ACCEPTANCE OF THE MEAT OF WILD UNGULATES AMONG THE HUNGARIAN CONSUMERS

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Abstract

The culture of game meat cooking in the Hungarian cuisine has very old tradition. In the recent survey we focused on the following species: red deer (*Cervus elaphus*), fallow deer (*Dama dama*), roe deer (*Capreolus capreolus*), mouflon (*Ovis musimon*) wild boar (*Sus scrofa*). Our aim was to map the consumers' requests, the demand as well as the main objectives on the domestic market. The results represent a descriptive picture on the acceptance, rejection, attitudes and preferences concerning the given meat types. Data were collected (n=500) by on-line and paper based questionnaire as well, and were processed by PASW Statistics 18 software. Most of the asked consumers ate already game meat occasionally (all those who have hunter in the family eat at least in every month and more species). Differences were found between the answers of the asked sample population living in urban and in the rural areas. About 90% of the consumers considered game meat as healthy and almost organic food. Those people who have a negative attitude to game meat are vegetarian or refuse consumption due to fear from zoonotic diseases or emotional reasons. The availability of game meats is better year by year, but the answerers judged the fresh and pre-cooled meat more favourable, than the deep frozen ones, and buy the game meat more frequent from hunters, than from supermarkets. By the opinion of the answerers the game meats are expensive meats (compared to the meats of domestic animals). Deer meats were preferred by the value of delight, and the wild boar meat was preferred by the price.

Key words: game meat, wild ungulates, consumption habits, consumer preference

Meat intake varies widely throughout the world. Overall meat consumption has continued to rise in the U.S., European Union, and developed world. In the U.S. and other developed countries, meat composes a significant portion of the normal diet, contributing more than 15% to daily energy intake, 40% to daily protein intake, and 20% to daily fat intake (Daniel, C.R. et al., 2011).

Hungarian consumers prefer the meat of domestic animals than game meat. (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 J., Komarek L., 2004).) 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). Similar was found in Croatia were the yearly game meat consumption amounts to only 0.55 kg per household member. Consumers prefer meat of domestic animals, because it is cheaper, not paying attention to specific nutritive advantages of game meat (Tolusic Z. et al., 2006).

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 N. et al., 2013, expect the same proportions in the future.

The quality of the product has a great influence on consumption. 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 (Brunsø K. 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

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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 are preferred by others. The health-conscious groups are seeking for fresh and natural foodstuff as guarantee of health or trust in high-tech based products (Horváth Á. et al., 2005).

In the rural areas of Timis county of Romania, meat and meat products are the most demanded foods: they are eaten twice or three times a week. In the urban area, meat and meat products consumption occurs four 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, C. et al., 2013).

Horváth J. and Soós L. 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 Hungarian game meat market.

MATERIAL AND METHOD

Recent study is a part of a wide spread survey on game meat consumption pattern of Hungarian consumers. The survey was carried out by on-line and paper based questionnaires as well. During the survey people were asked (n=500) 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.

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 of consumption was scaled with intervals: per year, per half year, in every 3 months, in every month, every week;
- opinion about meat of different wild ungulates (preference of species: roe deer, wild boar, mouflon, fallow deer, red deer); opinion on the value of delight,
- places of availability.

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 AND DISCUSSIONS

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 63.6% of the interviewed persons had intellectual work, and 34.4% of them had blue collar job (10 persons did not answer). Most of the sample group has secondary school and university/college degree as level of education (*table 2*).

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.

43.9% of the consumers (*table 5*) used to eat game meat less frequently than once in a year. Only 4.6% of the interviewees eat game meat 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 1

The age and gender distribution of the responders (capita)

Age (years)	Male	Female	Total
18-24	138	160	298
25-34	48	48	96
35-44	24	36	60
45-60	20	20	40
Above 60	2	4	6
Total	232	268	500

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	2	0	4	0	2	8
	Secondary school	126	22	12	10	0	170
	College/University degree	8	24	8	10	0	50
Total		136	46	24	20	2	228
Men	Primary school	1	2	0	0	0	3
	Secondary school	147	28	18	8	0	201
	College/University degree	8	18	18	10	4	58
Total		156	48	36	18	4	262

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	120	46	24	20	2	212
	Never tasted	16	0	0	0	0	16
Total		236	46	24	20	2	228
Men	Ate already	153	48	36	18	4	259
	Never tasted	1	0	0	0	0	1
Total		154	48	36	18	4	260

Table 4

Attitude to hunting (capita)

Gender	Responder	Age (years)					Total
		18-24	25-34	35-44	45-60	60<	
Women	Hunter	4	10	0	0	0	14
	Non-hunter	132	36	24	20	2	214
Total		136	46	24	20	2	228
Men	Hunter	36	22	26	14	4	102
	Non-hunter	120	26	10	4	0	160
Total		156	48	36	18	4	262

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	10	2	4	4	2	22
Once a month	40	26	20	10	0	96
Once in 3 months	40	16	8	8	0	72
Once in half year	43	2	4	2	0	51
Once a year	16	6	4	0	0	26
Less frequently	129	42	20	14	4	209
Total	278	94	60	38	6	476

Only 38 persons from 500 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 2 persons were afraid of the possible zoonotic diseases.

2/3 parts 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 game meats in hypermarkets. The types of meat (the preferred species) were chosen by most of the consumers on the price, quality and appearance (*table 8*). The most popular was the wild boar meat.

Table 6

Causes of rejection of game meat consumption (capita)

Causes of rejection	Age (years)					Total
	18-24	25-34	35-44	45-60	60<	
Vegetarian	6	0	0	0	0	6
Do not know this meat	10	0	0	0	0	10
Emotional reasons	10	2	0	2	2	16
Don't know where to buy	2	2	0	0	0	4
Hygienic risk	2	0	0	0	0	2
Total	30	4	0	2	2	38

Table 7

Places of obtaining of game meat (capita)

Places of obtaining	Age (years)					Total
	18-24	25-34	35-44	45-60	60<	
Hypermarket	8	2	2	2	2	16
Meat shop/butcher	96	22	16	10	4	148
Directly from hunter	188	68	42	26	0	324
Total	292	92	60	38	6	488

Table 8

Willingly consumed big game species (capita)

Species	Age (years)					Total
	18-24	25-34	35-44	45-60	60<	
Wild boar	173	52	38	28	4	295
Roe deer	95	28	16	8	0	147
Mouflon	4	0	0	2	2	8
Fallow deer	4	4	0	0	0	8
Red deer	16	8	6	0	0	30
Total	292	92	60	38	6	488

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 E. et al., 2008) could improve the situation.

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