### FOOD SAFETY - BASIC CONDITIONS IN NOURISHMENT

Assist. Nataliţa Maria Sperdea Ph. D
University of Craiova
Faculty of Economics and Business Administration
Craiova, Romania
Assoc. Prof. Marieta Stanciu Ph. D
University of Craiova
Faculty of Economics and Business Administration
Craiova, Romania
Lect. Mădălina Mangra Ph. D
University of Craiova
Faculty of Economics and Business Administration
Craiova, Romania

**Abstract:** : Food safety is related to the presence of risk in food at home consumption. Because these risks may occur at any stage of the food chain, adequate control throughout the product circuit is raging need. Organizations participating in the supply circuit are very varied, ranging from feed producers and primary producers to food manufacturers, carriers and storage, wholesale stores and retail food stores, service providers, such as the related organizations (producers of equipment, packaging material, cleaning agents, additives, ingredients, etc..). Because of the many "actors" who are present on stage nutrition, food safety for human consumption is an essential requirement

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#### 1. Introduction

Food safety has become an impetuous necessity of current society, for which food has become the center of the food universe. If until nowadays, the main concern of the producers was only consumer needs, we are now in a position to affirm that above this is the concern to satisfy their needs safely.

From January 1<sup>st</sup>, 2007, the date of Romania's EU integration, it was necessary to align food industry enterprises to hygiene and food safety requirements imposed by the European Union.

European consumers want safe and wholesome food. The major concern of the European Union is to ensure that foods consumed are all at the same level of standards for all citizens, regardless of whether food is produced in the EU or imported. Food safety is a top priority for the EU. Related regulations have strengthened and tightened in 2000 and so far as to ensure that foods consumed by Europeans are very safe.

This safety does not stand, however, in detriment of food quality. Conversely, we can say that is an element that enhances this quality, is effectively a new feature of the food, or another dimension of food quality.

Food safety begins, as Europeans say, from farm to fork. This new approach is more integrated: feed and food are pursued with great care on the farm and continues until the product reaches the consumer plate. The authorities of European Union carefully evaluate the risks and seek the best scientific advice before any restrictions, or approvals are given in turn for any product, ingredient, additive or genetically modified organism. These things apply to all feed and food, regardless of where they would come from inside or outside the European Union.

Also, this certainly does not mean, however, uniformity (because it must meet the same requirements and same rules). European law protects traditional foods and products from certain geographical areas, providing consumers with information that can help to distinguish the fakes.

New systems appear, however, to ensure that food safety and warning systems and informing consumers about product that presents a risk for consumers' safety.

#### 2. THE RAPID ALERT SYSTEM FOR FOOD AND FEED

For consumers, safety is the most important ingredient in food. Food production, their distribution and food trade, make the EU the world's largest importer and one of the largest exporters. With globalization of trade and distribution of food throughout the world, we have new challenges of food security for the European consumer.

The Rapid Alert System for Food and Feed (RASFF) is a concrete and visible result of trying to ensure food safety in the European Union. Rapid exchange of information between competent authorities in relation to food and feed, as well as coherent and simultaneous action of all Member States, leading to the development of this system and the diminishment of risks relating to food safety. This rapid exchange of information helps Member States to act quickly and reply efficiently to the specific threats related to food.

To ensure consumer safety, to prevent the entry into the consumption of foods that are a risk for consumers and for a rapid information to the competent authorities on product safety, The Rapid Alert System for Food and Feed has been created. This system is part of the European Alert System for Food and Feed - RASFF. Information on products with risk should soon reach the authorities and to the consumers. Can be take immediate action through this system to withdraw from the market any food that presents risk for consumers' safe.

The main objective pursued by the establishment of rapid alert system is the rapid exchange of information between:

- - European Commission and National Authority Veterinary and Food Safety; National Veterinary Authority for Food Safety, Ministry of Health, Ministry of

National Veterinary Authority for Food Safety, Ministry of Health, Ministry of Agriculture, Forestry and Rural Development and National Authority for Consumer Protection;

- County, local and central Structures of the National Authority for Sanitary Veterinary and Food Safety, Ministry of Health, Ministry of Agriculture, Forestry and Rural Development and National Authority for Consumer Protection;
  - Laboratories and local integrators of Rapid Alert System;
  - Border inspection points and structures of the central and county authorities:
- Consumers, producers and processors on the one hand and local integrators of Rapid Alert System, on the other.

This rapid alert system is based on information transmitted or received to or from the European Commission or from other third countries and National Veterinary and Food Safety Authority. Information is transmitted in the form of written notice, called form of alert

The notification will be accompanied by a detailed explanation of the reasons that led to action taken by the competent authorities of the Member State that make the notification. It will be followed, in useful time, by additional information, in particular where the measures on which the notice is amended or withdrawn.

Information and notification is made when there is suspicion that a food presents or may present risk to public health or where there is suspicion that a material or product that comes in contact with food may also present, such a risk. We should not understand that only the physical presence of chemical, physical, biological or radioactive materials can lead to such risks. Possible health hazards may occur also from the lack of information on the product label, the existence of a product due to falsified or inappropriate packaging.

