

## MARKET ASPECTS OF A TYPICAL HERZEGOVINIAN PRODUCT CHEESE IN A SUCK

Slavica SAMARDZIC<sup>1</sup>, Sabahudin BAJRAMOVIC<sup>2</sup>, Marko IVANKOVIC<sup>3</sup>, Aleksandar OSTOJIC<sup>4</sup>

<sup>1</sup>Ministry of Agriculture, Forestry and Water Management of Republic of Srpska, Bosnia and Herzegovina

<sup>2</sup>Faculty of Agriculture and Food Sciences, University of Sarajevo, Bosnia and Herzegovina

<sup>3</sup>Federal Agro-Mediterranean Institute, Mostar, Bosnia and Herzegovina

<sup>4</sup>Faculty of Agriculture, University of Banja Luka, Republic of Srpska, Bosnia and Herzegovina

(Corresponding author: [slavica92000@yahoo.com](mailto:slavica92000@yahoo.com))

### Abstract

Cheese in a suck, unique and characteristic product of Dinaride range which encompasses Herzegovina, to the characteristics it possess, in next period could become relevant initiator of rural development of this region.

Aim of this research was estimation of market aspects of the Cheese in a suck from the perspective of producers, consumers and distributors, as well as analyses of productive, selling, distributive and purchasing prices. Primary data have gained by questionnaire on the sample of 35 producers and 1182 consumers, 17 restaurants, 5 bridal restaurants and 2 retailers. Method applied for data collection was questionnaire composed of relevant questions for each interviewed subject, and method of data presentation was descriptive statistics. Research was carried out in Herzegovina, Banja Luka and Sarajevo in the period from 2005 to 2011 with the exception of research consumers in Sarajevo that is carried out in 2009.

Research results have shown that productive price of cheese is relatively high, 9,67 KM, for cheese made of cow's milk, while selling prices are frequently lower than productive ones. Relatively low percentage of consumers, 24,11%, consider purchasing price for a high. Majority of producers, 25,71%, cheese sell by combining different ways of selling. The highest percentage of consumers, 31,30% cheese buy directly from producers on farm. Research results of distributors, especially restaurants, don't give enough reason for optimism regarding Cheese market. On the territory of the production of Cheese in a suck, it is almost impossible to find on menu.

**Keywords:** *Cheese in a suck, cheese market, cheese prices.*

### Introduction

The last couple of decades, one of the leading trumps of the development of rural areas stand out products whose presence in a given area has century-lasting history. Such products have become part of identity and cultural heritage of the territory from which they derive. Their uniqueness entails specific target group of consumers. Thus, most consumers are familiar with the typical products, like local population is. Apart from them, the target group of consumers could be: curious ones – tourists, nostalgic ones - immigrants and socially vulnerable ones - those who are willing to purchase products to support the maintenance of the production system. Cheese production area mainly includes terrain of Upper Herzegovina, municipalities Nevesinje, Konjic, Prozor/Rama, Posušje, Bileća and Berkovici (31 producer), while in the area of Lower Herzegovina are identified only 4 producers.

Area of consumption of Cheese in a suck, except sporadic exceptions, such as Sarajevo, Banja Luka, Dalmatia, Zagreb and Vojvodina, where live large number of

immigrants from Herzegovina, mostly coinciding with the geographic boundaries of Herzegovina.

Research subjects of this work were market aspects of Cheese in a suck, like are sale, distribution and supply of cheese, as well as analysis of production, sales and purchasing prices of the cheese.

### **Material and method**

The main methods of data collection were questionnaire and structural interview. Results were analyzed by descriptive statistics and statistical inference based on the  $\chi^2$  test.

All surveys were conducted in the period from February to July 2011, except consumer survey in Sarajevo, which was carried out in 2009 year.

This survey was carried out in 35 producer's households from 8 Herzegovinian municipalities (Berkovići-8, Bileca-1, Konjic-4, Ljubinje-3, Ljubuški-1, Posušje-1, Prozor/Rama-5 and Nevesinje-13). Selection of the surveyed households has been made according to the registry obtained from the Association of Producers of Herzegovinan Cheese in a Suck, while the producer of Posusje and producer of Bileca, were selected based on prior knowledge to deal with the cheese production. The association has a total of 42 members, of whom 33 were interviewed. Two producers, members of the Association, who have been engaged in the production of cheese in the past years, left the production and started selling milk to local dairies (one Nevesinje and one of Konjic), while one respondent, member of the Association of Berkovići who has a farm of 60 cows, never has been producer, but he became a member of the Association, as he says, "to be present in Association if ever could be organized purchase of cheese."

