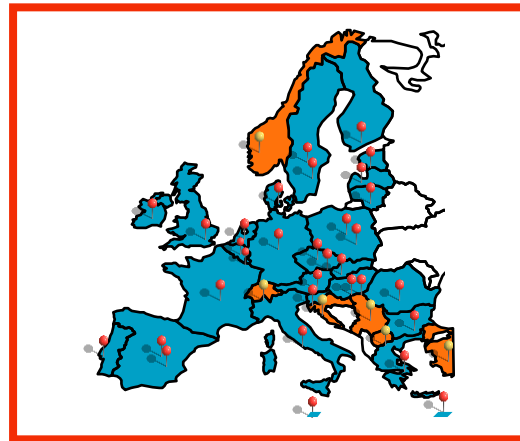


Detection methods for VTEC and other pathogenic *E. coli*: the state of play



Detection of VTEC in food (conclusions from the last Workshop)

- ✓ ISO/TS 13136 has been published
- ✓ A similar diagnostic approach is used in EU and USA
- ✓ First specific regulations issued in EU and USA
- ✓ Surveys conducted by the NRLs on meat and milk
- ✓ The prevalence of VTEC in these products is not very high

**How to manage a positive PCR screening
test NOT supported by VTEC isolation ???**

Controls enforced by July the 1st

12.3.2013

EN

Official Journal of the European Union

L 68/19

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

(Text with EEA relevance)

(c) the following row 1.29 and the corresponding footnotes 22 and 23 are added:

'1.29 Sprouts ⁽²³⁾	Shiga toxin producing <i>E. coli</i> (STEC) O157, O26, O111, O103, O145 and O104:H4	5	0	Absence in 25 grams	CEN/ISO TS 13136 ⁽²²⁾	Products placed on the market during their shelf-life
-------------------------------	---	---	---	---------------------	----------------------------------	---

⁽²²⁾ Taking into account the most recent adaptation by the European Union reference laboratory for *Escherichia coli*, including Verotoxigenic *E. coli* (VTEC), for the detection of STEC O104:H4.

⁽²³⁾ Excluding sprouts that have received a treatment effective to eliminate *Salmonella* spp. and STEC';

Open issues after 7 months from the release of the “sprouts package”

- ✓ We don't have information on the number of tests done and the results
- ✓ How to test spent irrigation water?
- ✓ Accreditation of the ISO TS 13136:2012 is still pending in most EU labs
- ✓ Tests done on other food commodities not covered by regulations
- ✓ Non-homogeneous reactions by MS to positivity of batches

Irrigation water

- ✓ Spent irrigation water is generally too dense to be filtered
- ✓ Filter aid may help? (Some NRL reported their use)
- ✓ Convenience to start a dedicated study in 2014

Accreditation of the ISO TS 13136:2012

- ✓ A questionnaire was sent to the NRLs on April 30 (Deadline May 7)
- ✓ 23 out of 34 NRLs replied from 21 MS (70% coverage, 80% at EU level)

ISO/TS 13136:2012 in the network of the EU MS NRLs (1):

- ✓ **None** of the NRLs has accredited the ISO TS 13136:2012 yet
- ✓ **1** NRL has accredited the CEN ISO PRF 13136:2011 (the draft version of the norm before the last re-arrangement)
- ✓ **4** NRLs planned to get the accreditation for the ISO TS 13136:2012 within **2013**
- ✓ **7** NRLs planned to get the accreditation for the ISO TS 13136:2012 within **2014**
- ✓ **7** NRLs planned to get the accreditation for the ISO TS 13136:2012 within **2015**

ISO/TS 13136:2012 in the network of the EU MS NRLs (2):

- ✓ **1** NRLs planned to get the accreditation for the ISO TS 13136:2012 within **2016**
- ✓ **1** NRLs planned to get the accreditation for the ISO TS 13136:2012 **ASAP**
- ✓ **2** NRLs **do not plan** to get the accreditation for the ISO TS 13136:2012
 - ✓ *(1 is the 2nd NRL in its MS and it is not involved in food testing.*
 - ✓ *The other one is the NRL that has already accredited the CEN ISO PRF 13136:2011).*

Internal methods for STEC detection in the network of EU MS NRLs (1):

- ✓ **1** NRLs have accredited internal methods with the same scope and field of application of the ISO/TS 13136:2012, using the same reagents and protocol.
- ✓ **2** NRLs have accredited internal methods with the same scope and field of application of the ISO/TS 13136:2012, but with different reagents/approaches.

