

Proceeding Paper

Valorization of Camel Meat and Meat Products in the World and in Algeria [†]

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Abstract: Camel meat is considered as good source of nutrition, its taste and texture are similar to that of cattle and has an amino acid content ten times higher than that of the latter. Moreover, its consumption is very low and the manufacture and marketing of cameline meat products are very neglected. The objective of this work is to promote camel's meat and the derived products from it. Thus, the industry sector should launch and invest in the production of large ranges of camel meat, in order to meet consumer demands.

Keywords: camelids; Algeria; meat; meat products; consumers



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1. Introduction

Food security and nutrition are major issues on the global agenda, linked to the Sustainable Development Goals (SDGs), which among other things, aims to end all forms of malnutrition in the world by 2030 [1]. In addition, the world population is increasing every year with a steady increase in the demand for food in the world, which makes various countries face acute food crises [2]. Thus, it is possible to meet these requirements as a result of the consumption and creation of combined products using animal and vegetable raw materials enriched with certain vitamins and biologically active additives and whose wholesomeness lies in the balance and improvement of the diet, thanks to the introduction of proteins, amino acids, vitamins, micro and macro elements, dietary fiber and other beneficial substances. Among the main sources of nutrients necessary for maintaining the normal functioning of the human body, meat and its derivatives [3]. Meat is defined as the whole carcass of cattle, sheep, goats, camels, buffaloes, deer, hares, poultry or rabbits and is an important source of nutrients, such as protein, iron and vitamins and has beneficial effects on human health [4]. Its production is estimated at around 340 million tons per year and the average annual consumption is estimated at 43 kg of meat/person, with a higher rate in developed countries [5]. Thus, camels can play a very important role by providing an important part of the human diet in particular, meat, in order to meet the demand [6]. All these aspects have aroused the interest of synthesizing the various research and works valuing meat and meat products from camels.

2. Camel Meat Consumption and Meat Products in the World and in Algeria

Although consumers are often surprised to learn that camel meat is consumable. Indeed, it is considered as an excellent source of protein with many medicinal benefits for human health. However, its contribution to world meat production is rather marginal due to the minor importance of camels among herbivores. Indeed, compared to all types of meat producers except fish, this meat represents only 0.13% of the total meat produced in the world and 0.45% of the red meat of herbivores. On the other hand, this contribution must be evaluated especially in arid zones [7]. In fact, camel meat is very important in arid and semi-arid regions of the world and it constitutes an important resource for some countries such as Sudan, Somalia and Mauritania [8]. In addition, regarding healthy and nutritional value, camel's meat contains 78% water, 19–22% protein and 3% fat and could be a worthy choice as it contains high quality proteins and produces carcasses with less fat, fewer calories and less cholesterol than other animal meats [9]. Every year, around 250,000,000 camels are slaughtered in different countries. Africa produces 62.2% of the world's camelid meat, followed by Asia at 35.8%. While South America only contributes 5.3%. In Africa, the largest contribution is from East Africa, followed by North Africa and West Africa. Furthermore, the production of camel meat is probably underestimated because a large number of camels are slaughtered outside official circuits and are therefore not included in the statistics [10]. Its consumption in North African countries is around 2.84 kg/capita/year [11], while, it is very low in Algeria, although it represents 33% of red meat slaughtering and this percentage is constantly changing [12]. In fact, during the period from 2012–2015, the slaughter of the camel species in Tamanrasset and Ghardaïa (Algeria), represents respectively 17% and 22% of the total meat produced [13]. Moreover, the availability of camel meat in the different regions of Algeria, in the South in the comparison with the North of the country, could influence its consumption frequency. A recent study reported by Lamri et al. [14], using an online survey ($n = 665$ consumers), showed that camel meat is not well appreciated and eaten by consumers from the region of Kabylia (Algeria), 54.3% of them never consumed it, only 1.6% eat it always, 35% sometimes and 9.1% rarely. These results may be due to habits and traditions and the limit production and availability of camel meat in this region and in the North of the country in general.

In addition, camel meat is rarely processed and its by-products remain underdeveloped. However, fermented or unfermented drying, brining and smoking of cameline meat are common traditional practices, especially in Algeria and Morocco [15]. Indeed, in some countries in order to promote this species, cameline meat is transformed into hamburgers, patties, sausages, cashir [8,16–19].

3. Conclusion

Despite the low productivity of camel meat, particularly outside arid and semi-arid regions. This species as well as its meats and meat products constituting some food rich in animal proteins, should be more valued in all regions and countries, which will allow the most disadvantaged populations to have access to red meats at a lower price. Moreover, the processing of cameline meats is neglected all over the world and in order to constitute a wide range of camel products, butcher shops and processing industries should be set up.

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