During the study surveyed a total of 1182 customers and potential customers, of which 1102 were from the area of 16 municipalities in Herzegovina (Berkovići-12, Bileca-43, Capljina-58, Čitluk-49, Gacko-34, Grude-49, Konjic -90, Ljubuški-66, Mostar -315, Neum-14, Nevesinje-54, Posušje-48, Prozor/Rama-51, Stolac-30, Široki Brijeg-90, Trebinje-108), 50 from Sarajevo and 30 from Banja Luka. The sample size for the Herzegovinian municipalities is determined in proportion to the population. The survey sample was made in Sarajevo during Wine Fest maintained at Europe in October 2009 year, while a survey in the Banja Luka is done with casual clients who buy cheese, all of whom were employed. Since the survey sample of Sarajevo and Banja Luka has been taken unsystematically and the results for the two municipalities are only indicative. Subjects were grouped by age into three categories: up to 25 years, 25 to 65 years and more than 65 years. In relation to the overall size of the survey sample, 18.53% were in the category of less than 25 years, 67.85% were between 25 and 65 years old, and 13.62% were older than 65 years.

Distribution survey was conducted through interviews. All distributors were classified into groups: retailers, restaurants, bridal shops, small stores and large retail chains, and then made up a list of questions relevant to each of them. All interviews were conducted face to face, except conversations with marketing departments of big retail chains such as Maxi, Robot and Interex with whom interview was carried out by telephone. In the course of this research two interviews were conducted with dealers who buy cheese from producers and resell it in the market, one in Trebinje and one in Mostar, then 17 interviews in the catering facilities in all municipalities in which the survey was conducted of consumers, except in Sarajevo and Banja Luka, 5 wedding salon (Nevesinje Široki, Gruda, Ljubuski Posušje), 5 retail and 3 wholesales.

## Results and discussion

### Placement of cheese

This research has identified these ways of cheese placement:

**Sall, on farm** means sale of cheese to the fixed and known direct consumers. They order in advance certain quantity of the cheese. This type of sale is registered at the producers who produce small amounts of cheese and those ones who during the summer months driving out the cattle to the mountain. Bigger producers also have this kind of demand, but because of the already established way of placement, frequently even avoid this type of sale. Another this kind of sale there must mention retailers who in periods of decreased demand of the cheese (e.g. summer period), buy cheese of smaller producers in smaller quantities.

**Sell at the market** means the sale of cheese during market day (one day a week) in the municipality in which it is produced. Small number of producers sells cheese in this way. Basically, this type of placement is characteristic for producers who have small quantity of production and have regular customers "on farm". It also happens that producers who stay on mountain during summer period produce large quantities of cheese and failure to place it in a relatively short period of time, due to the inadequacy of storage space for a long time, and yet unsettling habit of storage cheese in the central storage, part of the production sold out at the market.

**Sell to Herzegovinian emigrants and occasional clients in Sarajevo and Banja Luka** means sale to the consumers mainly originating from Herzegovina, mostly Zagreb, Belgrade, Novi Sad and Sarajevo. This type of sale is identified at a small number of producers from Posusje, Prozor/Rama and Ljubinje. In the case of Banja Luka there is a word of the clients that do not necessarily originate from Herzegovina, but order cheese through acquaintances.

**Giving cheese like a present.** As many producers have close relatives living in the city, one of identified ways of placement of the cheese is giving it like a present. Also, the consumer research has shown that in the case of payment services to third parties (e.g. mechanics), producers give cheese instead of money (a kind of barter).

**Sell to resellers** means selling of all produced quantities of cheese "in a sack", who further continue pack cheese in smaller quantities and resell it at the market, restaurants or to the direct customers. This method of selling is found at the producers who achieve higher production quantities, and have known buyers for many years. Producers who sell cheese in this way tend to have smaller problems with the placement. Resellers mainly place cheese on the market in economic centers of Herzegovina, Mostar and Trebinje.

**Sell to the restaurants and other catering facilities** is a form of selling that has less importance from the producers' perspective. Only one producer from Ljubuski all produced quantity sells throughout restaurants, while some producers state that a certain quantity of production sells through bridal facilities. However, this form of selling has no constants in its character, as the demand of wedding salons is usually associated with eating habits of clients who make wedding party. Also, according to the results of this research, restaurants almost have no offer Cheese in a sack.

