

## The Cucumber and Horsemeat crises\*

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This paper is the result of the lecture held during the IP Erasmus Programme 2014. It tries to identify some clues on two of the most recent events that affected food trade: the so called Cucumber Crisis, happened in 2011, and the Horsemeat Scandal, that took place at the beginning of 2013. Why are these two events so significant to have a paper dedicated?

There are mainly four reasons underlying the choice to deal with such topic.

First, they are recent occurrences that allow us to understand what a food safety crisis can be, and which happenings cannot instead be classified as "crises".

Secondly, we will understand how the EU Commission might manage a food crisis and the consequences that such management can produce over EU and non EU economy.

Thirdly, we will get perception of the effects that the definition of "unsafe food" given by Regulation (EC) No. 178/2002 may originate.

Fourthly, we will draw some considerations about consumers' reply to crises (or to events that are presented as crises).

The paper will first focuses on the Cucumber or E. Coli Crisis. After a short outline of the events, we will go through the EFSA reports and the Commission Decisions, adopted having regard to Article 53<sup>1</sup> of the Regulation (EC) No. 178/2002. We will then consider the Horsemeat Scandal (also known as Horsegate). After pinpointing the main steps of the occurrence, we will underline the characteristics that exclude this event from the category of food safety crises.

A third phase will be dedicated to the comparison between the Cucumber Crisis and the Horse Meat Scandal, to end up with some conclusions that will take into account the consumers' perception of the two events.

### 1.- The E. Coli crisis

Though known as "Cucumber crisis", the 2011 E. Coli outbreak was actually divided into several phases during which different "vegetables" were pointed out as being the cause of the event (tomatoes, peppers, cucumbers, soy sprouts, and fenugreek sprouts).

#### 1.1.- An overview of the events

On May 21<sup>st</sup>, Germany reported an ongoing outbreak of Shiga-toxin producing *Escherichia coli*, notifying it to the

European Centre for Disease Prevention and Control, on the following day. Only five days later, Germany sent its notification also through the RASFF.

On May 26<sup>th</sup>, the Health Senator from the State-City of Hamburg alleged that cucumbers imported from Spain were found positive to the E. Coli bacterium.

On June 8<sup>th</sup>, the European Food Safety Authority, hereinafter EFSA, with the ECDC cooperation, issued its "*Urgent advice on the public health risk of Shiga-toxin producing Escherichia coli in fresh vegetables*"<sup>2</sup>. As specified by the report itself, the aim was to provide a fast-track assessment of the exposure of the consumer to STEC through consumption of raw vegetables, and to suggest possible mitigation options. The lack of reliable data did result in a scientific report of existing literature and of the "state of the art", without providing useful information for a harmonized management of the crisis (but this was not actually the purpose).

On June 24<sup>th</sup>, also France reported a cluster of patients referring the same symptoms as the German patients. What was singular in the case and gave the possibility to link the two outbreaks, was the fact that the most part of French people fallen ill, had participated to the same event in the Commune of Bègles near Bordeaux, on the 8<sup>th</sup> of June. At least six of them had eaten some sprouts. This was the starting point for the subsequent investigation, that revealed that the organizer of the event had produced sprouts of fenugreek, rocket and mustard, served during the dinner. The seeds used for sprouting had been bought at an approved garden centre, and supplied by a UK based company.

At this point, the Commission requested EFSA to carry on a tracing back and tracing forward exercise with a twofold aim: on one side, identifying the source of the two outbreaks and pinpointing the best measures for potential future outbreaks; on the other side, understanding if the French and the German outbreaks were linked and in the affirmative, how.

The EFSA report *Tracing seeds, in particular fenugreek (Trigonella foenum-graecum) seeds, in relation to the Shiga toxin-producing E. coli (STEC) O104:H4 2011 Outbreaks in Germany and France*<sup>3</sup> was issued on July 5<sup>th</sup>.

