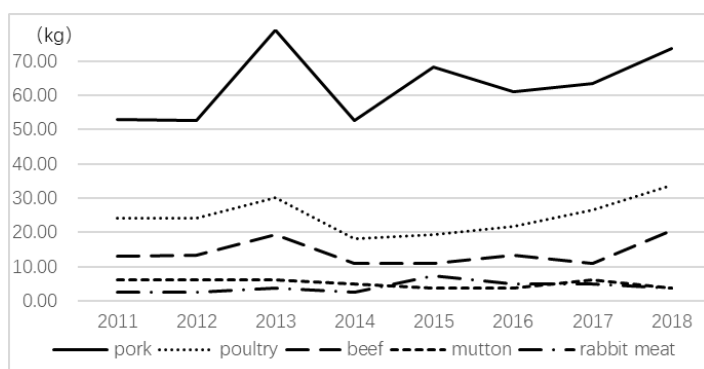


Figure 1: Average households meat consumption during 2011-2018 in urban China (kg/year/household)

Results:

1. Rabbit meat consumption in urban China is increasing gradually, but the overall consumption is still on the low side which account for less than 5% ;
2. Rabbit meat consumption in urban households is not common in China;
3. The barriers of rise in the rabbit meat consumption are composed of lacking of knowledge on rabbit meat and having no habit of eating rabbit meat;
4. Consumers attached great importance to freshness, taste, and quality of rabbit meat when they bought rabbit meat.