

## **THE FOOD SAFETY IMPACT ON FOOD PRODUCTS MERCHANTABILITY**

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### **ABSTRACT – The food safety impact on food products merchantability**

On the whole food chain, food safety issues require a complex and extremely current approach. Traditionally, food safety aspects are analyzed at intermediate stages of the food chain and, to a lesser extent, during initial or final stages; however, certain diseases that have appeared in the livestock sector have revealed the necessity to discover the causes inside the food chain, namely inside its initial stages, but also a complete check of all the circuit a product follows to the final consumer. The common efforts of persons involved in the complex chain of food production, including agricultural production, processing and transport, and product traceability to consumer would lead to quality and safe items production.

**Key words:** food safety, food industry, food quality

## **INTRODUCTION**

Despite their vegetable, animal or mixed nature, food is essential for humans, since it provides energy and basic nutrients, very necessary for smooth operation of metabolic processes, growth and individual's development.

Nowadays, one can notice a phenomenon of extreme diversification of categories of complex and colorful wrapped food products that attract more consumers on a domestic or international market. However, we must say that food has a complex composition, sometimes indiscernible to consumers and that, associated with an improper diet, poor in nutrients necessary for the body, and combined with "dangerous" food, it could lead to increased risk of disease through ingested food and stress factors which man is subjected to every day. All these highlight the need to revise the outlook on human nutrition and to stress its character of health preventive factor, but also the great importance food security presents within a highly dynamic and complex trade. The nutritional value of products sold is emphasized more and more and the responsibility of food producer and trader regarding their state of safety increases.

## **MATERIAL AND METHOD**

### **Food safety-concepts and definitions**

Traditionally, food safety aspects are analyzed at intermediate stages of the food chain and, to a lesser extent, during initial or final stages; however, certain diseases that have appeared in the livestock sector have revealed the necessity to discover the causes inside the food chain, namely inside its initial stages, but also a complete check of all the circuit a product follows to the final consumer.

In recent years, a great number of consumers have been made aware about food safety problem, so they became more and more interested not only in quality but also in the origin of food products consumed. In these conditions, it is required that any deficiencies or weaknesses of the circuit map of foodstuffs are eliminated, from farm gate to consumer. Solving these problems includes, among others, a careful resources and factors management used in agricultural and food production, despite their nature. The issue of food safety receives new values, in terms of an unprecedentedly food trade development due to globalization. These aspects make us aware that it is becoming difficult to ensure food safety, which inevitably affects population health. A fair approach of food security requires, in fact, coresponsibility of all components of food chain.

In that context the following elements that concur to increasing food security should be taken into account:

1. the fundamental components of risk analysis that can be found in food and health security, namely assessment, management and communication, a distinction between scientific risk assessment and their management being required;
2. traceability, that should consider all actors involved in the full flow of food;
3. the harmonization of rules relating to various aspects of health security of food;
4. the existence of common elements in the systems to ensure health security of food, that make them equivalent;
5. prior risks elimination directly from source or their prevention.

The common efforts of persons involved in the complex chain of food production, including agricultural production, processing and transport, and product traceability to consumer would lead to quality and safe items production.

According to the European Union and World Health Organization – food safety is everyone’s responsibility, from their origin to final consumer. We must be aware of the particular role of trade in food safety given the fact that food is sometimes found during a significant period.

Requirements imposed by the legislation in force in Romania (Law 150/2004) to ensure food safety are:

- a) foods should not be put on the market if they are not safe;
- b) foods are considered unsafe if they are harmful to health or unfit for human consumption;
- c) to determine whether a food is safe or not, normal conditions of use of food should be taken into account by the consumer at every stage of production, processing and distribution, and consumer information provided, including label information or other general information
- d) available to consumers to avoid harmful effects on personal health, caused by a particular food or food category;
- e) to determine whether a food is harmful to health, probable immediate and / or short-term and / or long term effects of that food on the person consuming it should be considered, and the effects on future generations, the possible cumulative toxic effects, and sensitivity to the health of a certain class of consumers;
- f) to determine whether or not a food is proper for human consumption, one must consider if food is unacceptable for human consumption in accordance with its purpose, in terms of contamination, caused by external factors or not, by alteration, deterioration or decay;

g) if an insecure food is part of a batch or shipment of food from the same class or having the same description, it will mean that all food in that batch or shipment is unsafe unless, following a ailed assessment, no evidence, to indicate that the rest of the lot / batch or consignment is unsafe, is revealed;

h) the compliance of food with specific provisions applicable to that food will not prevent the competent authorities from taking all necessary steps to impose some restrictions on the market or to withdraw it from the market, hen there are reasons to prove food is ot safe, although apparently they are insistent.

