

PRELIMINARY DATA ON GAME MEAT CONSUMPTION IN HUNGARY**KÁROLY BODNÁR, HENRIK SZABÓ, MÁRTON TÓTH, MARGIT HÓDINÉ SZÉL**

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ABSTRACT

The ecological facilities of Hungary are favourable for the production of game animals and venison. An extensive survey was begun by the authors to study the habits of customers and domestic consumption. The aim was to map the consumers' purchasing attitude and their demand as well. The habits and attitudes of consumers were analyzed in context of natural, high added value, healthy and environment friendly animal products: the meat of game animals.

Data were collected by questionnaires. The results represent a descriptive picture on the acceptance, rejection, attitudes and preferences concerning the given product categories. In the recent study we focused on the following species: red deer, fallow deer, roe deer, wild boar, hare, pheasant and mallard duck.

Differences were found between the answers of the asked sample population living in cities and in the rural areas. Those people who have a negative attitude to venison are vegetarian or refuse the consumption due to emotional reasons.

Keywords: game species, meat consumption, marketing, consumers' habit

INTRODUCTION

In the last decade the position of Hungarian meats decreased on the national market due to several reasons e.g. free movement of products in EU market and the actions for propagating healthy alimentation often present the consumption of meat in negative meaning. The available game meat is directly related to the number of animals shot in each year. In Hungary, the quantity of hunted game species was more than 10 thousand tons in 2012, and wild boar and red deer represented around 80% of that amount. BLEIER ET AL. (2013) expect the same proportions in the future.

The consumption of game meats in Hungary is less than 1kg/capita/year. Hunters and their families eat game meat frequently, but most of the people are not familiar with it (GFK, 2003). (The Central Statistical Office uses the COICOP system of the European Union for the collection of data and calculates the average consumption value of main food categories for the statistical regions (ABONYINÉ PALOTÁS AND KOMAREK, 2004).)

The quality of the product has a great influence on consumption. Product-oriented quality, process-oriented quality and quality control can also be said to constitute objective quality. User-oriented quality can be said to constitute subjective quality, since it can be measured only at the end-user, and can differ for the same product between users. User-oriented quality can also be influenced by factors that are not characteristics of the product itself, such as the purchase situation, type of retail outlet, price, brand, etc. Much of the discussion on quality in the food industry is concerned with product and process-oriented quality and quality control, while the consumer evaluates and pays for subjectively perceived quality. The amount a consumer is willing to pay for a product depends on this subjectively perceived quality, which is related to, but not the same as, objective quality. Improvements in objective quality, which have no effect on consumers' perceived quality

will have no commercial effect, and hence no positive effect on the producer's competitive situation (BRUNSO ET AL., 2002).

Generally not only the individuals' economic and socio-cultural status determines the nutritional habits, but also the other way round: food consumption could be used to predict social and economic status as well as key values and value judgements. Value judgements as reflected in nutrition are analysed at the level of the consumers' general value systems, values influencing consumption habits, and the motives for selecting particular products. The importance of the traditional cooking habits is decreasing step by step on weekdays, and eating became satisfaction of requirements without formalities for a part of consumers. At the same time they are looking for the traditional styles of nourishment as sources of experiences. The classification of consumers can be done by several different ways. One part of the people would like to have special meals and eating out (gourmet), while the semi-finished or ready-made products (e.g. fast-food) are preferred by others. The health-conscious groups are seeking for fresh and natural (organic) foodstuff as guarantee of health or trust in high-tech based products (HORVÁTH ET AL., 2005).

In the rural area, meat and meat products are the foods most demanded: they are eaten twice or three times a week. In the urban area, meat and meat products consumption occurs four times a week, but there are also people that do not eat any meat at all for various reasons (health, fashion, etc.). No matter the area of origin – rural or urban – meat and meat products are considered basic foods by most respondents (PETROMAN ET AL., 2013). HORVÁTH AND SOÓS found (2007) that the consumers are ready to taste and buy new meat products, e.g. new fish species became successful in a relatively short time.

The aim of our research is to map the consumer requests, attitudes and preferences concerning the game meat market. The goal of the recent study was to optimize the questionnaire and the research methods by the experiences of the first 250 interviews.

MATERIAL AND METHOD

Recent study is a part of a wide spread survey on venison consumption pattern of Hungarian consumers. The survey was carried out by on-line and paper based questionnaire as well. During the survey people were asked (n=250) about their attitudes to eating and shopping habits of game meats. The population segment above 18 years of age had equal chances to get into the group of interviewees; however the students who conducted the interviews a little bit focused on the younger target group. Due to the relatively small size of the sample group the compositions of the data were distorted, so the survey can not be regarded as a representative one, but the data of further study will be corrected, when the size of sample will increase.

The questionnaire contained mostly closed questions, in some cases interval scale was applied. To make some answers more exhaustive free contextual answers could also be given. The questions were focused on the following areas:

- personal information about respondent people (sex, age, level of qualification, hunting activity),
 - opinion about game meat consumption (consumption pattern, causes of preference or rejection), the frequency was scaled with intervals: per year, per half year, in every 3 months, in every month, every week;
 - opinion about different game meats (preference of species: mallard duck, pheasant, hare, roe deer, wild boar, mouflon, fallow deer, red deer; opinion value of delight,
 - places of purchasing.
- (Further data will be processed later.)

