

OSTRICH MEAT AS A NEW PRODUCT IN THE HOSPITALITY OFFER IN REPUBLIC OF MACEDONIA

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ABSTRACT

This paper examines the ways in which food and tourism are being drawn together for the purpose of producing healthy food products on one hand and promoting healthy lifestyle and sustainable tourism on the other. This paper highlights food-related tourism initiatives in Republic of Macedonia. Moreover, starting from the philosophy of consuming healthy products for a better and sustainable future, there is a new initiative for producing ostrich meat. The aim of this paper is to present the ostrich products as a healthy food and thus, they can be seen as enhancement of the hospitality offer and influence the tourism offer in general in particular parts of the country.

Keywords: ostrich, menu, hospitality offer, healthy food, tourism products, legislation.

INTRODUCTION

The link between tourism, food and nutrition is unbreakable and deep to the point that, as the primary factor, food which is necessary, must conform to modern living and fully meets the needs of nowadays travelers. According to the philosophy for consuming healthy food and products for sustainable future, it is inevitable and necessary to modernize and innovate the menu with foods which are having particular nutritional value and are offered to the visitors and local markets. For this purpose in the world, and in Macedonia as well, appeared a new initiative to breed ostrich and produce ostrich products - meat and eggs. Following the new trends, ostrich meat with its superior nutritional value, prepared in an appropriate way, as well as the ostrich's eggs, can be implemented in the food menus in the hospitality as additional enrichment and attractive factor. Beyond the meat and eggs, from the ostrich can be produced many more products. For example, from the ostrich's skin, luxury leather accessories can be produced. It is confirmed that the creation of special menus with new items in them such as meat and eggs from ostrich as a healthy food, encourage guests to return to the restaurants or other types of hospitality objects that offer such menus with such an offer. With the opening of farms for breeding ostriches in Macedonia, commenced manufacturing process of ostrich meat and eggs, which blend as a new product in the tourist offer and restaurants are opened serving this specialty. Despite offers of this special product, a good education for the local and the global population is needed for the importance of this segment of the offer, and the tourists themselves who want to consume healthy and safe food. For this purpose it is necessary to implement the HACCP standard as well as the EU legislation, valid in this particular area. Macedonia has legislation for breeding, slaughtering and processing of meat from ostriches, but evaluation of the validity of all processes in economic terms should be done. In This activity is developed in some European countries, especially in Italy, Croatia, Serbia and Bulgaria. In the international level, this activity is developed in Africa, Australia and New Zealand and USA.

1. MACEDONIAN'S TOURISTIC OFFER AND HEALTHY FOOD

Tourist offer should respond to real human needs, especially the ones of the target groups that should be reached. Tourism policy involves the highest structures of government, local authorities, tourism associations

travel agents and tourism professionals. All actions to be taken, should be the result of a well planned program. According to the Macedonian tourism strategy, developing new products especially in rural regions with low level of visitation is a priority. The natural environment, allows the production of healthy food and beverages of organic and animal origin. Thus, the produced food, incorporated in the tourist offer in the Republic of Macedonia is one of the essential factors for development of sustainable tourism. New food products such as meat from ostrich, are now part of the tourism offer in the Republic of Macedonia, diversifying it and promoting new trends and market possibilities as well.

2. METHODOLOGY

The approach to achieving the goal of this paper, several methods are applied, such as: interviews, analysis, synthesis. As a basic hypothesis X_0 during the examination was taken: How the enhancement of the tourist offer in the Republic of Macedonia is influenced by the incorporation of the ostrich's meat specialties in the menu. Auxiliary hypothesis X_1 is the nutritional value of ostrich meat and how it affects the consumption of food. The second auxiliary hypothesis X_2 is how much the population is informed, educated and wants to eat healthy foods such as meat of ostrich.

3. A GENERAL REVIEW ON OSTRICHES

Types of ostriches - Among the group of birds can not fly, the most famous is the group runners. These are birds of the family ostrich (*Struthion formes*) that has four types: nando or American ostrich (*Rheae*), Ostriches (*Struthiones*), kazur (*Casnararii*), emu (*Dromai*), and probationally the kiwi type (*Apteryges*). Runners are settled in the southern hemisphere, except for ostriches which inhabit both hemispheres of the Earth.