#### 1.2.- EFSA Report of 5<sup>th</sup> July

We might look at the EFSA Report of July 5<sup>th</sup> as the first of the main steps within the events connected to the 2011 outbreaks. We have already said about the reasons that led to the investigation. The report simply documents all the steps taken by EFSA and the task force established to face the outbreak, during the tracing back and tracing forward exercises. When referring to a trace back investigation, we mean that method used to determine and document the "previous life of the products", going back through its distribution, pro-

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(<sup>1</sup>) F. Albisinni, *Commento all'articolo 53*, in "La sicurezza alimentare nell'Unione europea (commento articolo per articolo al Regolamento (CE) n. 178/2002)", a cura di IDAIC, in *Le nuove leggi civili comm.*, 2003, pp. 439 ss..

(<sup>2</sup>) <http://www.efsa.europa.eu/it/search/doc/2274.pdf> [last access April 3<sup>rd</sup>, 2014].

(<sup>3</sup>) <http://www.efsa.europa.eu/it/search/doc/176e.pdf> [last access April 3<sup>rd</sup>, 2014].

duction chain and origin. For what concerns the tracing forward investigation, it shifts on the opposite direction, moving from the distribution of the food, to the consumer.

The main outcomes of the analysis are perfectly summarized in the following paragraphs of the Report.

*“The comparison of the back tracing information from the French and German outbreaks leads to the conclusion that lot # 48088 of fenugreek seeds imported by the Importer, from Egypt, is the most likely common link, although it cannot be excluded that other lots may be implicated.*

*Given the possible severe health impact of exposure to a small quantity of contaminated material, and, in the absence of information regarding the source and means of contamination and possible cross contamination, it seems appropriate to consider all lots of fenugreek from the identified exporter as suspect. In this regard, the thus far negative test results from the microbiological tests carried out on seeds cannot be interpreted as proof that a batch is not contaminated with STEC O104:H4 since these results depend on and may be limited by both the analytical and diagnostic performance characteristics as well as by the nature of the sampling plan”.*

The Report does not have a clear cutting conclusion: it does not state that fenugreek seeds had certainly been the source of the outbreak, but it instead provides a soft assertion of likelihood, without excluding the implication of other lots. Moreover, it explicitly acknowledges the lack of information of the source and means of contamination and possible contamination. In addition, we should remember that also the time when the contamination happened is unknown.

### 1.3.- The EU Commission Implementing Decision 2011/402/EU

Based on the mentioned report, though quite vague, on July 6<sup>th</sup>, the EU Commission adopted the Decision 2011/402/EU on emergency measures applicable to fenugreek seeds and certain seeds and beans imported from Egypt<sup>4</sup>.

Article 1 of the Decision allows Member States to adopt all the necessary measures to ensure the withdrawal and destruction (after sampling) from the market of all the lots of fenugreek seeds, imported from Egypt during the period 2009-2011 and mentioned in the notifications of the RASFF. In addition, Article 2 prohibited the release for free circulation in the EU of seeds and beans from Egypt, for a period of three months. This last measure was adopted, as specified by the sixth whereas, “on the basis of the precautionary principle” (Article 7 of Regulation (EC) No. 178/2002) and on the consideration that even a “small quantity of contaminated material” could cause severe effects on human health, and taken into account the lack of information on the

exact origin and the means of the contamination, as well as possible cross-contamination.

Article 3 added the provision for a regular reassessment of those measures, on the basis of the guarantees offered by Egypt.

What is strange, singular or noteworthy on this Decision is that, despite the source and way of contamination was uncertain, the Commission decided to withdraw and automatically destroy all involved lots. Is this measure proportional? Adequate? Does it make sense?

And does it make sense to prohibit imports, if we consider that the involved lots had left Egypt in 2009?

For what concerns the withdrawal of the lots the number of which was listed in the notification, the answer will be affirmative. Some doubts could instead arise from the provision on the ban of the import of all other seeds: the lot had left Egypt two years before the outbreak. Since then, tonnes of seeds had been imported and no event linked to food safety had ever happened. Though the effects on human health caused by the contamination could be serious, there was no reason to extend the ban to all Egyptian seeds, wherever they came from and whatever type they belonged to.

