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## **Comparative study on the quality and food safety**

Vidraşcu, Paula Angela

Academy of Economic Studies, Accounting, Bucharest, Romania

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# COMPARATIVE STUDY ON THE QUALITY AND FOOD SAFETY

PAULA – ANGELA VIDRAȘCU<sup>1</sup>

**Abstract.** *The issues addressed in this paper makes a significant contribution to solving the complexity irregularities occurred in the development of environmental achievements. Quality and food safety is now a consumer law that directly reflects the quality of life. So this topic gives a particular importance to the work of the bodies created to defend the interests of all consumers. This study has an important role both in the short and long term through proper understanding of the terms of quality and food safety and implementation of strict hygienic-sanitary rules. The essential aim of this article is the integration of environmental awareness, which can stop the degradation and disappearance of the planet. Thus through the implementation of the adoption and application of strict orders regarding compliance with hygienic-sanitary rules can result in increased development and maintenance of environmental performance in a competitive economy . Quality is and will always be a very important competitive factor.*

**Key words :** *Food quality, food safety, ecological success, eating behavior, sustainable development.*

## INTRODUCTION

Currently the main impediment competitiveness means solving problems related to the environment. Performance concept has evolved into a comprehensive approach including financial aspects and non-financial aspects, which mainly refers to the elements of social responsibility. Previously, on the foreground is the financial performance, but now economic entities have realized that future successes, motivation is what today, in the context of sustainable development of society, we call the global performance. This involves aggregation of economic performance, social and environmental.

Intensifying environmental problems increasingly causes more uncertainty.

Companies provide increasingly more interest on the realisation and demonstrating environmental performance by controlling the impacts of healthy activities, products and services and their impacts on the environment. They performed "audits" to assess their environmental performance. Unfortunately, these alone audits are insufficient to ensure that the organization meets its performance in the future and meet legal requirements. Environmental Management standards (such as EMAS and ISO 14000 series of standards) represents an adequate benchmark after which organisations and companies can measure their performance.

At the same time, public opinion has become increasingly more concerned about environmental issues, which are often reflected in the behaviour of consumers, who expresses interest in products that are not harmful to the environment. In this way arose Ecolabel providing information about environmental impact, promoting low impact products.

## MATERIAL AND METHODS

The materials used in this research are making direct reference to the study of literature and related data processing as a result of the research carried out. At the same time I processed the data obtained from the actual existence of networking to consumers in our country, EU countries and a study conducted in America concerning genetically modified organisms, through which we debated the pros and cons that can be detached as a result of the field of study.

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<sup>1</sup> Asis. Univ. Drd. Paula – Angela Vidrașcu, Academia de Studii Economice – „Contabilitate”, București , vidrascupaulaangela@yahoo.com

Thus have been completed, understood and processed on European regulations concerning the quality and safety of food but also the strict rules of sanitary-hygienic use which further add to the quality of life of all living beings in the environment.

## RESULTS AND DISCUSSIONS

**Food quality** encompasses all properties they own food in accordance with current regulations and consumer needs and requirements.<sup>2</sup>

Hygienic quality of food is achieved if the following rules are being respected such us:

- ✓ The use of fresh raw materials;
- ✓ Applying heat treatment to inactivate anti-nutritive substances;
- ✓ Minimal processing so that it can be avoided the formation of harmful substances and to maintain the quality of nutrients and biologically active substances;
- ✓ Properly stored to avoid microbiological spoilage;
- ✓ The use of additives to the destination and accurate doses;
- ✓ The practice rational and strictly controlled fertilizers, pesticides and antibiotics;
- ✓ Maintain perfect hygiene processing units in storage for machinery, equipment and working tools;
- ✓ Consumer education related to compliance with the rules of hygiene during food preparation and storage of products.

**Food safety** is an essential element of food security and human nutrition refers to the three characteristics that must satisfy a food.

Thus a food must have the following traits:

- a. To have intrinsic nutritional value;
- b. To have a high nutritional value as bioavailable;
- c. Hold hygienic qualities.

**Nutritional value** means the quantity and quality of protein, fat and carbohydrates, in a word, energy suppliers. These nutrients provide the body with the following functions:

- ✓ Provides energy to the body and provides nutritional requirements of it;
- ✓ Own plastic role, physiological and physico - chemical;
- ✓ They are essential to life acting at the cellular level to support the development and maintenance of normal body health.

