

THE POTENTIAL OF RABBIT MEAT MARKETING IN TIZI-OUZOU AREA, ALGERIA

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ABSTRACT: In Algeria, the raising of the rabbit for meat develops more and more these last years. Several segments of this young sector have been studied as the feeding and reproduction. However, the segment of marketing has not been approached yet. This paper provides an overview of the rabbit meat marketing system in the Tizi-Ouzou area. To meet this objective the descriptive survey method was employed, using a structured questionnaire to provide data on commercialization of rabbit meat. Butcheries (n=192), poulterers (n=49), restaurants (n=184) and hotels (n=11) were concerned. Rabbit meat is sold in 8.48% (n=37) of stores visited and do not sold in 91.51% (n=399) ones. It's marketed more cooked (restaurants and hotels) than fresh (butcheries and poulterers). 75.44% of respondents who do not sell rabbit meat justifies it by the lack of demand and 10.78% (n=43) because of its unavailability. Rabbits are bought from producers generally as whole carcasses (86.49%) of about 1.4 kg. In the butcheries and poulterers, rabbit meat is sold to consumers at an average price of 470 DA (1US\$=95 DA). 44.56 kg of rabbit meat are sold per week. The marketing of this meat is fragmented, inefficient so its distribution chain is disorganized. Despite those problems, there are also opportunities for expansion of this market. Given the current low levels of consumption of rabbit meat, there is a potential for total consumption of this meat to increase substantially as production and availability increases. More attention must be given to the market outlets and promotions of rabbit meat in Tizi-Ouzou area.

Key words: Rabbit meat, Marketing, Tizi-Ouzou

INTRODUCTION

The raising of rabbit always existed in Algeria. In traditional production system until there and in modern system these last years, rabbit production actively participates in the reduction of the animal protein shortage of the population (Gacem and Lebas, 2000). While efforts have been taken to promote rabbit production in rational level (Gacem et al., 2008; Berchiche et al., 2012; Kadi et al., 2012).

In Algeria, rabbit production is concentrated mainly in the east and center of the country and Tizi-Ouzou is the highest production region of rabbit meat. Those last years, a pilot project has been carried out in Tizi-Ouzou: Formation of the young breeders before the creation of the rabbit unit, creation of the raising facilities with local materials and distribution of 16 does + 2 males for each unit. In spite of the encountered problems, part of these units continues to work and to produce rabbit (Zerrouki et al., 2005a; Kadi et al., 2012).

Meat market in Algeria is very complex (Sadoud, 2011; Sadoud and Chehat, 2011) and the literature on its operation is limited. The publications which relates to rabbit marketing are non-existent. To date, much of the research on rabbits carried out in Tizi-Ouzou University has centred on production practices. No market assessment studies are undertaken. In assessing the market for an infrequently consumed commodity, such as rabbit meat, the actions of both users and nonusers must be evaluated.

The aim of this paper is to investigate rabbit meat marketing in the wilaya (district) of Tizi-Ouzou.

MATERIALS AND METHODS

The aim of this survey was to investigate rabbit meat marketing in the wilaya of Tizi-Ouzou (a wilaya = a geopolitical district). Tizi-Ouzou is the fifteenth wilaya among the forty eight that contains Algeria (see the official web site <http://www.tiziouzou-dz.com/>). It is located in the Northeast at about hundred km from the capital Algiers

ORIGINAL ARTICLE



(Figure 1). To meet this objective the descriptive survey method was employed, using a structured questionnaire to provide data on commercialization of rabbit meat. The questionnaires aimed the butcheries (n=192 representing 67.3% of the total of butcheries), poulterers (n=49 representing 30.6% of the total poulterers), restaurants (n=184 representing 43.4% of the total ones) and hotels (n=11 representing 25.5% of the total ones). The questions were about the presence mainly or not of this meat and in particular on the frequency of the demand by the clientele, the sources and places of provisioning, weight and price of the carcasses, profile of the consumers, quantities used during the week. The data obtained from the questionnaires were organised by coding the open-ended questions, in order to prepare them for data capturing.