Was it just a measure to show that the EU Institutions were present, to regain consumers’ confidence? Was it an indirect way to require Egypt to improve its safety standards and controls?<sup>5</sup>

### 1.4.- Following acts

After the EU Commission Implementing Decision, a new EFSA Study was published. In particular, on October 03<sup>rd</sup> the Authority issued the Report “*Shiga toxin-producing E. coli (STEC) O104:H4 2011 outbreaks in Europe: Taking Stock*”<sup>6</sup>. In this document, EFSA retraced the sequence of events, “*summarising the strain characteristics, epidemiological investigations, and analytical methods for foods linked to this outbreak*”. It drew also some conclusions, laying down some methods for the prevention of further exposure to contamination and the prevention of the seed contamination. The Report did not add to what the Authority had already explained in its previous documents.

Let’s now give a look to the impact that the E.Coli 2011 happening had on the EU normative scene. After the Implementing Decision of the Commission, several more acts were adopted to amend its annex (list of seeds the trade of which was banned) and to extend the period in which the measures had to be applied (6 months+6 months).

But this wasn’t the only regulatory effect of the crisis. As soon as Germany issued the press release saying that

(4) Commission Implementing Decision 2011/402/EU of 6 July 2011 on emergency measures applicable to fenugreek seeds and certain seeds and beans imported from Egypt (notified under document C(2011) 5000).

(5) See also V. Paganizza, *Dai cetrioli spagnoli ai semi di fieno greco egiziani: crisi risolta?*, in q. Riv., [www.rivistadirittoalimentare.it](http://www.rivistadirittoalimentare.it), n. 3-2011, pp. 31-41.

(6) <http://www.efsa.europa.eu/it/efsajournal/pub/2390.htm> [April 3<sup>rd</sup>, 2014].

some raw vegetables from Spain appeared to be contaminated by the E. Coli, sales and consumption of fruit and vegetables immediately dropped down, causing a deflation of prices and the impossibility to place new products on the market. That was obviously caused by a sudden loss of confidence by consumers in the safety of vegetables. In order to face such an exposure for the market of fresh vegetables, the Commission adopted Regulation (EU) No 585/2011<sup>7</sup>, laying down some exceptional supporting measures for the fruit and vegetable sector.

As the fifth “whereas” of the Regulation stated, since the very specific nature of the fruit and vegetables sector, besides the crisis management, the market support measures seemed to be the most appropriate tool to sustain producers.

What were these measures about? The EU Commission granted economic support to farmers for non-harvesting or withdrawing from the market fruits and vegetables, in order to re-establish an average sale price. This is another aspect of the crisis, actually linked to what had been defined as an “excess in risk communication”. But can we really say that Germany exceeded in its press release? We will try to answer this question later on.

All those people thinking that the E. Coli crisis and its regulatory effects ended in 2011 were wrong. The consequences of the outbreaks developed also in the following years. In 2013, the EU Commission adopted four regulations (nn. 208, 209, 210, 211 of 2013) laying down provisions for the seeds sector and explicitly deriving from the E. Coli occurrence of 2011. What do they establish?

Regulation (EU) No 208/2013<sup>8</sup> sets some traceability requirements for sprouts and seeds intended for the production of sprouts. The sixth “whereas” is meaningful as for purpose and content: *“In order to ensure the traceability pursuant to Article 18 of Regulation (EC) No 178/2002, the names and addresses of both the food business operator supplying the sprouts or seeds intended for the production of sprouts and the food business operator to whom such seeds or sprouts were supplied should always be available. The requirement relies on the ‘one-step back’- ‘one-step forward’ approach which implies that food business operators have in place a system enabling them to identify their immediate supplier(s) and their immediate customer(s), except when they are final consumers”*.

Regulation (EU) No. 209/2013<sup>9</sup>, amending Regulation (EC) No. 2073/2005 as regards microbiological criteria for

sprouts and the sampling rules for poultry carcasses and fresh poultry meat, lays down some sampling rules for sprouts (and defines them as ready-to-eat food).

Regulation (EU) No 210/2013<sup>10</sup> on the approval of establishments producing sprouts pursuant to Regulation (EC) No 852/2004 of the European Parliament and of the Council, establishes that food business operators shall ensure that establishments producing sprouts are approved by the competent authority in accordance with Article 6 of Regulation (EC) No 852/2004.