**Sell through retail and wholesale facilities** is one of the identified form of selling, but of less importance for producers for a moment due to the lack of legislation for legal sale of cheese. However, producer from Posusje, who makes cheese from pasteurized milk, has mentioned this way of selling as the most important one. Research has found that the Cheese in a sack made of pasteurized milk by dairies from Bileca, Nevesinje and Posusje, can be

found on sale in retail and wholesale facilities, both in Herzegovina and elsewhere of Herzegovina (Banja Luka, Sarajevo).

As the largest number of interviewed producers, 9 of them, which make 25.71%, combine several above mentioned methods of selling, it is difficult to give a precise overview in measurable parameters on quantities sold individually in some of these ways (Table 1). Also, a significant percentage of respondents, 20%, produce only for their own use. Only 7 manufacturers, which make 20%, have constant customers for all produced quantity, most of them are from Nevesinje, 6 of them, or sell to the restaurants, which indicates that a small percentage of respondents have preferred method of placement. Due to the difficult preservation of cheese after opening (change in taste, easy perishability) producers generally don't like retail sale and all other ways of selling characterized like difficult placement.

Table 1. Identified ways of selling cheese

Way of placement/selling	Number of producers	%
1. Combining more ways	9	25,71
2. Production only for selfconsumption	7	20,00
3. Selling to the resellers	6	17,14
4. On farm selling	5	14,29
5. No production for sale	4	11,43
6. Selling on the market	3	8,57
7. Sell to the restaurants and other catering facilities	1	2,86
8. Sell through retail and wholesale facilities	0	0,00
9. Sell to Herzegovinian emigrants and occasional clients in Sarajevo and Banja Luka	0	0,00
10. Giving cheese like a present	0	0,00
TOTAL	35	100,00

#### Purchasing of cheese

The highest percentage interviewed, 51.18%, buy cheese directly from producers, either on farm, or on market. It is mainly a long lasting established way of buying cheese and in the same time the most preferred one by consumers. However, not everyone has opportunity to purchase cheese directly from producers. Thus, 15.48% of total interviewed buy cheese from resellers. Only 7.53% interviewed buy cheese in wholesale and retail trade (Table 2).

Table 2. Identified ways of purchasing cheese

Responses	Number of respondents	% (compared to the total number of responses)	% (compared to the total number of respondents)
1. Directly from producers on farm	370	34,68	31,30
2. From producers on the market	235	22,02	19,88
3. From resellers	183	17,15	15,48
4. Obtained from relatives from village	152	14,25	12,86
5. In retail shops	64	6,00	5,41
6. Through acquaintance	34	3,19	2,88
7. In wholesale shops	25	2,34	2,12
8. On fairs	4	0,37	0,34
TOTAL	1067	100,00	90,27

## Distribution of cheese

With respect to the manner of sale cheese, there are two identified forms: (1) direct sale to consumers and (2) sale to distributors. As the Cheese in a suck is "illegal" product on market (due to unregulated legislation on the selling of products made from unpasteurized milk), fear of inspection and payment of fines is determining obstacle for distributors to trade with cheese.

**Resellers** Interview with them has been conducted at markets in Trebinje and Mostar. Both retailers had on offer a full range of dairy products: Cheese in a suck - fat, Cheese in a suck - Torotan, kajmak, "Cheese in blocks" (just curdled cheese made from skim milk), Urda (product obtained by curdling of whey), whey and milk. Cheese in a suck - fat made from cow's milk is sold at a price of 15 to 20 KM in Mostar, and 13 to 18 KM in Trebinje. Purchasing price they didn't want to disclose, but they said that is worthwhile to work with fatty cheese. Cheese in a suck - Torotan at the market in Mostar is sold at a price of 8 to 10 KM, while the purchase price of it is 3 to 4 KM. Interviewed reseller in Mostar said that there is no "major" problem with inspection, while the reseller from Trebinje said "that inspection is a big problem."

**Catering services** Interviews with representatives of catering services were conducted in 12 municipalities in BiH, in 17 restaurants. Only 5 restaurants in its regular offer had Cheese in a suck, 1 in Nevesinje, 2 in Mostar, 1 in Citluk and 1 Ljubuski. Reasons why they have not Cheese in a suck in everyday are shown in Table 3.