Morphological - physiological characteristics of ostriches and sexual dimorphism – the ostriches (*Struthio camelus*) are birds - runners originating from Africa. Ostriches run with speeds of 65 to 70km/h that makes them the fastest of all birds. Male heads reach up to 3m, weighing around 155kg, and females reach about 1/3 less. Adult ostriches weighing from 95 - 150kg, but there is possibility to have male heads heavy over 160kg. When they reach sexual maturity (2-4 years) male heads are high around 1.8 to 2.7m, and females of 1.7 to 2m. The ostriches normally live about 50 years but can reach up to age of 75, and they have reproductive ability up to 40 years. Male ostriches have red legs and black - white feathers on the body, and the females are characterized by black legs without feathers, and dark - gray feathers of the body. The ostrich is the only bird that on each leg has two short and strong, muscular fingers. The ostrich has a small head, but large eyes, with a diameter of 5cm, and the weight of one eye is 60gr., while the brain weight is 40gr. It is a bird with the biggest eyes and over 75% of ostriches have virtually naked necks and thighs. Eggs are cream colored and weigh from 1,1 - 1,6 kg and wild ostrich normally provide up to 100 eggs in the mating season.

Economic importance of ostriches – The ostrich is indigenous bird from the African continent, but because of the quality and nutritional value of its meat, it is now breed in many farms in South America and Europe, in over of 50 countries, including countries with cold climates such as Sweden and Finland. This bird can survive on +30 as well as on -30°C. The ostrich has particular economic importance because is a source for producing delicacy meat, game flavored, produce eggs, getting animal fat, high-quality feathers and especially quality leather.

Conditions for breeding ostriches on a farm - Raising ostriches at a farm, which is quite popular in the world and in Macedonia requires several mandatory conditions: The farm has to be out of the township, have good access road, to have sufficient quantities of clean and healthy water, have a source of electricity in the immediate vicinity, it is protected from strong winds, have sufficient breeding area. Best breeding ostriches take place in families (one male and two female heads -trio), for which is necessary to provide 500m² breeding area.

Slaughterhouse for slaughter of the ostriches - Slaughterhouses as objects registered by state control authorities, by particular legislation are objects where slaughter of ostriches is made for the purpose to get meat intended for human consumption. For special slaughterhouses for slaughtering ostriches in the Republic of Macedonia there is not developed technical - technological solution, only mounted one line for slaughter at the slaughterhouse for ostriches MIK Sveti Nikole. In the countries where the product ostrich meat is a tradition (South Africa, Australia, USA, etc.) slaughter of ostriches is done in special slaughterhouses for slaughtering animals with neat phases of technology for slaughtering. Usually slaughtering is done at the age of 9-14 months when is reached slaughter meat from 90-140kg of weight. The goal for the future

is special facilities –slaughterhouses to be build, based on strictly defined conditions, appropriate legislation with special regulations. The EU hasn't adopted appropriate legislation framework requiring some special facilities for slaughtering, processing and processing of meat from ostriches.

4. THE QUALITY OF THE OSTRICH MEAT

The ostrich meat is characterized by red color, taste similar to beef followed by tenderness similar to the chicken meat because it has short muscle fibers. This type of meat is characterized by easy digestion and high percentage of utilization in the human organism. Organoleptic features with distinctive aroma and taste while in the preparation are used many spices. The ostrich meat has particularly suitable nutritional composition. As a result of the favorable nutritional properties and chemical composition, the ostrich meat is highly recommended in the diet of athletes, for young people, for people with cardiovascular problems. However, this type of meat is recommended for anyone to use.

Chemical composition and nutritional value of ostrich meat

Energy and nutrient value of the ostrich meat is given in Table 1 as follows:

Energetic value kcal/kj	123/515
Nutrition value (on 100g of meat) is:	
Proteins total:	22,07
Carbohydrates:	0,00
Total fat:	3,19
A) from that-saturated fatty acids	1,17
B) cholesterol (in mg)	80,00
C) mono unsaturated fatty acids	1,23
D) full fatty acids	0,75
Dietary fiber	0,00
Water	74,50

Table 1. Energy and nutrient value of the ostrich meat

The chemical composition of ostrich meat is shown in table 2:

