ASPECTS REGARDING THE EU RAPID ALERT SYSTEM FOR FOOD AND FEED (RASFF)

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Abstract: *The EU has one of the highest food safety standards in the world – largely thanks to the informations when risks to public health are detected in the food chain by the Rapid Alert System for Food and Feed. The new food production technologies and the continuing globalization of food production and distribution means the potential for international public health scares involving food contaminated with pathogens or chemicals. Analysis of the Rapid Alert System for Food and Feed (RASFF) provides determination of seasonal variations in contamination patterns. The RASFF annual reports, the information analysis have been summarized and discussed in this paper.*

Key words*: food safety, protection of consumers, RASFF*

INTRODUCTION

The EU has one of the highest food safety standards in the world – thanks to the information's when risks are detected by the Rapid Alert System for Food and Feed**.**

The legal basis of the RASFF is Regulation (EC) No.178/2002. Commission Regulation (EU) No. 16/2011 lays down the implementing measures for the Rapid Alert System for Food and Feed.

RASFF notifications can be: alert notifications, information notifications, border rejection notifications, original notifications and follow-up notifications, rejected and withdrawn notifications.

Most notifications are reported for pathogenic micro-organisms, fruits and vegetables, mycotoxins, nuts, nut products and seeds, pesticide residues and heavy metals.

Humans are exposed to heavy metal through various pathways, especially food chain.

MATERIALS AND METHODS

Documenting the work consisted in using data from the annual reports submitted by the RASFF (http://ec.europa.eu/food/safety/rasff/reports_publications/index_en.htm), legislation and some authors, associated with research, formed the basis of the analysis.

RESEARCH RESULTS

The evolution of the number of notifications in 2011-2015 time intervals is presented in Figure 1.

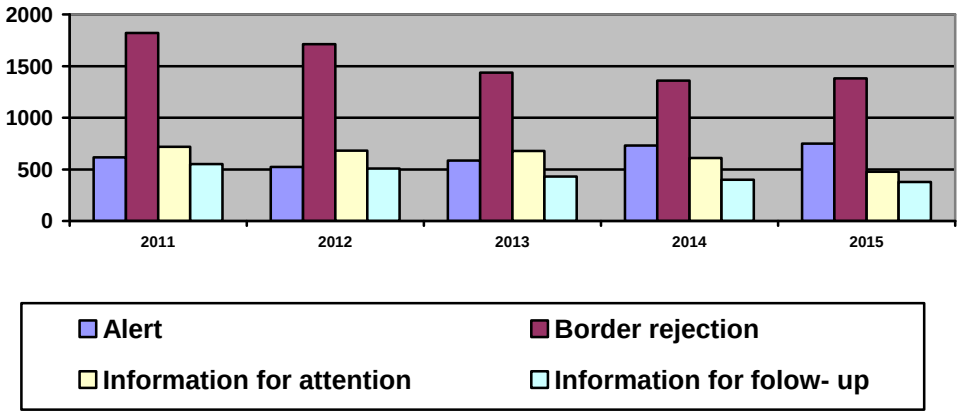

Figure 1. Evolution of the number of notifications
Source: Official information's provided by RASFF

In figure 2 is shown the evolution of original notifications made by Romania, during 2007-2015 period.

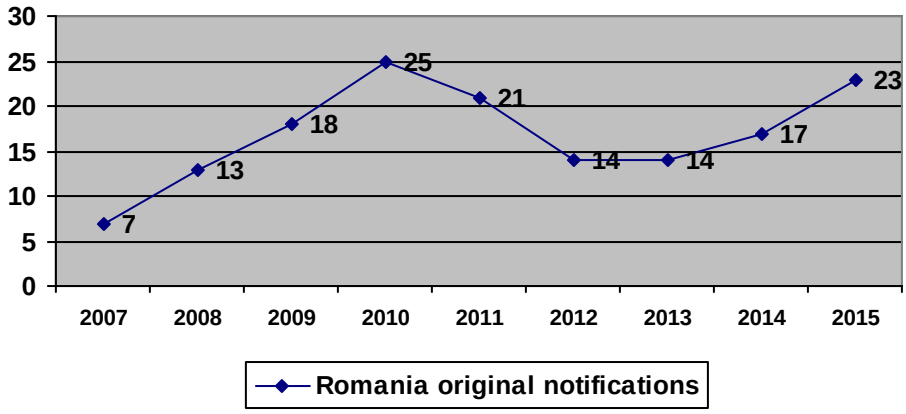

Figure 2. Evolution of original notifications by notifying country (Romania)

In Figure 3 are presented the total RASFF notifications by hazard category in 2013-2015 period. The notifications include all the categories: alert, information, border rejection, and information for follow-up.