Table 3. Reasons of catering services for not having Cheese in a suck in regular menu

Answers	Number of answers	% (compared to the total number of responses)	% (compared to the total number of respondents)
1. Fear of inspection	12	46,15	70,59
2. Easy perishable goods	6	23,08	35,29
3. Lack of demand	4	15,38	23,53
4. Expensive product for average customer	2	7,69	11,76
5. Brucellosis decreased demand	2	7,69	11,76
TOTAL	26	100,00	

As it is visible from the table, "illegality" of cheese on market is a key problem for the lack of cheese on the menu for catering services. Even those who have cheese in regular offer have responded that they do it "at high risk" and "do not know till when."

Furthermore, all were asked under what circumstances they would have cheese in regular offer. All 12 were reported that they would have cheese on offer if it would be legally permissible. Otherwise they are unwilling in times of severe economic situation "take the risk".

Interview conducted with 5 owners of **wedding salons** has shown almost the same results as interview made in restaurants. The difference is that menu of wedding salons is fully formed according to the wishes of clients who make wedding, and there are clients who request menu with Cheese in a suck. However, fear of inspection is always present and risk is solely a burden on restaurant owners. Cheese sell through catering service reaches the price up to 50 KM per kg.

**Retail and wholesale stores.** In research were interviewed 5 owners of retail stores: 2 in Mostar, 1 in Ljubuski, 1 in Posusje, and 1 in Nevesinje. They sell cheese at a price from 12

to 15 KM. All answered they were satisfied by demand, but due to the problem of the legislative they are not willing to sell cheese produced by producers.

During the research interview was done with representatives of marketing department big supermarket in Mostar and Banja Luka. All they had in offer Cheese in suckmade by dairies from Nevesinje, Posusje and Bileca. The cheese is sold in vacuum packs of 0.5 to 1 kg at a price of 14 to 16 KM per kg. They expressed satisfaction with present demand, but from the same reasons mentioned by small shops they are not willing to sell cheese produced by producers.

## Prices

### Productive prices

On the basis of quantity of material used for cheese production acquired during research conducted among cheese producers in 2009 (Samardzic, 2009), and according to the current prices in 2011 has made calculation of cost price for cheese made of pure cow's milk, and it is 9.67 KM per 1 kg of cheese. Quantities of wood used for maintain temperature during phase of curdling, the amount of water for maintain hygiene of materials and space for curdling, consumed electric energy and fuel costs for transportation of the cheese to the final customer, are calculated on subjective producer estimation. More detailed in Table 4.

Tabela 4. Calculated producing price of Cheese in a suck made of cow s milk per 100 kg

Type of cost	Measure unit	Quantity	Price per measure unit	Sum (KM)
<b>Material</b>				
Milk (cows)	Liter	800	0,80	640,00
Rennet*	Liter	0,24	5,00	1,20
Salt**	Kg	3	0,50	1,50
Suck***	Piece	2,22	18,00	39,96
<b>Other costs</b>				
Wood	m <sup>3</sup>	0,2	40,00	8,00
Water****	m <sup>3</sup>	1,6	10,00	16,00
Electricity	KW	300	0,125	37,50
Labour*****	Working hour	45	4,50	202,50
Fuel	Liter	10	2,00	20,00
<b>TOTAL</b>				<b>966,66</b>
<b>Per 1 kg</b>				<b>9,67</b>

\* At 100 liters of milk it goes 30 ml of rennet

\*\* At 100 kg of cheese it goes 3 kg of salt

\*\*\* In one suckin average goes 45 kg of cheese

\*\*\*\* It is assumed that the average per liter of raw milk goes 2 liter of water (water price of 10.00 KM/m<sup>3</sup> is higher due to transport costs)

\*\*\*\*\* This includes work on curdling of 1.5 to 2 hours every morning and evening and work of 2 hours every 5 day for braking cheese blocks and inserting in suck

### Selling prices

Research results have shown extremely high variation of prices within the same cheese category. Depending on milk category used for cheese production it is only possible to display range of prices within same cheese category and they are:

- cows' milk cheese 8 to 15 KM,
- cheese made of mix of sheep' and cows' milk 10 to 18 KM,
- sheep' milk cheese 15 to 25 KM.

It has found that cheese price depends on category of milk (cows' or sheep') used for making cheese, the territory in which it is sold, and to some extent on the degree of ripeness

and dryness (long standing in suck). Thus, producers from Konjic achieve the lowest sale prices, while producers from Prozor/Rama and Ljubuski achieve the highest sale prices for particular category of cheese.