Finally, Regulation (EU) No 211/2013<sup>11</sup> on certification requirements for imports into the Union of sprouts and seeds intended for the production of sprouts. From its eighth “whereas”, we can infer the core object: *“Currently Union legislation does not provide for certificates for the import into the Union of sprouts and of seeds intended for the production of sprouts. It is therefore appropriate to set out in this Regulation a model certificate for the import of such commodities into the Union”*.

What seemed a strange plan to manage the crisis, can be even more puzzling: did really the EU need four specific regulations on seeds? Isn't it a useless, cumbersome regulatory process, bringing about more burdens than benefits?<sup>12</sup>

## 1.5.- What do we get from this crisis?

After having outlined the main facts of the crisis and the way the EU Commission managed it, we should now summarize what we can learn from the events. On one side, we should recognize that traceability works. At least, Public Authorities have identified the suspicious batches of seeds making a difficult tracing back exercise: Egypt/Exporter – German importer – UK Buyer and German Distribution – French seller and German seller – French event and German Restaurants/canteens where the seeds had been served.

On the other side, there are several elements that can be considered as negative aspects, emerged from the crisis: **a)** Consequences of a risk communication that has not been properly understood: as we have underlined just shortly before, after the German press release of May 2011, consumers started losing confidence on food safety. They thus ceased buying fresh vegetables, especially if coming from Spain (the Country from where the first contaminated cucumbers originated). The EU Commission had therefore to adopt specific measures to sustain producers.

(<sup>7</sup>) Commission Implementing Regulation (EU) No. 585/2011 of 17 June 2011 laying down temporary exceptional support measures for the fruit and vegetable sector.

(<sup>8</sup>) Commission Implementing Regulation (EU) No 208/2013 of 11 March 2013 on traceability requirements for sprouts and seeds intended for the production of sprouts.

(<sup>9</sup>) Commission Regulation (EU) No 209/2013 of 11 March 2013 amending Regulation (EC) No 2073/2005 as regards microbiological criteria for sprouts and the sampling rules for poultry carcasses and fresh poultry meat.

(<sup>10</sup>) Commission Regulation (EU) No 210/2013 of 11 March 2013 on the approval of establishments producing sprouts pursuant to Regulation (EC) No 852/2004 of the European Parliament and of the Council.

(<sup>11</sup>) Commission Regulation (EU) No 211/2013 of 11 March 2013 on certification requirements for imports into the Union of sprouts and seeds intended for the production of sprouts.

(<sup>12</sup>) See also V. Paganizza, *Les quatre mousquetaires (ou mousquetons) contre E.Coli: i regolamenti (UE) 208/2013, 209/2013, 210/2013, 211/2013 e gli « eccessi » nella sicurezza*, in q. Riv., [www.rivistadirittoalimentare.it](http://www.rivistadirittoalimentare.it), n.2-2013, pp. 36-44.

b) Risk management acting overly broadly. The EU Commission, in the effort to re-establish consumers' confidence on food safety and on Public Authorities, managed the risk in an excessive way. There was no need to ban import of seeds coming from Egypt, for several reasons. Let's presume that fenugreek seeds were contaminated (but we do not know it):

1. there was no certainty on the time and means of contamination of seeds (and so fenugreek could have been contaminated in the trip to Europe or somewhere in Germany);
2. it does make no sense to ban the import of all seeds from Egypt, if the identified batch left the Country on 2009.

c) The measures adopted by the Commission, had been influenced by public opinion: as it happened after the BSE crisis, the feeling was that no one could really identify the source of the contamination and an effective way to reduce exposure. To restore consumers' confidence, the best solution seemed to be a new intervention through acts laying down new duties for operators.

## II.- The horse gate

The Horsegate, or Horsemeat Scandal, is an event that took place at the beginning of 2013. Though it did not have the features to be classified as "crisis", the way in which it was presented and the impact on consumers' confidence were similar to those of a true crisis.

### II.1.- Timeline

To understand what exactly happened during the so called Horsegate, it could be useful following an ideal timeline, as we did for the E. Coli crisis.

As reported in the EU website<sup>13</sup>, the problem was first noticed by Irish food inspectors who had found horsemeat in frozen beef burgers, in mid-January 2013.

