

QUALITY MANAGEMENT OF WINE IN THE REPUBLIC OF KOSOVO

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ABSRACT

Nowadays consumers have become more aware of what kind of food they are consuming, which means that now they consume food and agricultural products of good quality that meet their needs for healthy food. Kosovo, as a part of global market, in the last decade has become part of the quality management systems of food for the local market, as well as for international market. Wine in Kosovo under the Law on Wines No. 02/L-08 and the Law with changes and prior completion of the previous Law, No. 04/L-019, article 2, paragraph 1, is qualified as agricultural and food product, which means that the industry of wine is oriented not only for positive financial effects upon the placement of their products but also is oriented in the quality of wines, which is achieved through complete food chains from production of raw materials (grape), from the vineyards to the tables of consumers who consume wine. Quality management of wine in Kosovo is realized through consumer protection policies under Article 1 of the Law on Consumer Protection (Official Gazette of the Republic of Kosovo) No. 32.

Manufacturers of wine as food producers, the demand for quality can achieve only through quality management of wines, in relation from idea to production and consumption. The access of this study is oriented to the real appearance of concepts in appliance of the quality of wine systems, the appliance of quality management through ISO (International Organization for Standardization), HACCP (Hazard Analysis and Critical Control Points) and through the model access in the quality management system of wines.

Keywords: *management, quality, wine, market, customer*

1. INTRODUCTION TO THE MANAGEMENT OF WINE QUALITY

Quality of wine in the last decade has become a reference point as an agro-food product in the global market of wines. Industry of wines not only looks at the financial profitability during the production placement assortment of wines, but also at the quality of wines which is achieved through the production chain, from raw material supply to costumer, meaning from the vineyard to the glass.

In this context, wine consumers have become more conscious about the quality of wines, while their ultimate objective remains in demand for quality and healthy wines. Wine producers, requirements for the quality of wines can accomplish only through the management of wines quality, meaning from the vineyard to the glass or to the costumer table.

2. BACKGROUND AND WINE PRODUCTION IN KOSOVO

Wine in the Middle Ages and in the Illyrian-Pelasgians time was produced in a very primitive way, grapes has been suppressed by foots and wine has been moved from one place to another with containers that were produced out of the skin and of the earth.

The history of the development of viticulture is a companion to the history of development of human society. Starting from the Illyrian-Pelasgians time, when humans of the viticulture region were placed on their permanent residence, the vine was among the first plants that were near their houses.

Viticulture region – the south of Kosovo, known for quality wine grapes, encompasses a territory that extends between north latitude, 42 degrees and 17 minutes, 42 degrees and 29 minutes, 20 degrees and 31 minutes, and 23 degrees and 21 minutes, geographic longitude east of Prizren Pond and Dukagjin. This region is known throughout Antiquities and Middle Ages and, according to the list of geographical names of Medieval Zeta, occupies space around the central flow of the White Drin river, from the Cramavic village through all the left side villages of the Drin river flow, towards the holy Bridge of Ladvica to the village of Corisha, towards Suva Reka, thence through villages: Pecan, Semetisht, Doberdelan, Samadragje, Red Stone to Kramaviku.

Whereas, on the whole territory of Kosovo is estimated that there are 4965 farmers, who grow grapes in an area of 3170.27 hectares, where varieties of the wine production are cultivated in an area of 2455.82 hectares, table grapes in an area of 712 hectares and grapes for drying in an area of 2.45 hectares; and 7.7 million liters of wine in 2013.

Table 1. Productive potential of farmers, areas of vineyards and wine production in Kosovo

Serial No.	Description	Measure unit	Farmer 2013	Area 2013	Production of wines 2013
1.	Wine producers	Family economy	4965		
2.	Vineyards with varieties for wines	ha		2455.82	
3.	Vineyards with varieties for tables	ha		712	
4.	Vineyards with variety for drying	ha		2.45	
5.	Annual production of wines in 2013	lit.			7.682.425
	Total		4965	3170.27	7.682.425

3. QUALITY AND DEFINITIONS OF QUALITY

During the last decades, in the nineties of the last century have come many definitions by many authors. Scientists and philosophers have given different definitions of products, but not specifically for quality of wine or food.

Juran, in 1990, defines the quality as a “*characteristic of the product which results customer satisfaction, without absence, gives customers dissatisfaction: means willingness to use*”.

Deming, in 1993, defines the quality “*that product or service possesses the quality if it helps anyone to enjoy, and ensures better and stable market*”.

Besides these philosophers and scientists, for quality management there are also some institutions that have given their definitions on the quality of the food.

