



Impact of Gender and Age on Game Meat Quality

By Reka Stefan, I. Bud, M. Botha & Daniela Ladoși

Abstract - The environmental conditions become more “civilized” during the time and implicit less favorable in general for the game. It came into sight some trace regarding the qualitative and also the quantitative regress of the products and subproducts from this domain. The analysis of the causal relations of the determinant factors and of the game population dynamic during the years showed that the actual situation is a consequence of some complex releasers factors (biotic and atrophic factors). We named the following from these factors: the environmental conditions of the game (climate, relief, temperature, humidity, the shelter, and the quit of this), the specie, the age, the gender of the game, the game fatten, the feed supplement, the stress before slaughter, the type of the used arms, electrocution of the game or other methods witch the game became unconsciously. Another category of factors refers to the treatment conditions after slaughter, respectively: the time to disembowel the game, the removal of the males’ testicles, the cooling and the correct manipulation during transportation of the game carcass, and the adequate storage of these carcasses for aging. In this paper we present some of these factors: age and gender which affect the game meat quality. In this paper we describe the influence of gender and the age on game meat quality. The results of the experiences showed that the male’s carcasses have higher contents in muscular and osseous tissue, comparative to the female’s carcasses. The female’s carcasses have higher contents in fat and conjunctive tissue, comparative to male’s carcasses. Also, these results point out that younger game have a soft meat, comparative to the adult game meat.

Keywords : game meat, quality, age, gender.

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I. INTRODUCTION

The physical and geographical conditions specify to Harghita district has favored some pedogenetical process, which determined the apparition of some different types of soils. These physical and geographical conditions assure adequate development of some game species (bear, wild boar, and deer). Cinegetic administration point of view, Harghita district is divided in 66 hunting territories. In present these hunting territories include the following species: common buck - 1278 examples, deer-690 examples, chamois-60 examples, bear-271 examples, wild boar-441 examples, partridge-465 examples, grouse-552 examples, wolf - 53 examples, rabbit-1195 examples, and lynx-56 examples (Miercurea-Ciuc Silvic Direction).

The total forest surface in Harghita district represents 231494 ha, and it is situated exclusively in the mountain area, excepting the south-west region which belongs to the hill region. From the total forest surface, 212905 ha (93%) belongs to Romsilva, and 15709 ha (7%) belongs to private persons.

The forest is constituted preponderant by resinous species, 73% from the total forest surface, and the deciduous species represents only 27% (Miercurea-Ciuc Silvic Direction).

The buck has gain the quality of emblem of Romanian hunting, like a food source, one hand and for his imposing trophy, one the other hand.

For majority of the hunters the deer remains the main hunting specie.

In this paper we present some of the factors, which affecting game meat quality: the age and gender of the animals. The aim of this paper is to compare the differences between the carcasses of males and females, and also, between the carcasses compositions of the adult and the younger animals.

II. MATERIAL AND METHODS

The results which were processing statistically proceed from the personal experiences, based on some results from the forest administration of Harghita district, and also from literatures. We made qualitative and quantitative analysis of the game meat. The game proceeded from Harghita district, and all the animals were slaughtered according to meat industry standard. In present, the results of statistics point out high variation of the game effectives, during the time, with alarming decrease of some species, for this reason we appreciated that is opportune to study these aspects. Are many responsible reasons for the effectives decrease, which can be diminish this decrease.

In this paper we approach the following aspects: the influence of age and gender towards to game meat quality.

III. RESULTS AND DISCUSSIONS

The environmental conditions become more "civilized" during the time and implicit less favorable in general for the game. It came into sight some trace regarding the qualitative and also the quantitative regress of the products and subproducts from this domain.

Authors ^{α σ ρ ω} : Faculty of Animal Husbandry and Biotechnologies, USAMV - CJ, România Calea Mănăstur Nr. 3-5, 400372, Cluj-Napoca. E-mail : reka_stefan@yahoo.com

The analysis of the causal relations of the determinant factors and of the game population dynamic during the years showed that the actual situation is a consequence of some complex releasers factors (biotic and atrophic factors). We named the following from these factors: the environmental conditions of the game (climate, relief, temperature, humidity, the shelter, and the quit of this), the specie, the age, the gender of the game, the game fatten, the feed supplement, the stress before slaughter, the type of the used arms, electrocution of the game or other methods witch the game became unconsciously. Another category of factors refers to the treatment

conditions after slaughter, respectively: the time to disembowel the game, the removal of the males' testicles, the cooling and the correct manipulation during transportation of the game carcass, and the adequate storage of these carcasses for aging. Follow-up we will describe some of these factors.