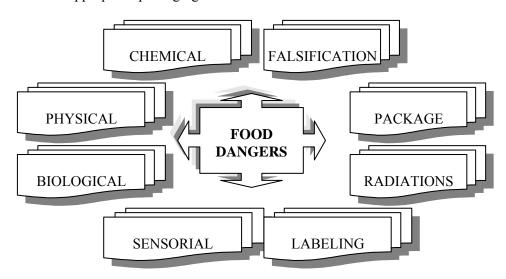


Fig. 1 Hazard categories notified by the Rapid Alert System

RASFF's legal basis is EC Regulation no. 178/2002. Article 50 of the Regulation establishes the Rapid Alert System for Food and Feed as a network involving the Member States, the Commission, as manager of the system, and the European Food Safety Authority (EFSA). EEA States - Norway, Lechtenstein and Iceland are also members of RASFF.

Whenever a member of the network has any information about the existence of a direct or indirect risk to human health deriving from food or feed, this information is immediately notified to the Commission through the Rapid Alert system. Commission shall immediately transmit this information to all network members.

Authority may include notification of any scientific or technical information which facilitates an appropriate risk management action by Member States. Without prejudice to other elements of Community legislation, Member States shall immediately notify the Commission through the Rapid Alert System:

- Any measures which they have adopted to restrict the launch or withdrawal from the market of food products to protect human health requiring rapid action;

- Any recommendation or agreement with professional operators that aims in a voluntary or mandatory manner, to prevent, restrict or impose specific conditions for placing on the market or the eventual use of food due to a serious risk to human health, requiring rapid action;
- Any rejection, related to a direct or indirect risk to human health, to a batch, container or transport of food by a competent authority at a border checkpoint in the European Union.

Notification is accompanied by a detailed explanation of the reasons for the action taken by the competent authorities of the Member State in which the notification was issued. Commission shall immediately notify the members of the network of all the additional information received.

Participation in the Rapid Alert system may be open to applicant countries, third countries or international organizations based on agreements between the Community and those countries or international organizations.

To help network members, information are classified into three different groups:

TABLE 1. Types of RASFF notifications

# RAPID ALERT SYSTEM FOR FOOD AND FRED

#### **Alert Notification**

Alert notification is sent when the food that is currently on the market has risk and requires rapid action. Alert is triggered by the Member State which has detected the problem and initiated relevant measures such as withdrawal or recall of the products on the market. The notification aims to providing information to all network members so they can check the products on the market for their selves and they may take such measures.



#### **Notification Information (non-alert)**

Notification of information refers to foods that have been identified at risk for human health, but have not yet reached the market. All measures necessary to ensure consumer safety have been taken or are currently being taken. This notification is used for products rejected at the border or dangerous products that have not yet reached the market.



#### Additional Notifications

All types of information on food safety which were not communicated by a Member State as the "warning notice" or "information notice", but it is related to food, are classified as additional information. These are the actual reactions of members of the original notification alert RASFF, e.g. information relating to alert notification.

Source: Ordin MAAP nr. 722, 8 august 2005 for approving of Rapid Alert System for Food and Feed

All these notifications are forwarded to the competent authorities which are obliged to take measures to eliminate risks associated with marketing and consumption of these products. When a batch, container or cargo is rejected by a competent authority at a border point within the European Union, the Commission will immediately alert all border within the European Union as the third country of origin.

When a food or feed that has been the subject of a notification via the system's early warning was sent to a third country, the Commission will communicate to the latter all the relevant information. Member States shall inform the Commission about the action implemented or measures taken following receipt of notifications and supplementary information transmitted under the rapid alert system. Commission will have to forward these information network members.

Participation in the rapid alert system may be open to countries that make a request to that effect, third countries or international organizations based on agreements between the Community and those countries or international organizations, in accordance with the procedures described in those agreements. The latter should be based on reciprocity and will have to include confidentiality measures equivalent to those applicable in the Community.

Summary of information flow diagram RASFF is presented in Figure 2.

#### 3. DIOXIN-CONTAMINATED PORK IMPORTED BY ROMANIA

Romania was announced by the Rapid Alert System for Food and Feed On December 2008 about the existence on the market of dioxin-contaminated pork, a substance harmful to human body. The biggest problem is that there is no antidote to dioxin. In addition, the substance can not be destroyed by processing meat, whether boiled, roasted or minced. According ANSVSA, pork contaminated with dioxins may have effects on human health only if taken continuously for several months, and in such cases skin and liver may be affected and, types of cancer in adults could occur when extremely large quantities are consumed.

Pork meat came from Ireland and was produced from September the 1<sup>st</sup> to December the 6<sup>th</sup>. All of the meat from this producer had withdrawn and destroyed safely. The level of PCBs in contaminated meat came from Ireland was established it was from 20 to 100 times the limits set by European standards, namely one picogram at a gram of fat pork.

Alert in Ireland was launched after the discovery, during routine checks carried out in late November, of some traces of PCBs (persistent organic pollutants and probably carcinogenic) in pig fat originating from nine Irish farms.