**Bioavailability** means the way that food nutrients, biomineralele, vitamins and biologically active substances are used by humans. This feature can be supported by:

- ✓ The level of nutrients and biologically active sunstanțe existing intestinal tract level capable of being absorbed by the body;
- ✓ The absorption of substances for digestion;
- ✓ The amount of substances retained by the body.

However there are a number of factors that can have a high influence on this trait. Thus we find:

- ✓ Physiological condition of the body;
- ✓ Nature of produce;
- ✓ The presence of anti-nutritive substances;
- ✓ Raw material processing method;
- ✓ Type interactions synergism, antagonism or association between nutrients and biominerals or nutrients and vitamins.

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<sup>2</sup> Burghelea, C. (2010), *Securitatea și protecția consumatorului*, Revista Amfiteatru Economic, ASE București, Facultatea de Comerț, Anul XII, Iunie 2010, Nr. 28, ISSN 1582-9146, pp. 476-489

**Hygienic quality** of a food may be influenced by:

- a) Nature toxic substances in raw materials or finished products (alkaloids, biogenic amines, etc.)
- b) Anti-nutritive substances of agricultural raw materials (haemagglutinin or lectins, trypsin inhibitors, antivitamins, antiminerals, blockers of various enzymes, etc.)
- c) Additives used in food production without the legislation in force related destination, dosage etc.
- d) Chemical contaminants such as heavy metals, pesticides, mycotoxins;
- e) Chemicals that may arise as a result of processing the type of nitrosamines, polycyclic aromatic hydrocarbons or polymers thermal oxidation of fats;
- f) Substances that can migrate into food from plastic packaging (pigments, stabilizers, monomers with reduced Molec table etc.);
- g) Pathogens that can cause infections due to poisoning by these organisms multiply in the human body;
- h) Biological agents that can infect foods (vermin, insects, protozoa, larvae etc.).
- i) Viruses that can contaminate raw materials and products of plant and animal origin.

Studying the "World Declaration on Nutrition" (FAO / WHO, Rome, 1992) and the "Declaration on World Food Security" (FAO / WHO, 1996), we see that food security situation arises where any time all men have physical access and economic access to reliable and nutritious food that meets the needs of the human body so that they can lead a healthy life.<sup>3</sup>

Food security has become a highly publicized issue both locally and internationally. It also should be noted that Earth's population nutrition international expansion is a concern to WHO (World Health Organization), FAO (Food and Agriculture Organization), the Codex Alimentarius Commission, etc. .

Food security in the entire world can be assured of domestic resources through its policies of each country.

Generally food security means "the right to eat." Following the study symposium on "Sustainable Food Security for All by 2020" in Bonn we define a number of key features security on food security, as follows:

- ✓ cleaning water sources;
- ✓ promoting agriculture and rural development;
- ✓ development of agricultural research in order to promote new technologies of modern agricultural
- ✓ improve the management of natural resources;
- ✓ promoting sustainable development in disadvantaged areas;
- ✓ supporting a healthy national and international trade and macroeconomic policies;
- ✓ making globalization to the poor.

Food safety is an essential element of food security and human nutrition, which must possess the following characteristics: to have intrinsic nutritional value, nutritional value as high bioavailable and always hygienic qualities.

Practicing a European food safety system requires legislative development of the field, and different actions in order to:

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<sup>3</sup> Mărcuță, L., Mărcuță, A., Tindeche, C. (2013), *Analysis of Romanian GDP during crisis, 20th International Economic Conference - IECS 2013*, „Post Crisis Economy: Challenges and opportunities”, Sibiu, România

✓ Ensure the practice of management and control systems effective and efficient in terms of food safety and quality and animal health and nutrition and plant health within EU countries and non-EU countries that export food to the EU and are evaluated according to EU standards related field of study.

✓ A properly manage international relations with countries outside the EU and other international organizations regarding the safety of food, their quality and other associations.

✓ A managing relations with the European Food Safety Authority - European Food Safety Authority (EFSA) and ensure prevention of potential risks.

The United States believes European regulation as limiting imports and cultivation of genetically modified organisms (GMO) - is "cumbersome and unworkable".