## RESULTS

### **Trade and food security**

In market economy conditions, characterized by a very complex offer, including food, there is an intense competition among producers and traders n terms of meeting the highest level of consumer requirements, in a permanent change without which it is unlikely o achieve economic efficiency and, finally, profit. Therefore, in such competitive market consumers seek not only the general and particular characteristics of the existing product ix, but also the possibilities they have n relation to the choice of quality and safe consumption food. In other rds, they are concerned, in an increasingly higher measure, about the quality assurance issues and the responsibilities of those economic operators that are guilty of producing and trading products that can affect health or immediate and long term economic interests.

It should be recognized that economic agents do not always meet the ethical code and do not use the most honest practices, issues that necessitate he intervention of state bodies – through various regulations (laws, rules, standards, etc.) - in terms of imposing some specific requirements throughout he food chain, giving consumers' confidence that goods they purchase will ot affect the safety, health and their legitimate interests.

It can be said, without any fear, that a market driven by quality and safe food supply will have a significant potential in connection with the successful participation of economic operators which represent it in international trade, given that today, self-sufficient economic development is no longer conceivable.

In food trade field competitive authorities have mainly the following obligations:

a) to help develop technical standards for food and animal feed products and to develop sanitary and fitosanitary standards;

b) to coordinate activities related o implementation of specific food and animal feed, adopted by governmental and nongovernmental organizations;

c) to contribute, when appropriate, o agreements conclusion on recognition f equivalence of specific measures on food and animal feed;

d) to pay a particular attention to specific development, finance and trade problems, in developing countries, to ensure that international standards do not create obstacles in achieving exports of these countries;

e) to promote consistency between international technical standards and food aw, so hat the high level of protection as not diminished.

Both international and Romanian law regarding food industry stipulates the implementation of principles of a food safety management system based on risk assessment and prevention in all units involved in the whole food chain from primary producers to retailers production, transport, storage, serving and food trade), that is a HACCP system Hazard Analysis and Critical Control point).

ISO 22000 is a new international standard designed to ensure food safety. Developed with the participation of food specialists, ISO 22000 includes HACCP principles and integrates key requirements developed at global standards. A food safety management system certificate demonstrates the organization's commitment and ability to control food safety hazards in order to ensure that the food meets all quality standards during human consumption.

The quality of the food industry does not only refer to the finished product, but also to hygiene processes (not limited to technological flow).. In his context, quality is and will always be an important competition factor, if not the most important. HACCP principles are a means to guide the organization to comply with all rules related to achieving quality products and to continuously improve performance.

The benefits of implementing ACCP are: it is part of quality management system, it is a preventive method of self-control of food safety, it increases national and international competitiveness, it increases customers and employees confidence in its ability to consistently produce only safe products or consumption, it limits incidents involving legal responsibility of society, t demonstrates compliance with specific legislation in force, it improves the working conditions of employees.

### **The current situation of trade in food**

Since the fourth quarter of last year, the effects of global economic crisis began to manifest more intensely in Romania, the economic slowdown becoming a reality. The statistical results show a significant reduction of economic activities with direct impact on Romania's international trade relations, which have reduced.

In the first trimester of 2009, exports and imports of goods have reduced significantly compared to the first quarter of 2008 (by 19% and 34.5%), but also compared to the previous fourth trimester (by 14.7% and 33.5 %). In the first quarter of 2009 the important fall of

imports compared to exports of goods, increased the trade deficit by half, compared to fourth trimester of 2008.

Exports of food, beverages and tobacco, are the only component of manufacturing industry which registered positive trend during the first 6 months of 2009, namely 13.4%. This trend was given by increasing exports of tobacco products by 51.3% and a difference value of 55.2 million euros, compared to the a than their conventional counterpart.

Even if the quality products have a guaranteed safety by their ecological composition itself, a defining imprint on rate development of such products and beyond is given by the purchasing power of final consumers.

It is obvious that bio sector continues to grow, and farmers' interests to switch to organic farming are going up with the consumers' increasing interests in such products. In the first semester of the previous year and food exports about 2% and an increase of 5. million euro of nominal value.