However, as producers are reluctant to give the answer to this question, the impression is that data on sales prices are increased compared to actual sales prices achieved in the market. Therefore, these data should be taken with reserve and obtained price ranges should be reduced about 10 - 20%.

Of 25 producers who have a certain amount of cheese for sale, 4 producers responded that they were not satisfied with the sales price of cheese, 14 have answered that they are satisfied with the sales price, while 7 responded that they are satisfied when there is no other choice.

#### **Purchasing prices**

When respondents have been declaring purchasing price of cheese, there was observed disagreement with sale price quoted by the producers. Price quoted by customers range from 7 to 25 KM. Surveyed producers, perhaps out of fear of competition, or of keeping prices as secrets from other producers, have provide answers on increased selling prices, and consumers of reduced purchasing prices.

In relation to the total number of respondents, only 24.11% said that price of cheese is high.

Testing respondent's attitude toward price of cheese is made by applying  $X^2$  test in relation to the individual municipalities and found that the attitude of the respondents of purchasing price is not depending on the municipality in which survey has been conducted.

### **Conclusion**

From research results is visible that most consumers cheese purchase from known and constant suppliers: directly from producer on farm 31.30%, from producers in market 19.88% and 12.86% obtained from relatives of village (Table 2). Knowing each other represent a sort of unwritten guarantee for cheese quality and hygienic safety, even in absence of a legal certificate that could confirm this information. Mutual trust among producers and consumers is a reason, despite illegal presence of cheese in market, why producers still manage to sell all produced quantities. Reason for giving up some producers of this production probably lies in the difficult attainment of consumer confidence due to lack of confidence in the quality and hygiene of cheese. This explains the phenomenon that some producers have regular customers for years, while others have no demand and give up of production. Cheese in a suck, besides the lack of guarantees for its quality, has no major fluctuations in relation supply - demand. Cheese in a suck is an excellent example how short chain of distribution and mutual trust among producers and consumers, has stronger power than official certificate.

Research results have shown that producers sell cheese in range of prices from 8 KM (Konjic) to 25 KM (Ljubuski). Such a big disparity of prices causes serious harm to producers, on one hand due to the realization of small profits, and on the other hand due to the reduction of cheese reputation among consumers. The cause of this phenomenon is often in inadequacy of keeping cheese for longer period. In order to protect producers and consumers it is elaborate and adopt a clear pricing policy for certain categories of cheese.

### **References**

Brunory, G. (2005/2006). Strategies and tools for valorization of typical products. Lectures, Master MISS, Facolta di economia e agraria, Bologna.

- Brunori G., Belletti G., Cerruti, R., Marescotti A., Pacciani, A., Rossi A., Rovai M., Scaramuzzi, S. (2006). *Guida per la valorizzazione delle produzioni agroalimentare tipiche. Concetti, metodi, strumenti*. Firenze, Italy: ARSIA.
- Brunori, G., Rossi, A., & Vanni, F. (2000). Marketing Sustainable Agriculture: An analysis of the potential role of new food supply chains in sustainable rural development. Desk study on consumer behavior towards sustainable food products, National report – Italy. The fifth framework programme 1998-2002, sus-chain QLK5-CT-2002-01349, financed by European Commission.
- European Commission, (2008). Evaluation of the CAP policy on protected designations of origin (PDO) and protected geographical indications (PGI), Final report. London: London Economics in association with ADAS and Ecologic.
- FAO(2003). Market research for agroprocessors. Marketing extension guide 3. For FAO Shepherd, A. AGS.
- Samardžić, S. (2009). Sir izmijeha iz Hercegovine: starirecept – nova perspektiva. *Prehrambenaindustrija, Mlekoimlecniproizvodi, Časopis saveza hemičara i tehnologa*, 20(1-2), 52-56, Beograd.
- Sarić, Z. (2009). Analiza lokalnog proizvodnog sistema hercegovačkog Sir izmijeha. Projekat: Zaštita i valorizacija poljoprivrednih tradicionalnih proizvoda od vrijednost iz Hercegovinu, NGO UCODEP, Sarajevo.
- Tourist attitudes towards Regional and Local Foods. (2008). By Enteleca Research and Consultancy Ltd for UK Ministry of Agriculture Fisheries and Food and the Countryside Agency Tourists.
- Vandecandelaere, E., Arfini, F., Belletti, G., Marescotti, A. (2009-2010). Linking people, places and products. A guide for promoting quality linked to geographical origin and sustainable geographical indications. (Second edition). Roma, Italy: FAO and SINERGI.