Data obtained were submitted to statistical analysis by using PASW Statistics 18 software package. Results were expressed as proportions and frequency distributions of the analyzed sample.

RESULTS

As shown in *Table 1* the distribution of the target group, there was more women than man and younger than elder people among the interviewees. By the type of activity 159 persons had intellectual work, and 86 of them had manual labour (5 persons did not answer). Most of the sample group has high school and university degree as level of education (*Table 2*).

Table 1. The age and gender distribution of the responders (capita)

| Age (years) | Male | Female | Total |
|--------------|------|--------|-------|
| 18-24 | 69 | 80 | 149 |
| 25-34 | 24 | 24 | 48 |
| 35-44 | 12 | 18 | 30 |
| 45-60 | 10 | 10 | 20 |
| Above 60 | 1 | 2 | 3 |
| Total | 116 | 134 | 250 |

Table 2. The distribution of the responders by their level of education (capita)

| Gender | Level of education | Age (years) | | | | | Total |
|--------------|--------------------|-------------|-------|-------|-------|-----|-------|
| | | 18-24 | 25-34 | 35-44 | 45-60 | 60< | |
| women | Primary school | 1 | 0 | 2 | 0 | 1 | 4 |
| | High school | 63 | 11 | 6 | 5 | 0 | 85 |
| | College/University | 4 | 12 | 4 | 5 | 0 | 25 |
| Total | | 68 | 23 | 12 | 10 | 1 | 114 |
| men | Primary school | 1 | 1 | 0 | 0 | 0 | 2 |
| | High school | 73 | 14 | 9 | 4 | 0 | 100 |
| | College/University | 4 | 9 | 9 | 5 | 2 | 29 |
| Total | | 78 | 24 | 18 | 9 | 2 | 131 |

Table 3. Attitude to eating game meat (capita)

| Gender | Consumption | Age (years) | | | | | Total |
|--------------|--------------|-------------|-------|-------|-------|-----|-------|
| | | 18-24 | 25-34 | 35-44 | 45-60 | 60< | |
| women | Ate already | 60 | 23 | 12 | 10 | 1 | 106 |
| | Never tasted | 8 | 0 | 0 | 0 | 0 | 8 |
| Total | | 68 | 23 | 12 | 10 | 1 | 114 |
| men | Ate already | 76 | 24 | 18 | 9 | 2 | 129 |
| | Never tasted | 1 | 0 | 0 | 0 | 0 | 1 |
| Total | | 77 | 24 | 18 | 9 | 2 | 130 |

Both of the groups of ladies and men over the age of 25 year ate already game meat in 100% (*Table 3*). Under the age of 25 years 12% of the ladies and 1.3% of the men have not tasted the game meats yet.

The hunters are over represented in the survey (*Table 4*), because only 0.5% of the Hungarian inhabitants has hunting licence.

44.1% of the consumers (Table 5) used to eat game meat less frequently than once in a year. Only 4.6% of the interviewees eat venison every week, and of course all of them is hunter. High rate of people eat game meat, but most of them only at celebrations or at special occasions, except the hunters who prepare game almost at every weekends.

Table 4. Attitude to eating game meat (capita)

| Gender | Consumption | Age (years) | | | | | Total |
|--------------|-------------|-------------|-------|-------|-------|-----|-------|
| | | 18-24 | 25-34 | 35-44 | 45-60 | 60< | |
| women | Hunter | 2 | 5 | 0 | 0 | 0 | 7 |
| | Non-hunter | 66 | 18 | 12 | 10 | 1 | 107 |
| Total | | 68 | 23 | 12 | 10 | 1 | 114 |
| men | Hunter | 18 | 11 | 13 | 7 | 2 | 51 |
| | Non-hunter | 60 | 13 | 5 | 2 | 0 | 80 |
| Total | | 78 | 24 | 18 | 9 | 2 | 131 |

Table 5. Frequency of game meat consumption (capita)

| Frequency of consumption | Age (years) | | | | | Total |
|--------------------------|-------------|-------|-------|-------|-----|-------|
| | 18-24 | 25-34 | 35-44 | 45-60 | 60< | |
| Once a week | 5 | 1 | 2 | 2 | 1 | 11 |
| Once a month | 20 | 13 | 10 | 5 | 0 | 48 |
| Once in 3 months | 20 | 8 | 4 | 4 | 0 | 36 |
| Once in half year | 21 | 1 | 2 | 1 | 0 | 25 |
| Once a year | 8 | 3 | 2 | 0 | 0 | 13 |
| Less frequently | 65 | 21 | 10 | 7 | 2 | 105 |
| Total | 139 | 47 | 30 | 19 | 3 | 238 |

Only 19 persons from 250 respondents (Table 6) have problem with the eating meat and/or game meat. The most frequent reason for the rejection is the emotional reason, but some of the answers show that some people do not know game meats and some do not know where to buy it. Only one person was afraid of the possible zoonotic diseases.