Different traders in Romania imported pig meat produced in Ireland by intermediaries from other countries like: Belgium, France, Spain, Italy, Hungary, fact that has hampered and delayed the discovery of all meat infected with dioxin (figure no 3).

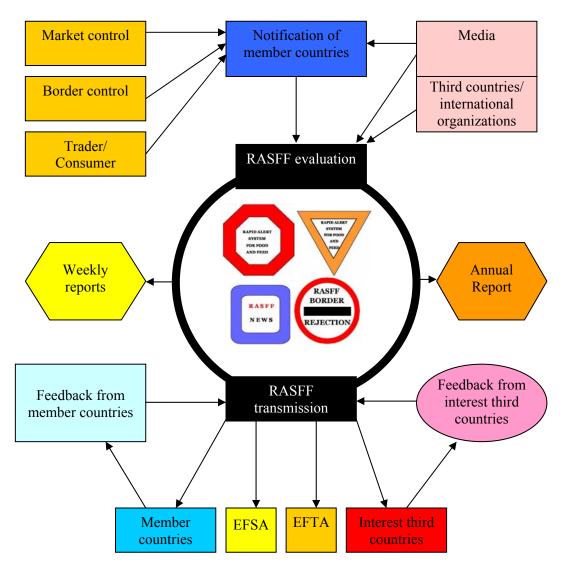


Fig. 2. Schematic representation of the flow of information RASFF

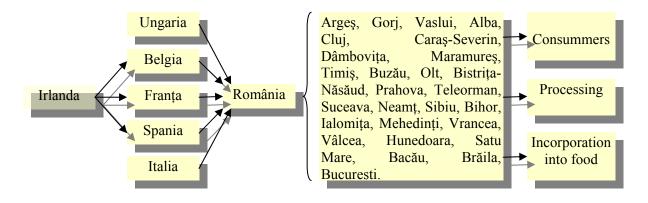


Fig. 3. Dioxin contaminated pig meat flow

Following the information received through the European alert system, importers of meat from Ireland were relatively easily identified the problem that arose was the importers concerned have sold infested pig meat in various counties. Basically, the meat has reached the 26 counties: Argeş, Gorj, Vaslui, Alba, Cluj, Caraş-Severin, Dâmboviţa, Maramureş, Timiş, Buzău, Olt, Bistriţa-Năsăud, Prahova, Teleorman, Suceava, Neamţ, Sibiu, Bihor, Ialomiţa, Mehedinţi, Vrancea, Vâlcea, Hunedoara, Satu Mare, Bacău, Brăila, plus Bucharest. The products were distributed further on to final consumers to be consumed as such or to be processed or incorporated into other foods. Most of the meat contaminated with dioxin was transformed into finished products, which have already reaches in the stores.

Under the law, the Authority would have had the right to examine the risk faced by consumers and to inform people in a matter of urgency. At that moment ANSVSA inspectors would have had to know the entire range of firms and companies in which meat was sold, processed and distributed to consumers. Their information would have to include absolutely all data - from feed and vaccines for pigs till the last company that sold the meat. Any food processor supplier and recipient must know from whom they took and whom they had given commodity. In this case, ANSVSA must address to the slaughterhouse in case from Ireland and, the processor can determine step by step not only Romanian processor that had received meat, and even the stores in which the finished products arrived.

In this case, traceability finds its applicability and can retrace the route of the infected meat and succeeds quite easily to recall all products on the market. A well-tuned traceability system correlated with the rapid alert system for food reduced practically to minimum food safety risks.

A quarter of the dioxin-contaminated meat was seized by the veterinary inspectors, the rest has already reached the tables of consumers. Inspectors of the National Authority for Sanitary Veterinary and Food Safety (ANSVSA) had 2948 of controls, including 358 in units and processing plants, 220 in cold stores and 2370 in retail units, in total being discovered 133.6 tons meat that come from Ireland [1].

The European Union urged all States to stop imports and withdraw pork and derived products contaminated with dioxin from Ireland. It is the meat that was produced and exported by Ireland from September the 1<sup>st</sup>. Most of it was imported from Britain, but significant quantities arrived in Belgium, Hungary, France and Germany. Most of these countries have given the alert very early (some groups were stopped right at the border) and managed to withdraw the contaminated lots immediately from the market. France has urged the national veterinary authorities to monitor the traceability of products. In its turn, Bulgaria had also part of a fairly large lot of Irish meat (100 tones), but officials in Sofia have boasted that they succeeded to take measures to search and withdraw it from the market even before old European countries did.

The European Commission has requested a meeting hold in Brussels, removal and disposal of pig meat coming from Ireland in the period September the  $1^{\rm st}$  to December the  $6^{\rm th}$ . However, experts have determined that compound foods and foods containing up to 20% meat or pig fat originating from Ireland may be excluded from the recall.

Of the 133.6 tons, which is known to have arrived in Romania, only 34 tones were seized, the remaining 99.6 tons, were prepared and their recall was ordered by the Rapid Alert system [3].

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