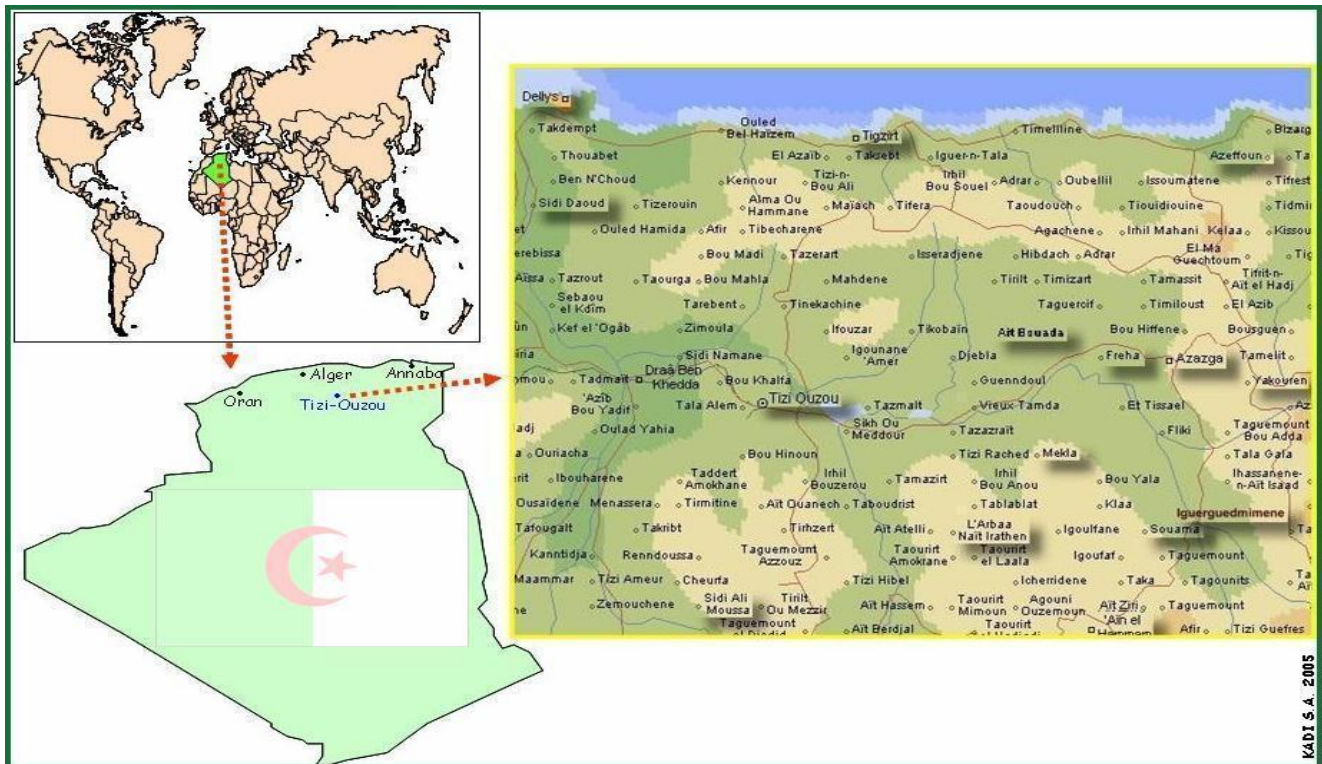


Figure 1 - Localisation of Tizi-Ouzou region, the study area

Statistical analysis

All data were entered into a Microsoft Excel spreadsheet with, in lines, the different questionnaires and, in columns, the explanatory and explained variables represented by the different questions. The quantitative data were subjected to the 6.4 version of the STATBOX package for determining descriptive statistics (means, standard deviations, frequencies and percentages). The statistical significance level of differences between the dependent and independent variables were determined by Chi-square tests at $P < 0.05$.