International Organization of Standardisation (ISO) defines a wide range of conditions related to quality management which are applicable to all products. Thus, the document ISO 9000 defines quality as *a preferred characteristic that the product must have*, e.x product must be

reliable, usable and repairable. High product quality must meet the costumer's needs and expectations.

American Society of Quality Control (ASQC) had developed vocabulary terms which are related to quality, in which terms quality is defined as *a subjective concept that everyone has their own definition*.

Institute of Science and Technology (IFTS) have described specific concepts for food quality. *Quality is the degree of standard of excellence and/or suitability for purpose and/or specific achieving consistency of food quality*.

From all that was said above, the best definition is: "*Quality means achieving or exceeding costumer expectations*". The costumer is the one who receives the product (from raw materials to finished products) within food chain, and the consumer is the intimate user or consumer of product.

Meaning, wine quality management is a process that applies from the cultivation of grapes in vineyards, application of modern production technology of grape by observing the ISO and HCCAP standards, in order to provide quality wine to the consumer, not dangerous wine, in order that consumer will be satisfied.

4. QUALITY MANAGEMENT OF WINE IN KOSOVO

Based on the basic requirements, all rates in wine quality management: planning, training, responsibility, authority, control, measurement, communication with suppliers of raw materials (grape), research, management of clean and dirty vineyards surfaces, control and critical control points, the control over the causes and effects on the environment and health of the population in case of wine consumption, quality management of wines is realized through Law of Wines No.02/L-08 and Law on Amending the previous law No.04/L-019, and also through consumer protection policies under Article 1 of the Law of Consumer Protection (Official Gazette of the Republic of Kosovo) No.32.

In the context of quality management of wines Law No.04/L-019 and the provisions of this law issue are provisions that relate directly to quality management of wines. For example, Article 2, Paragraph 1 of the Law provides: "Wine" means agricultural food production obtained exclusively by alcoholic fermentation of the entirety or a part of fresh grapes. Then, Article 3 determines protected geographical origin, Article 18 determines the classification and valuation, while Article 20, 20.1 determines that the label of quality wine trade which is released in market should also contain special label of quality control of wine, while Article 21 determines the testing commission that carries out the organoleptic analysis, Article 22 recommends the label and declarations on the structure or brand. Article 38 defines the rights and responsibilities of the sale of wines and control system, and the Article 45 is the article which deals with the complete inspection of the chain, is from "vine to glass"; and Article 1 of the Law on Consumer Protection (Official Gazette of the Republic of Kosovo) No.32.

In the framework of the quality management of wine, a special role has the Viticulture Department under the Ministry of Agriculture, Forestry and Rural Development. This department, among other divisions, also has the laboratory division. This laboratory is accredited at the national level, and has the following responsibilities: the main task of the division is the Management and Monitoring of quality control of wine in analytical aspect.

Wine Division manages and monitors quality control of wine in two aspects:

1. Analytical Control of nine (9) parameters according to ISO / IEC 17025
2. Organoleptic Control, 100 point scheme approved by OIV

Manages and monitors:

- Domestic Trade
- Exports

The import of wine and other grape products and wine

4.1. Control system

In the framework of the quality management of wines, in Kosovo performs the integrated system of control which is managed by the Viticulture Department of the Ministry of Agriculture, Forestry and Rural Development. Part of this division is the Viticulture Department and Wine Department.

Viticulture division tasks – the task of this division is to manage the control system and the one of collecting vineyards, vineyards cadastre management which project started in 2004 and finished in 2014, the cost of which was approximately 1 million euro, which was implemented by the company Geo Land.

Kosovo is a leader in control system with a Cadastre of vineyards for the fact that is the only country in the region that applies the vineyard cadastre. This system, according to UA 24/2008 receives annual statements until 10 June of the current year, through the forms, farmers and companies declare plantings of vineyards in accordance with standards and criteria varieties which are controlled and certified by the central institutions, then they declare the vineyards tweaks and general vineyards sales.

The control system that is managed by this division is also responsible for declaration of grape collection. Each farmer or company that owns or has made a rent contract has a legal obligation to declare the collection: for quantity, varieties and for the quality of grapes by 10 December of the current year.

4.2. Wine division duties

The task of this division within the Department Of Viticulture in Ministry of Agriculture, Forestry and Rural Development, is:

- To monitor the production of wines
- To control the production of wines
- To manage the quality of wines

Monitoring of wine production is made by applying the Law of Wines No.02/L-8 and the Law on amendment and supplementation of the Law No.04/L-019, Article 5, 12, while production of wines is made based on UA 24/2008 and 04/2014 on wine production declarations and the declaration of stocks from the previous period.