Imports of food, beverages and tobacco were reduced by 6.2% compared to the first 6 months of 2008, while increasing this group contribution of 2.3 percentage points to achieve total imports. This evolution is based mainly on increasing the share of food imports in total imports structure, with 2.2 percentage points. From imports dynamics point of view, all three components of the group registered negative values, namely: food (-4%), beverages (-27.5%), tobacco products (- 5.1%)

Food, beverages and tobacco foreign trade has resulted in reducing the trade deficit with approx. 134 million euro compared to the same period of 2008. In this context, we may

emphasize that tobacco products have improved surplus with 57.2 million euro, while food and beverages decreased negative balances by 53 million euro, respectively 4.0 million euro, compared to January-June period of the reference year. (table no 1 and table no. 2)

**The evolution of food exports in Romania**

Table no. 1

Activity	2008 mil euro			2009 mil euro			Percent change 2009/2008-%-		
	1st trim	2nd trim	1st sem	1st trim	2nd trim	1st sem	1st trim	2nd trim	Sem I
<b>Food, beverages and tobacco products</b>	<b>159,8</b>	<b>212,2</b>	<b>372,0</b>	<b>186,4</b>	<b>235,3</b>	<b>421,7</b>	<b>16,6</b>	<b>10,9</b>	<b>13,4</b>
Food	110,6	121,9	222,5	100,9	126,9	227,8	0,3	4,1	2,4
Beverages	14,4	27,5	41,9	13,5	17,6	31,1	-6,2	-3,6	-25,8
Tabacco	44,8	62,8	107,6	72,0	90,8	162,8	60,7	44,6	51,3

Source: Statistical Yearbook of Romania, 2008 and www.cnp.ro

**The evolution of food imports in Romania**

Table no. 2

Activity	2008 mil euro			2009 mil euro			Percent change 2009/2008-%-		
	1st trim	2nd trim	1st sem	1st trim	2nd trim	1st sem	1st trim	2nd trim	Sem I
<b>Food, beverages and tobacco products</b>	<b>159,8</b>	<b>212,2</b>	<b>372,0</b>	<b>186,4</b>	<b>235,3</b>	<b>421,7</b>	<b>16,6</b>	<b>10,9</b>	<b>13,4</b>
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Source: Statistical Yearbook of Romania, 2008 and www.cnp.ro

A niche trade that clearly seeks product's harmlessness and food quality is represented by bio and premium organic products, which, because of the difficult economic situation, consumers are less willing to spend since their prices are high. In the EU, meat without chemicals costs double compared to conventional meat. Because of this difference, people either do not eat meat anymore, either they choose conventional version. Dairy and organic vegetables also tend to have 20% -30% higher prices than their conventional counterpart.

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## CONCLUSIONS

Meanwhile, soaring food prices around the world alarmed.

Experts estimate that food prices in the next decade "will exceed the average levels over the last ten years" and will record "unprecedented prices for almost all agricultural products".

Compared to the average in the period 1998 - 2007, price projections for the period 2008 - 2017 suggests an increase of approximately 20% for beef and pork, with about 30% for brown sugar and white and between 40% and 60% wheat, maize and skimmed milk powder. For the same period, growth will be "more than 60% butter and oilseeds and vegetable oils over 80%".

European Development Commissioner Louis Michel said recently that "rising prices of basic foodstuffs could cause a global humanitarian disaster. Current food programs are subject to strong pressure, because there is less food available for people already at risk of hunger. Other millions, who managed to get by, are now threatened by famine.

Financial Times warns that the world is "dangerously close "to a new food crisis, while the UN biennial report points out: "The international community must remain vigilant to future food supply shocks".

The report gave the UN agency Food and Agricultural Organization (FAO) warns that this year will feel an increase in food prices, particularly the poorest people in the world. The report predicts a growth of 11% for the poorest countries and 20% for countries with food shortage because of low income. Currently, according to UN estimates, one billion people worldwide suffer from hunger. This is the highest number ever recorded in history.

It is estimated that imports of products worldwide will be 15% higher than in 2010 and reached 1,000 billion dollars. It would be the second time in history when that happens, while in 2008 the world food import was 1.031 billion dollars, an absolute record time. By comparison, in the period 1997-2007 was half the value of imports, not exceeding 500 million.

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