RESULTS AND DISCUSSION

Marketing of rabbit meat

According to the results, only 8.48% (n=37) of the respondents in the wilaya of Tizi-Ouzou market the rabbit meat (Table 1). The two most important markets for commercially produced rabbit are retail poulterers in metropolitan markets and restaurants often high-end ones. Rabbit's meat is mostly marketed cooked (restaurant and hotels) than fresh (Butcheries and Poulterers); because of its time consuming preparation which requires culinary skills. This situation is also observed in the wilayas of Constantine and Algiers by Gacem and Lebas (2000). So, there is a real challenge for food technologists, especially cooks, to put in point receipts incorporating the rabbit meat and fulfilling the requirements of the local consumers.

Fresh rabbit meat can also be sold directly to the consumer as it is the case in the rural areas. In these regions where the type of rabbit raising is traditional (Berchiche and Lebas, 1994), the primary objective for rabbit production is to provide a source of meat for the family (Djellal et al., 2006). Only the surplus of rabbits is sold as meat for consumer or as breeding stock to neighbours, friends and local clients but rarely at the weekly markets.

A majority of respondents (75.44%) who do not sell rabbit meat justifies it by the lack of demand (Table 2). However, 10.78% (n=43) does not sell it because of its unavailability. Indeed, the lack of consumer acceptance of the product has little impact upon the market because rabbit production has not saturated the market. Current demand for rabbit meat exceeds supply, so consumer acceptance is not a problem.

Table 1 - Marketing of rabbit's meat according to the type of store in the wilaya of Tizi-Ouzou

Type of store	Total number in the region	Number of stores investigated	Sells the rabbit's meat (number and percent)	Don't sells the rabbit's meat (number and percent)
Butcheries	285	192	03 (1.56%)	189 (98.44%)
Poulterers	163	49	10 (20.41%)	39 (79.59%)
Restaurants	423	184	20 (10.86%)	164 (89.13%)
Hotels	43	11	04 (36.36%)	7 (63.64%)
Total	914	436	37 (8.48%)	399 (91.51%)

Moreover, contrary to the generally accepted ideas, on the level of the area of study, people having negative attitude to rabbit meat or refuse consumption for emotional reasons is weak (Kadi, 2007). In addition, there are no religious apprehensions since Islam (principal religion in the area) does not prohibit the consumption of the rabbit meat. However, motivations for no consuming this meat are globally the same than that reported by several authors in different regions through the world (Hui and McLean-Meyinsse, 1996; McLean-Meyinsse, 2000; Hoffman et al., 2004; Olivares et al., 2004; Hoffman et al., 2005).

Table 2 - Reasons for which the rabbit meat is not sold

Reasons evoked	Number of respondents	Proportion (%)
Not asked for by the customers	301	75.44
Traditions	20	5.01
Expensive	18	4.51
Unavailable	43	10.78
It resembles to the cat	2	0.50
Without idea	15	3.76

Format of rabbit meat and source of provisioning

Rabbits are marketed live or killed to Butcheries, Poulterers and restaurants (Table 3). They are bought from producers generally as whole carcasses (86.49%) of about 1.4 ± 0.5 kg. Whole carcasses include head, thoracic content (heart, lungs...), liver, kidneys and extremities of the legs and the corresponding skin. The offals are thrown. The weight of carcasses (1.4 ± 0.5 kg) seems interesting compared to the modest growth performances of this population (Kadi and Berchiche, 2002). For indication, on the level of French market, the average carcass weighs 1.4 kg (Lebas, 2003).

Table 3 - State of rabbits to the purchase

Reasons evoked	Number of respondents	Proportion (%)
Alive	5	13.51
Slaughtered	32	86.49

There is no slaughter-house specialized in the slaughtering of rabbits in the area of study. The rabbits are slaughtered by cutting the jugular vein with a sharp knife and stripped into the rabbiteries. Present country laws do not require veterinary inspection of rabbit processing or of rabbit meat before it can be sold in retail outlets. So, the rabbit producer is responsible for ensuring that the rabbit meat sold is wholesome and properly handled prior to delivery. As well as the butchers and Poulterers, the restorers and hotels are in majority (78.38%) supplied on rabbit's meat directly by the producers (Table 4). Only 8.11% of the respondents buy their merchandise outside of the wilaya.