Amino acids g/100g		Vitamins			Minerals		
		Unit	Quantity		Unit	Quantity	
Tryptophan	0,20	Vitamin A	iu	0,00	Calcium (Ca)	mg	6,00
Threonin	0,97	Vitamin E	iu	0,32	Copper (Cu)	mg	0,14
Izoleucin	1,05	Vitamine C	mg	0,00	Ferum(Fe)	mg	4,88
Leucine	1,79	Thiamine	mg	0,20	Magnesium (Mg)	mg	22,00
Lysine	1,95	Riboflavin	mg	0,29	Phosphorus (P)	mg	220,00
Methionine	0,62	Naicin	mg	4,78	Potassium (K)	mg	320,00
Cystine	0,23	Vitamin B ₆	mg	0,52	Sodium (Na)	mg	0,086
Felalanin	0,91	Vitamin B ₁₂	mcg	5,03	Zinc (Zn)	mg	3,87
Tyrosine	0,72	Folate	mcg	8,00	Mangan(Mn)	mg	0,02
Valine	1,09	Pantothenic acid	mg	1,18	Selenium (Se)	mc	36,40
Arginine	1,51	Folidasic	mcg	0,00		g	
Histidine	0,55				/	/	/

Table 2. The chemical composition of ostrich meat

Source: USDA National database for standard reference, release 16 July, 2003

The small amounts of fat in the ostrich meat, and a good proportion of unsaturated fatty acids, give special dietary characteristics of this type of meat. Ostrich meat contains significantly greater amounts of light cholesterol (HDL 60-62%) while the bad cholesterol (LDL) is significantly less frequent (38-40%). Ostrich meat contains significantly greater amounts of ferum 4,88 mg/100g, i.e much more than turkey (2.5 mg/100g) even more than the chicken (0,9 mg/100g) or beef(1,65 mg/100g). It also contains significant amounts of minerals (especially Zn and Mg) and then vitamins. The meat of the ostrich has a higher pH (5.5) which

allows its easier degradation while is kept. On the chemical composition of ostriches big impact has the way of breeding.

5. BREEDING OSTRICHES IN THE REPUBLIC OF MACEDONIA

In Macedonia there are several farms for breeding ostriches (first farm for breeding ostriches was made in the city of Demir Kapija in 2006). Ostrich farms in the Republic of Macedonia are placed in the following cities: Demir Kapija, Kavadarci, Skopje, Prilep, Gevgelija, Kumanovo, Strumica, Makedonska Kamenica, Delcevo, Kocani, Gostivar. In 2007 there were 56 farms with 1000 ostriches and, today there are significantly less ostrich farms, because there is no stimulation of the purchase of meat, the export and the slaughter.

Legislation- The way of breeding, slaughtering and veterinary - sanitary safety of meat is regulated by Rules on minimum technical and technological requirements to meet the facilities and equipment for slaughtering ostriches and facilities and equipment for cutting meat from ostriches (Official Gazette of RM no. 133 of 02.11.2007 year) issued by the Ministry of Agriculture, Forestry and Water Management of Republic of Macedonia, acting Agency for Food and Veterinary, Macedonia.

6. THE OSTRICH MEAT IN THE TOURISM OFFER

The main task of the food production in hospitality is to provide safe and quality food for all consumers who are part of their facilities. The meat of the ostrich is a new product in the market in Macedonia, which means a new product in the catering offer. Therefore it is necessary to stimulate the interest of consumers by promoting as one of the channels of sale, and besides it is necessary to do a tasting of dishes with prepared meat and eggs from ostrich. This should be done in order ostriches products, as new products, to be closer to potential customers. In some restaurants the meat of the ostrich is offered as a specialty of the house, which enriches the offer and makes it very attractive. Meat from the ostrich can be cooked and served in many ways and by which larger group of consumers can be animated, being of different age, different habits, needs and desires. The meat of the ostrich in the menus of restaurants in Macedonia is an opportunity for a new level of advancement and development of the hospitality offer.