The game meat quality is influenced by the gender of the animals. In the case of males, the first step after slaughtering is representing by the remove of the testicles because these can imprint a strange taste to the meat.

The following table presents some differences between deer males and females carcasses:

Table 1 : Differences between deer males and females carcasses (Reka Stefan, 2007)

Carcass compositions	Male	Female	Differences %
Muscular tissue, %	60.51 \pm 0.43	56.64 \pm 0.97	3.87
Osseous tissue, %	18.37 \pm 0.81	15.98 \pm 0.84	2.39
Fat tissue, %	6.21 \pm 0.19	9.46 \pm 0.09	-3.25
Intermuscular fat tissue, %	2.23 \pm 0.35	3.28 \pm 0.09	-1.05
Conjunctive tissue, %	11.8 \pm 0.26	13.87 \pm 0.02	-2.07

This table shows that there are some differences between the males and females carcasses. In the case of the males, the percent of muscular tissue is higher than in female's cases, and this tissue represent 60.51 \pm 0.43 from the total carcass weight. In the case of the females, the percent of the muscular tissue is 56.64 \pm 0.97, the difference between females and males carcasses is 3.87.

In the males case the osseous tissue percent is 18.37 \pm 0.81 from the total carcass weight. In the females case this percent is 15.98 \pm 0.84, and the

difference is 2.39. There are also significant differences between the fat percent of males, comparative to female's carcasses.

Also, the difference between the percent of conjunctive tissue of the two genders is 2.07, in the favor of females.

Another factor which affects the game meat quality is the age of the animal. The younger have a soft meat, comparative to the meat of the adult animals, at it is showed in the following table:

Table 2 : Chemical composition of the different game meat species, depending on age (Reka Stefan, 2007)

Game species	Water, %	Protein %	Fat, %	Minerals, %	Dry substance, %
Adult deer	75.2	20.9	2.8	1.1	24.8
Young deer	79.8	17.7	1.8	0.7	20.2
Adult wild boar	72.09	20.5	6.4	1.01	27.91
Young wild boar	78.9	16.3	4.3	0.5	21.1
Adult bear	75.9	19.7	3.3	1.1	24.01
Young bear	79.5	17.4	2.5	0.6	20.5

This table shows that there are some differences between the adult game animals and the younger. The meat of the younger is soft, with a higher water percent comparative to the adult game meat. Also, the adult game meat has a higher protein, minerals and fat percent, comparative to the younger game meat. It is necessary to aging the both types of game meat for being softly.

IV. CONCLUSIONS

The analysis of the causal relations of the determinant factors and of the game population

dynamic during the years showed that the actual situation is a consequence of some complex releasers factors (biotic and atrophic factors). The main conclusions are the following:

1. The game meat quality is influenced by the gender of the animals. In the case of males, the first step after slaughtering is representing by the remove of the testicles because these can imprint a strange taste to the meat. In the case of the males, the percent of muscular tissue is higher than in female's cases, and this tissue represent 60.51 \pm 0.43 from the total carcass weight. In the case of the females,

the percent of the muscular tissue is 56.64 ± 0.97 , the difference between females and males carcasses is 3.87. In the males case the osseous tissue percent is 18.37 ± 0.81 from the total carcass weight. In the females case this percent is 15.98 ± 0.84 , and the difference is 2.39. There are also significant differences between the fat percent of males, comparative to female's carcasses. Also, the difference between the percent of conjunctive tissue of the two genders is 2.07, in the favor of females.

2. Another factor which affects the game meat quality is the age of the animal. The younger have a soft meat, comparative to the meat of the adult animals. The meat of the younger has a higher water percent comparative to the adult game meat. Also, the adult game meat has a higher protein, minerals and fat percent, comparative to the younger game meat. It is necessary to aging the both types game meat for being softly.

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