As we can learn from the RASFF portal, on February 05<sup>th</sup>, 2013, the presence on an unauthorised substance (phenylbutazone) was detected in chilled horsemeat from the United Kingdom and notified as an alert within the system. Three days after, a new notification was issued, concerning the presence of unlabelled horse meat (DNA >60 %) in frozen beef lasagna, from France and Italy, processed in Luxembourg, with raw material from Romania, via the Netherlands. It is worth noting that this notification, qualified as "information for follow up" derived from the company's own check.

The high number of States involved in the distribution of these products, urged the EU Commission to appeal to all Member States to conduct DNA tests on all beef products (13<sup>th</sup> February 2013). No need to say that many other cases of adulteration were detected.

On February 19<sup>th</sup> 2013, the Commission issued a "Recommendation on a coordinated control plan with a view to establish the prevalence of fraudulent practices in the marketing of certain foods"<sup>14</sup>, as well as the EFTA Surveillance Authority did, through its Recommendation No 93/13/COL of February 21<sup>st</sup> 2013. The EU act implemented a coordinated control plan for a period of one month, consisting of two actions: on one hand, appropriate controls had to be carried out to determine the presence of undeclared horse meat in food products; on the other hand, controls had to be done in order to detect residues of phenylbutazone in meat destined for human consumption. If the second action showed no widespread non-compliance, the first one detected several cases of non conformity. Consequently, the EU Commission adopted the Recommendation 2014/180/EU of 27 March 2014, on a second coordinated control plan with a view to establish the prevalence of fraudulent practices in the marketing of certain foods<sup>15</sup>, focusing only on the labelling of meat products.

### II.2.- What do we get from this case?

The first reflection is about the possibility to consider the Horsegate as a crisis or not. To answer this doubt, we should first understand what a crisis is, taking into consideration that the GFL does not provide a definition. Anyway, Article 56, on the Crisis Unit, gives us the meaning: the Commission shall start the Crisis procedure when it "identifies a situation involving a serious direct or indirect risk to human health deriving from food and feed, and the risk cannot be prevented, eliminated or reduced by existing provisions or cannot adequately be managed solely by way of the application of Articles 53 and 54".

So, to qualify an occurrence as "crisis", there should be a positive and a negative condition: the positive one is the presence of a serious risk for human health, deriving from food or feed; the negative condition is the impossibility to manage it through the sole adoption of emergency measures (Article 53 and 54 GFL).

What about the Horsemeat scandal? It was just a matter of undeclared meat, that is to say, a matter regarding labelling requirements, without any elements to raise safety concern. For this reason, the event cannot be considered a food crisis. This is certainly one of the explanations to the lack of adoption of binding acts by the EU. Controls had notwithstanding to be carried out: several thousand tonnes of food were withdrawn from the market to be re-labelled.

But – we could question - why a RASFF notification was sent, if there was no risk for human health? Actually, the system, born to exchange information on food safety concerns, is nowadays used to transmit details related to any incompliance with general requirements affecting food and consumers (adulteration/fraud, labelling absent/incom-

<sup>(13)</sup> See [http://ec.europa.eu/food/food/horsemeat/index\\_en.htm](http://ec.europa.eu/food/food/horsemeat/index_en.htm).

<sup>(14)</sup> Commission Recommendation 2013/99/EU of 19 February 2013 on a coordinated control plan with a view to establish the prevalence of fraudulent practices in the marketing of certain foods.

<sup>(15)</sup> Commission Recommendation 2014/180/EU of 27 March 2014 on a second coordinated control plan with a view to establish the prevalence of fraudulent practices in the marketing of certain foods.

plete/incorrect, organoleptic aspects<sup>16</sup>).

After having thus verified that the Horsegate was not a food crisis, since no risk for human health was involved<sup>17</sup>, we should now sum up what we have learnt from the event.

On one side, we could confirm that traceability works: once identified, all lots were withdrawn from the market and relabelled.

On the other side, we should acknowledge that the system of controls is not as efficient as traceability, and much has still to be done in this sense.