Table 4 - State of rabbits to the purchase

Reasons evoked	Number of respondents	Proportion (%)
Breeders	29	78.38
Butcheries	4	10.81
Weekly Market	2	5.41
Other	2	5.41

Price and availability of rabbit meat

In the Butcheries and Poulterers, the average market value of this rabbit meat is 470 ± 62 DA per kg. In the wilaya of Constantine and Algiers, the prices seem more acceptable: 360 to 380 DA per kg (Gacem and Lebas, 2000). Since the realization of this study, the prices increased considerably (700 DA) because of the increase of the prices of the raw materials on the world market and that constitute the feed of the rabbits.



Chicken usually costs less than DA 300 per kg. This is not exclusive to Algeria. Dalle Zotte (2002) argues that in developed countries the production costs for rabbits are twice as high as for chicken broilers. This implies that rabbit meat consequently becomes more expensive than other white meats and thus its consumption is automatically decreased especially at level of low-income families which are the most numerous in the Tizi-Ouzou area.

However, the most frequent problem is the lack of rabbit meat in the Butcheries and Poulterers, so urban citizens, liking rabbit meat can buy it only in few stores at the level of the urban center of the city of Tizi-Ouzou, often far from several kilometres of the dwelling place. The main problem in rational raising of rabbits in Algeria is that commercial feeds are very expensive. This is, in part, because many of their main ingredients as soybean meal, dehydrated alfalfa, corn and other micro ingredients, are imported from overseas. Dehydrated alfalfa and soybean meal often comprise 30 to 40% and 10 to 20%, respectively of the feed ration for rabbits.

In addition to higher cost of production, due to the lack of access to important inputs and services, smallholders tend to have lower productivity. According to Zerrouki et al. (2005a), the numerical productivity recorded in this region is about 25 to 30 rabbits weaned/female/year. For the same population and in the experimental farm, Zerrouki et al. (2005b) got slightly better performances but confirms the limits of this genotype.

Lack of technical know-how is the other reason which decreases the productivity. Many rabbit's raisers do not control the techniques of raising especially the reproduction. The majority of breeders have limited education, which limits their capacity to adopt new methods.

Relation between type of store and independent variables

Source of provisioning, education level of customers and quantities of rabbit meat sold per week are not related to the type of store (Table 5). Whereas, was observed the difference ($P < 0.05$) between the type of establishment and the fidelity of the customers. These are the poulterers and butchers who receive the same rabbit meat purchasers.

Table 5 - Relation between the type of store and the independent variables

Criteria	Signification
Type of store / Source of provisioning	ns
Type of store / faithful or varied customers	*
Type of store / Education level of customers	ns
Type of store / quantities of rabbit meat sold per week	ns

* $P < 0.05$; ns: non significant

Globally, 10.51 ± 5.9 kg of rabbit meat is sold per store per week, whereas the total quantities sold is 44.56 kg per week (Table 6) or an average of 32 carcasses per/week. Per type of store, butchers are the ones who sold the great quantities, this although they are not numerous (only 3).

Table 6 - Quantities of rabbit meat sold per week

Type of store	Quantities sold (kg/week)
Butcheries	13.66
Poulterers	11.3
Restaurants	9.8
Hotels	9.8
Total	44.56

CONCLUSION

The study indicates that there already exists a small market for rabbit in the wilaya of Tizi-Ouzou. Based on the analysis presented earlier, it appears that there are significant deficiencies in this marketing system. It is fragmented, inefficient so the distribution chain of this meat is disorganized. This inefficient marketing system has resulted in higher costs and low availability of rabbit meat, but with a possibility for expansion through appropriate promotion. Despite those problems, there are also opportunities for expansion of this market. Given the current low levels of consumption of rabbit meat, there is potential for total consumption of this meat to increase substantially as production and availability increases.

The ultimate objective is to educate the public about the high nutritional quality of rabbit meat. Also, in this region the Rabbit seem to be the meat of the restaurant as encountered in some Mediterranean countries like Malta, Italy or Spain.



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