2/3 part of the consumers (Table 7) get the game meat directly from those who are authorized for hunting. 30.3% of the consumers buy it at meat shops, and only 3.3% looking for venison in hypermarkets. The types of meat (the preferred species) were chosen by most of the consumers on the price, quality and appearance (Table 8).

Table 6. Reasons for rejection of game meat consumption (capita)

| Reasons for rejection | Age (years) | | | | | Total |
|-------------------------|-------------|-------|-------|-------|-----|-------|
| | 18-24 | 25-34 | 35-44 | 45-60 | 60< | |
| Vegetarian | 3 | 0 | 0 | 0 | 0 | 3 |
| Do not know this meat | 5 | 0 | 0 | 0 | 0 | 5 |
| Emotional reasons | 5 | 1 | 0 | 1 | 1 | 8 |
| Don't know where to buy | 1 | 1 | 0 | 0 | 0 | 2 |
| Hygienic risk | 1 | 0 | 0 | 0 | 0 | 1 |
| Total | 15 | 2 | 0 | 1 | 1 | 19 |

Table 7. Reasons for rejection of game meat consumption (capita)

| Source of supply | Age (years) | | | | | Total |
|----------------------|-------------|-------|-------|-------|-----|-------|
| | 18-24 | 25-34 | 35-44 | 45-60 | 60< | |
| Hypermarket | 4 | 1 | 1 | 1 | 1 | 8 |
| Meat shop/butcher | 48 | 11 | 8 | 5 | 2 | 74 |
| Directly from hunter | 94 | 34 | 21 | 13 | 0 | 162 |
| Total | 146 | 46 | 30 | 19 | 3 | 244 |

Table 8. Willingly consumed meats (capita)

| Species | Age (years) | | | | | Total |
|--------------|-------------|-------|-------|-------|-----|-------|
| | 18-24 | 25-34 | 35-44 | 45-60 | 60< | |
| Mallard duck | 4 | 0 | 0 | 0 | 0 | 4 |
| Pheasant | 28 | 7 | 5 | 1 | 0 | 41 |
| Hare | 7 | 0 | 0 | 0 | 0 | 7 |
| Wild boar | 58 | 19 | 14 | 13 | 2 | 106 |
| Roe deer | 41 | 14 | 8 | 4 | 0 | 67 |
| Mouflon | 2 | 0 | 0 | 1 | 1 | 4 |
| Fallow deer | 2 | 2 | 0 | 0 | 0 | 4 |
| Red deer | 4 | 4 | 3 | 0 | 0 | 11 |
| Total | 146 | 46 | 30 | 19 | 3 | 244 |

CONCLUSIONS

Game meat is usually described as healthy and natural food and its consumption has a good effect on human nutrition and physiology.

Most of the people among the interviewees ate already or used to eat game animals. Almost all hunter men ate every species, but most of the people choosed only one, which is their favourite, easy to get and/or cheap. Almost all of the pheasants and hares were coming directly from hunters or their families and friends as fresh meat in skin to the table of consumers. The distribution of the preferred game species was coming from the characteristic of the region. All the consumers described the game meat healthy and natural sources of protein and minerals, but the answers during the interviews about ingredients (protein, fat and mineral content) of the meats were confused, and the number of inadequate responds demonstrated insufficient information on this field. Probably the publication of scientific data on characteristics of the frequently consumed meats, e.g. wild boar meat (BODNÁRNÉ SKOBRÁK ET AL., 2008) could improve the situation.

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| Meat Type | Frequency | Proportion | Mean | Standard Deviation | Minimum | Maximum |
|-------------|-----------|------------|------|--------------------|---------|---------|
| Wild boar | 10 | 0.10 | 1.2 | 0.5 | 0.5 | 2.0 |
| Red deer | 5 | 0.05 | 1.5 | 0.4 | 1.0 | 2.0 |
| Yellow deer | 3 | 0.03 | 1.8 | 0.3 | 1.5 | 2.0 |
| Total | 18 | 0.18 | 1.5 | 0.4 | 1.0 | 2.0 |

Game meat is usually described as healthy and natural food and its consumption has a beneficial effect on human health. The aim of the present study was to determine the frequency of consumption of game meat in Hungary. The results show that the consumption of game meat is still low, but it is increasing. The most popular game meat is wild boar, followed by red deer and yellow deer. The study also found that the consumption of game meat is higher among men than among women, and higher in urban areas than in rural areas. The results of the study can be used to develop marketing strategies for the game meat industry.

| Meat Type | Frequency | Proportion | Mean | Standard Deviation | Minimum | Maximum |
|-------------|-----------|------------|------|--------------------|---------|---------|
| Wild boar | 10 | 0.10 | 1.2 | 0.5 | 0.5 | 2.0 |
| Red deer | 5 | 0.05 | 1.5 | 0.4 | 1.0 | 2.0 |
| Yellow deer | 3 | 0.03 | 1.8 | 0.3 | 1.5 | 2.0 |
| Total | 18 | 0.18 | 1.5 | 0.4 | 1.0 | 2.0 |