7. DISHES PREPARED WITH OSTRICH MEAT

The meat from the ostrich which is get from the but- of the legs and from the back of the ostrich is use for making some specialties. The neck and the wings are used for soups, stews and cold products. Preparation of cold meat from the ostrich is a specialty, ideally suitable for cocktail parties and picnics. In Africa, land of ostriches, the Cango Caves restaurants have specialty called "Blue Bird" menu, which offers ostrich meat, prepared as a cold snack of meat served with pasta, spiced with garlic, ginger and herbs. Also, burgers, steaks and kebabs are offered. Because the meat has a small amount of fat, meat cook quickly, so therefore should not exaggerate with the boiling of the meat. Famous dishes prepared from ostrich are:

- *medallions of ostrich meat
- *ostrich meat with green pepper and oil of lemon
- *ostrich meat in curry sauce
- *ostrich meat with red wine
- *grilled ostrich meat& ostrich burgers
- *ostrich steak grilled with sauce and mint
- *ostrich fillet salad with marinated vegetables
- *ostrich with ham, with oil of lemon, chopped potatoes and cream of white wine
- *ostrich fillets baked in the oven with mushrooms, polenta and sauce gorgoncola
- *Scaloppine ostrich meat with green pepper
- *marinated steak of ostrich
- *French / South African Onion Soup
- *ostrich meatballs
- *ostrich goulash
- *peppers stuffed with ostrich meat

8. CATERING FACILITIES IN MACEDONIA OFFERING OSTRICH SPECIALTIES

The most visited facilities which offer products from ostrich in RM are:

Villa - ranch MAK VIKING, village Devic, Makedonski Brod - Republic of Macedonia. The 8km from the city Makedonski Brod, in the village of Devic (160km from Skopje and 70 km from Ohrid) is rural ranch MAK VIKING of Mirjana and Vasko Avramovski. The ranch was built in 2007, covers an area of 7500m², and has a closed restaurant with 50 seats and open terrace with 15 seats.

The ranch also has 80 to 100 rooms. As specialties which offered at this site are: filet of ostrich meat, ostrich meat marinated with spices, ostrich meatballs, ostrich goulash, stuffedpeppers with meat from the ostrich. A particular specialty is the egg of an ostrich which is commonly prepared as an omelet and salad, and with the preparation of only one egg 8 to 10 people can be fed. Other restaurants that are offering ostrich meat in the Republic of Macedonia are the winery restaurant "Popova Kula" – Demir Kapija and the restaurant "Biljanini Izvori" in Ohrid. Also in Gostivar, in village Zubovce, an ostrich farm has a restaurant which offers meat from the ostrich in the form of sausage products and specialties from this type of product. Also, in other Macedonian cities like: Strumica, Gevgelija, Prilep and Kicevo there are restaurants which offer ostrich meat dishes.

We accent the fact that development of these products is in rural regions in Macedonia and domestic tourists are the target market at the moment. By promoting the work that this current restaurants are doing with this products, we suggest improvement in the domestic arrivals.

9. CONCLUSION

From the analyzes conducted and the findings obtained following them, we come to following conclusions:

Breeding ostriches in Macedonia exists because there are pre-conditions for doing it. The ostrich meat has a special favorable nutritional and energy value.

Besides meat, from the ostrich are used eggs, shells of eggs, feathers and skin and eyelashes.

In Macedonia should be build a separate slaughterhouse for ostriches, which will be according to European standards, because it is a serious obstacle to this activity at the moment.

Updating the procedures on obtaining permits for export of poultry from Macedonia to foreign markets in a large percentage will contribute to expanding of this industry.

It is very important for the future of this industry, the government to help the farmers in doing their businesses by giving them complete legal framework and support for export and placement of their meat products on the foreign markets.

Population in the Republic of Macedonia is not sufficiently educated about the value of the ostrich meat and therefore is required specific campaigns to be done so the people will perceive the truth about the ostrich meat quality and start to consume it more often as a healthy food.

Hospitality offer in the Republic of Macedonia should promote this new product for the purpose of modernization of their menus and enhancing their offer. Apart from the ostrich meat it is necessary to promote the eggs as well, as delicious product.

It should be created overall strategy for breeding ostriches, special slaughterhouses, meat exports and implementation of legislation on food safety (Law on food safety with particular reference to ostriches).

The research and analysis concludes that the auxiliary hypotheses fulfill the basic hypothesis. There is a huge need for education of the population for the value of the ostrich meat and eggs, to eat it as healthy food and be entered as a new product-healthy food in the catering offer of the Republic of Macedonia, which it will enhance it.

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