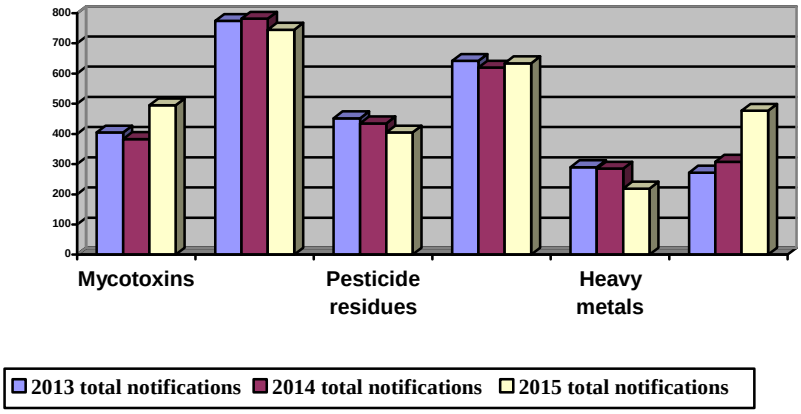

Figure 3. Total RASFF notifications by hazard category in 2013-2015 period

The RASFF annual report (2014) shows that pathogenic micro-organisms had the largest number of total notifications (782), followed by fruits and vegetables (620 notifications), pesticide residues (435), mycotoxins (383), nuts, nut products and seeds (308). Also, the RASFF annual report (2015) shows that pathogenic micro-organisms had the highest number of total notifications (745), followed by fruits and vegetables (634), mycotoxins (495), nuts, nut products and seeds (477), and pesticide residues (405).

In table 1 is presented the 2014-top 10 number of notifications based on country origin. On the first place was mercury (fish and fish products from Spain), on the second aflatoxins (nuts, nut products and seeds from Iran), followed by Salmonella spp.(poultry meat and poultry meat products from Brasil). On the last place, with 25 number of notifications were: norovirus (Vietnam), shigatoxin-producing Escherichia coli (New Zealand), migration of manganese (China), unauthorised genetically modified (China) and unauthorised substance dichlorvos (Nigeria).

Table 1

Top 10 number of notifications by country of origin, in 2014

No	Hazard	Product category	Origin	Notif.
1	mercury	fish and fish products	Spain	54
2	aflatoxins	nuts, nut products and seeds	Iran	49
3	Salmonella spp.	poultry meat and poultry meat products	Brazil	45
4	migration of chromium	food contact materials	China	38
5	aflatoxins	nuts, nut products and seeds	China	38
6	aflatoxins	nuts, nut products and seeds	Turkey	38
7	aflatoxins	fruits and vegetables	Turkey	37
8	Listeria monocytogenes	fish and fish products	Poland	27
9	norovirus	bivalve molluscs and products thereof	Vietnam	25
10	shigatoxin-producing Escherichia coli	meat and meat products (other than poultry)	New Zealand	25
11	migration of manganese	food contact materials	China	25
12	unauthorised genetically modified	feed additives	China	25
13	unauthorised dichlorvos	fruits and vegetables	Nigeria	25

In 2015, the hazards with the most great number of notifications were aflatoxins (nuts, nut products and seeds from China), *Salmonella* (fruits and vegetables, nuts, nut products and seeds from India) and mercury (fish and fish products from Spain) (Table 2).