Internal methods for STEC detection in the network of EU MS NRLs (2):

- ✓ **1** NRL ha accredited an internal method comprising the PCR screening for the *stx+eae+top five O groups* genes only, without isolation.
- ✓ **1** NRL ha accredited an internal method comprising the PCR screening for the *stx* genes only, without isolation.

OLs (in addition to the NRL) in the EU MS that can perform STEC testing with accredited methods

- ✓ **2** MS have **1** OL that have accredited internal methods with the same scope and field of application of the ISO/TS 13136:2012, but likely with different reagents/approaches.
- ✓ **1** MS has **>3** OLs that have accredited internal methods with the same scope and field of application of the ISO/TS 13136:2012, using the same reagents and protocol.
- ✓ **1** MS have **25** OLs that have accredited internal methods with the same scope and field of application of the ISO/TS 13136:2012, but with different reagents/approaches.

Food commodities not covered by EU regulations

RASFF 2012 Annual report

Figure 1 – 2012 RASFF notifications by classification

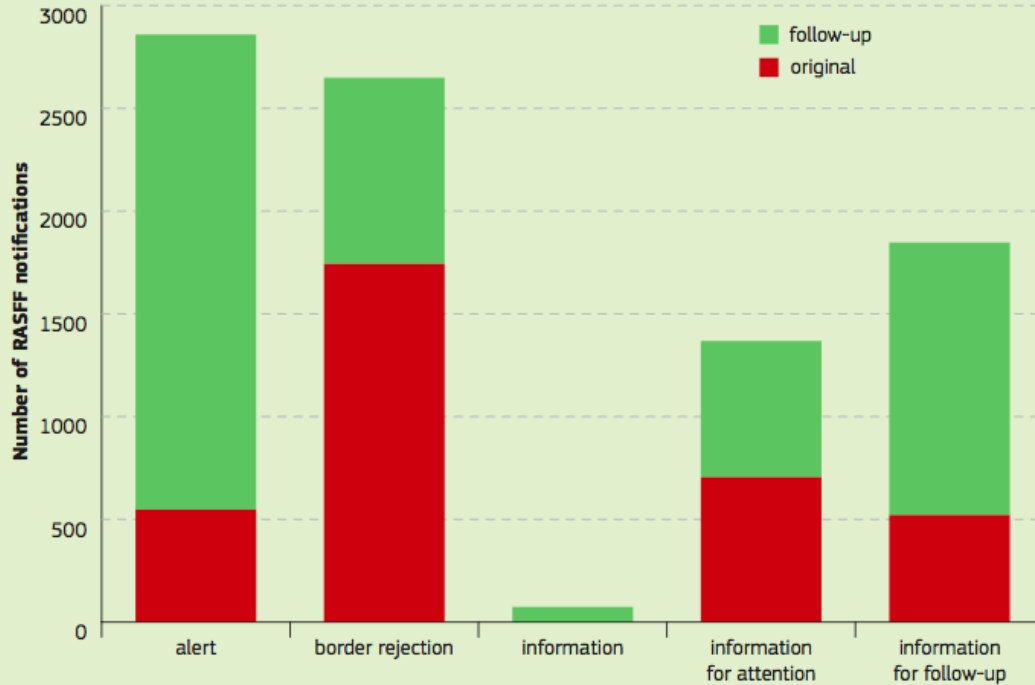
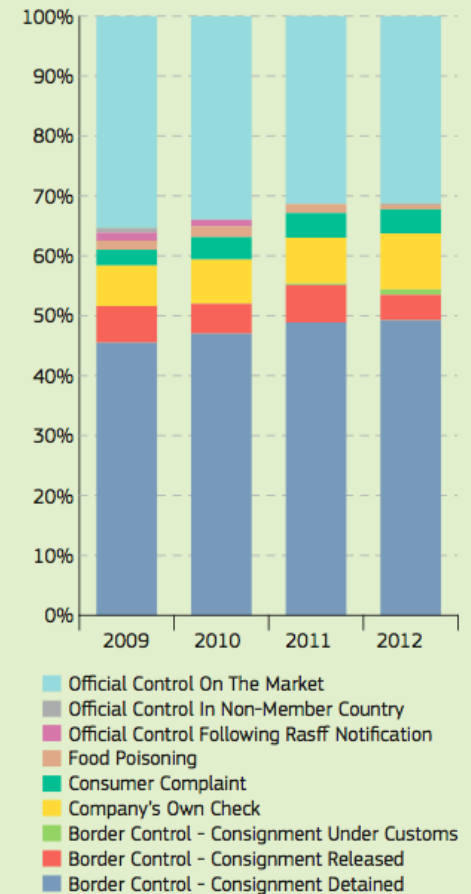