U.S. and EU are about to launch negotiations to create a vast free trade area, but the discussions are likely to block the issue of genetically modified crops and products. Such products approved in the U.S. are strictly regulated in Europe, where only two genetically modified seed culture is authorized.<sup>4</sup>

Note that there are both pros and cons. Thus a U.S. trade representative supports the view that governments continue to impose discriminatory measures or useless on U.S. agricultural exports. Basically these impediments would affect American farmers but blocks and consumers around the world to access U.S. agricultural products, which that person considers to be reliable and of good quality even if GM yet.

Such products approved in the U.S. are strictly regulated in Europe, where only two genetically modified seed culture is authorized.

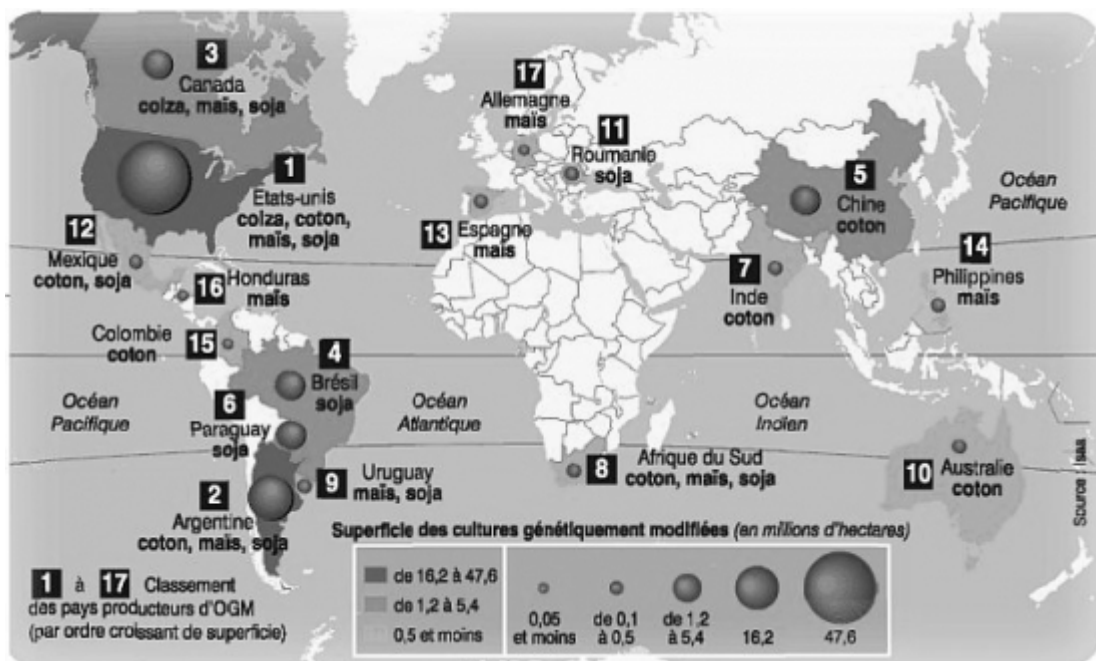


Figure No. 1. Examples of GM crops

Source: www.antena3.ro (Processed data for a report conducted by Television Antena 3, Bucharest, Romania)

<sup>4</sup> Gheorghiu, A., Gheorghiu, A., Spânulescu, I. (2009), *Target market risk evaluation*, Proceedings of the International Conference on Econophysics, New Economics & Complexity - ENEC-2009, Editura Victor, București, ISSN 2065-2550, p. 113

## CONCLUSIONS

The concept of the food safety (from the qualitative point of view) and healthy, wholesome comprises a variety of elements. We are talking about a food that contains all nutrients and biologically active substances of which man needs for maintaining health and preventing the occurrence of chronic diseases in addition, talking about a food without pesticides, toxins, chemical contaminants, physical contaminants and pathogens such as bacteria and viruses that can cause disease.

According to the EU and the World Health Organization, quality and food safety must be based on the efforts of all those involved in the complex process that starts with their origin and ends with the moment you arrive on the table.

This topic is timely and will remain in a continuing debate both pro and cons of different ways it affects individuals and creatures across the globe and the quality of environment, quality of life in one word.

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