Wine quality management is made by the division through:

1. Physics chemical and analytical control of nine (9) parameters according to ISO / IEC 17025

Table 2. Parameters of analytical control of wines

Serial Number	Analytical description	Parameters
1.	Specific weight	g/cm ³
2.	Alcohol	% v/v
3.	Extract	g/l
4.	General acids	g/l
5.	Volatile acids	g/l
6.	Free SO ₂	mg/l
7.	General SO ₂	mg/l
8.	pH	
9.	Sugar	g/l

2. Organoleptic control, 100 point scheme approved by the OIV. Definition determines four (4) phases of tasting:
 - Observation through senses

- Description of perceptions
- Comparison starting from some specified rate (defects and quality)
- Reasoned judgment (description of defects and qualities)

Wine is made to be consumed, appreciated and enjoyed, while tasting is the act that allows the issuance of giving a valid judgement on its quality.

There are three methods (aspects) of tasting:

- Theoretical tasting: studies the mechanism of taste
- Analytical tasting: studies the relationship of taste and aroma based on the composition of wine
- Applied tasting: it means to describe detailed impressions of taste, to comment and classify wines. To fill a folder with all the details of wine.

Manages and monitors:

- Domestic Trade
- Exports
- Import of wine and other products from grape and wine

5. ENSURING THE QUALITY OF WINES

Ensuring the quality of wines is an active approach to plan and develop the quality. The main objective of quality assurance is consumer demand, quality of wines and reliability in the safety and quality of wines.

Quality system is defined in organizational structure, responsibilities, processes, procedures and necessary resources to achieve the objectives of quality management. Quality is achieved by quality control at all stages of development, creation, production and consumption of wine. In the wine industry, were set some quality assurance systems and norms and criteria which can serve as guides in the development of quality systems and safety of wine consumption, and achieve quality and safety requirements.

5.1. Best practices

Best practices include instructions and standards for producing and storing food products, in this case of wines as agro-food product.

Instruments to provide food in a market economy are guidelines and good practice at international, national or community level, defined by *Codex Alimentations*.

Guidelines for operators of food business are:

- Good Agricultural Practice
- Good Veterinary Practice
- Good Manufacturing Practice
- Good Hygiene Practice
- Good Production Practice
- Good Distribution Practice
- Good Practice Trade Practice

In determining whether any food item is harmful to health, is taken into consideration:

- The possibility and / or short-term impact and / or long-term impact of food on the health of persons who consume future generations
- The possibility of cumulative toxic effects
- Particular health sensitivities of food intended for a particular category of consumers

In such a case, the business of wines and food, to take an action that will prevent the entry of such products in the food chain, unless the operator can provide, reducing risks to a minimum and reducing the risk to an acceptable level. Food industries which work with HACCP system have introduced measures to best industrial practices.

6. HACCP – HAZARD ANALYSIS AND CRITICAL CONTROL POINTS

HACCP is a professional approach, rational and systematic identification, evaluation and control of safe food production measures that are considered to be critical to product safety. The basic principle of HACCP system is food security and agricultural food products, in terms of security, not monitoring the quality of food.

HACCP is a system of self-control processes that determines and assesses critical control points (CCP) that are essential for product safety.

This is the concept of systematic verification of food safety based on principles aimed at detecting and preventing risks that can occur at any stage of working with food.

The practical appliance of HACCP is a rule by seven (7) principles:

1. Identification of risks
2. Identification of the most important points of critical control in the process
3. Establishment of critical limits for each critical control point (for example fermentation temperature / time)
4. Establishment of a monitoring system for each critical control point to prevent the problem (monitoring / supervision)
5. Deciding on corrective actions in case that something goes wrong
6. Establishment of a control process
7. Establishment of the documentation and storage of records

The appliance of HACCP in the wine industry of Kosovo represents a new and challenging principle for wine producers. In the wine industry of Kosovo, HACCP has started only through the control system, while for consumer safety and risk of wines has begun on the basis of the notification and training for preparation of companies in the wine industry in the appliance of this system.

7. CONCLUSION

Based on the importance of the control system, security system, risk and critical control points of wines, i consider it very important and indispensable the appliance of HACCP in the wine industry and in general in the effective management of quality of wines in the wine industry in Kosovo.

I recommend companies involved in the wine industry in Kosovo to begin to apply the HACCP system. The result of application of this system will increase competition, increase circulation of wines in local and international market, which would also affect the safe consumption of the wines of Kosovo and generating new work places.

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