Figure 2 – 2012 RASFF notifications by notification basis



Food commodities not covered by EU regulations

			for attention		in chilled tuna loins from Sri Lanka		
23	28-Jun-12	2012.0894	alert	Belgium	suspicion of shigatoxin-producing <i>Escherichia coli</i> (O157:H7) in spicy minced meat from Belgium	1**	Belgium, Germany and Netherlands
24	3-Jul-12	2012.0913	alert	France	foodborne outbreak (histamine poisoning)	large	France

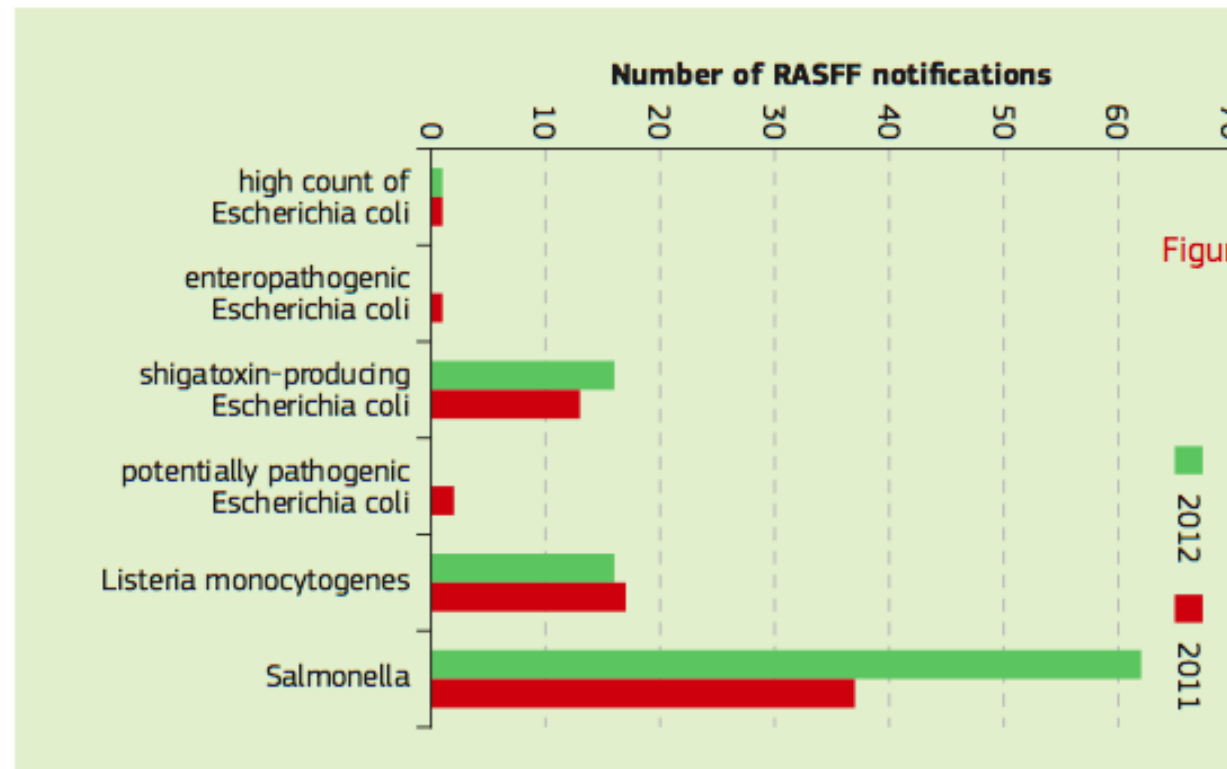


Figure 7 – Pathogens in meat and meat products other than poultry

Perspectives from different angles (1)

- ✓ **Uncertainty on the VTEC types to be considered hazards: top 6 ?, strains with adhesion factors ?any VTEC ?..... (EFSA opinion 2013)**
- ✓ **Two stages methodology (screening + isolation): How to manage a positive PCR screening test NOT supported by VTEC isolation ???**

Perspectives from different angles (2)

- ✓ Prevalence of VTEC contamination in the different commodities
- ✓ Size of the food market
- ✓ Severity of the disease presumably caused by the “different types” of VTEC (HUS vs diarrhea)
- ✓

A fair approach: Public consultation ?

- ✓ A thorough discussion involving all the stakeholders is required!
 - ✓ Food industry
 - ✓ Policy makers
 - ✓ Consumers associations
 - ✓ Laboratories

Let's talk about it...