Table 2

Top 10 number of notifications by country of origin, in 2015

No	Hazard	Product category	Origin	Notif.
1	aflatoxins	nuts, nut products and seeds	China	97
2	*Salmonella*	fruits and vegetables	India	78
3	*Salmonella*	nuts, nut products and seeds	India	65
4	mercury	fish and fish products	Spain	58
5	aflatoxins	nuts, nut products and seeds	Iran	55
6	aflatoxins	nuts, nut products and seeds	Turkey	53
7	aflatoxins	fruits and vegetables	Turkey	48
8	aflatoxins	nuts, nut products and seeds	United States	37
9	*Salmonella*	poultry meat and poultry meat products	Brazil	37
10	migration of chromium	food contact materials	China	33

CONCLUSIONS

Regarding the top 10 number of notifications by country of origin, in 2014, on the first place was mercury (fish and fish products from Spain), on the second aflatoxins (nuts, nut products and seeds from Iran), followed by Salmonella spp.(poultry meat and poultry meat products from Brasil). On the last place, with 25 number of notifications were: norovirus (Vietnam), shigatoxin-producing Escherichia coli (New Zealand), migration of manganese (China), unauthorised genetically modified (China) and unauthorised substance dichlorvos (Nigeria).

In 2015, the hazards for food safety were aflatoxins (nuts, nut products and seeds from China), Salmonella (fruits and vegetables, nuts, nut products and seeds from India) and mercury (fish and fish products from Spain).

In conclusion, the analysis of the rapports of Rapid Alert System for Food and Feed (RASFF) can lead to determination of seasonal variations in contamination patterns.

REFERENCES

1. **BORDEAN, DESPINA MARIA, GERGEN, I., GOGOAŞĂ, I., OPREA, GABRIELA, PÎRVULESCU, LUMINIŢA, ALDA, LIANA, ALDA, S., BOROZAN, AURICA, HĂRMĂNESCU, MONICA,** 2011, Matematical model evaluation of heavy metal contamination in vegetable and fruits, Journal of Food, Agriculture &Environment, Print ISSN:1459-0255; Online ISSN:1459-0263, Vol.9, (no.1), 680-683;
2. **DRĂGHICI, G.A., LUPU, MARIA, ALDA, LIANA, ALDA, S., BOROZAN, AURICA, GOGOAŞĂ, I., GERGEN, I., BORDEAN, DESPINA MARIA,** 2013, Mineral content of some Cruciferae species, available on romanian market, Journal of Horticulture, Forestry and Biotechnology, USAMVB Timişoara, 2013,Vol 17 (4), ISSN 2066-1797, 49-51;
3. **GOGOAŞĂ, I., MIRCESCU, ADRIANA, OPREA, GABRIELA, BORDEAN, DESPINA-MARIA, ALDA, LIANA MARIA, RADA, MARIA, ALDA, S., GERGEN I.,** 2011, Study regarding Cu contamination of vegetables grown in Ruschita (Caras–Severin county), Journal of Horticulture, Forestry and Biotechnology;
4. **GOGOAŞĂ, I., PÎRVU, ALEXANDRA, ALDA, LIANA MARIA, RADA, MARIA, ALDA, S., VELCIOV, ARIANA, BORDEAN, DESPINA-MARIA, MOIGRADEAN, DIANA, GERGEN, I.,** 2013, The mineral content of different coffe brands, Journal of Horticulture, Forestry and Biotechnology, ISSN 2066-1797, Volume 15(4), p.13-16;
5. **SÎRBULESCU, CLAUDIA, PEŢ, ELENA, TONEA, ELENA, ŢIGAN, EUGENIA, COTET, C.,** 1999, Securitatea alimentară – o prioritate absolută, Lucr. Şt. "Dezvoltare Integrată a spaţiului rural în România", Editura. Agroprint, Timişoara, 418-427;
6. **PÎRVULESCU, LUMINIŢA, SÎRBULESCU, CLAUDIA**, 2003, Calitatea produselor agroalimentare – factor al competitivităţii. Lucr. Şt. Simp. Intern.,Integrare, specializare, dezvoltare", Univ. Babeş-Bolyai, Cluj Napoca;
7. *** http://ec.europa.eu/food/safety/rasff/reports_publications/index_en.htm