Despite the lack of food safety concerns, the outcry raised among consumers had the same effects of a crisis: their confidence fell, resulting in the drop of sales of prepackaged products containing meat. Yet again, incorrect information conveyed by media had disturbing consequences on the market. What is more, when reading the EU Parliament questions to the Commission, we can perceive confusion about the purpose of traceability (that is directed to operators) and the purpose of food labelling requirements (intended for consumers) and also about food safety and misleading practices. Any perspective or suggestion of improving consumers' ability to discern safety issues (and related actions) from other food related problems should premise the EU Institutions capacity to do that.

### III.- E. Coli Crisis and the Horsemeat Scandal: a comparison

After having focused first on the E. Coli Crisis and then on the Horsemeat Scandal, we could now try to understand whether there are some common elements or not.

For what concerns the qualification of the occurrence, we have broadly said that while the first one was a true food crisis, involving a serious risk for human health, the second one was only a matter of misleading practices, related to incorrect labelling (no risk for health being involved).

The different nature of the two occurrences has an obvious consequence: the type of notification used was different. While the E. Coli started with an alert notification (due to the serious risk for human health), the Horsemeat Scandal was characterized just by information notification.

Though the events had two diverse outlines, the consequences for operators were similar: they suffered damages both from withdrawal of products (we know that this sort of action is charged to them) and from the consumers' reaction (sales dropped in both circumstances). The Horsemeat scandal, anyway, had a lower impact, as for the measures adopted after the withdrawal. While in the E.Coli case seeds and sprouts had been destroyed, all meat products involved in the Horsegate were just relabelled.

Also the way in which the two events were managed were different: while during the first one the Commission exceeded in zeal, all through the emergency, but also in the following years (let's think to the Regulations adopted in 2013), in the most recent occurrence the Commission recommended (without any binding acts) an intensification of controls.

### IV.- Conclusions

Which conclusions can thus be drawn from the aforesaid comparison?

First, though the consumers' perception was that of a crisis for both the events, actually only the E. Coli outbreak was qualified and managed like a crisis, due to the serious risk for human health. Unlikely, the Horsegate was just a matter of misleading practices and insufficient controls.

The analyzed occurrences gave us the opportunity to evaluate how the EU Commission can manage two different events and to appreciate the functioning of traceability along the food chain.

We have emphasized some points that can still be improved, such as the excess in risk communication or in zeal to adopt safety measures and the fact that, despite many provisions and controls, some frauds can be put in place.

In this regard, it has been stressed by some consumer associations the need of a country-of-origin labelling, to overcome such deceptive practices. This solution cannot be shared: what was actually relevant in the Horsegate was not the origin of the meat (or, at least, it was not directly that), but the fact that some products contained undeclared horsemeat. When the ingredient is not listed, it does not matter if there is a provision about its origin. It could be argued that the country-of-origin labelling should be the response to the problem of food safety, rather than to misleading practices, but we have already concluded for the absence of any risk for human health.

It is thus a matter of controls, repeated checks all over the food chain: a burden for all the operators determined by the incompliance and fraudulent behaviours of few of them.

### ABSTRACT

*In the very last few years, several events affected food trade. Among them, the so called Cucumber Crisis, happened in 2011, and the Horsemeat Scandal, that took place at the beginning of 2013.*

*The paper focuses on the two occurrences, drawing a comparison between them and trying to find out common and differentiating elements. In this perspective, specific attention will be paid to understand what a food safety crisis is, and which happenings cannot instead be classified as "crises". The investigation will then move towards the understanding of how the EU Commission might run a food crisis and the consequences that such management can produce over EU and non-EU economy. Emphasis will thus be given to the perception of the effects that the definition of "unsafe food" given by Regulation (EC) No. 178/2002 may originate. The paper will end with some considerations about consumers' reply to crises (or to events that are presented as crises).*

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<sup>(16)</sup> See the "Category" of "Hazard" in the RASFF Form, [Form&cleanSearch=1](http://www.rasff.europa.eu/rasff-window/portal/?event=SearchForm&cleanSearch=1) [April 1<sup>st</sup>, 2014].

<sup>(17)</sup> Notifications about residues of phenylbutazone were only four.