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**CODEX COMMITTEE ON FOOD HYGIENE  
(Fifty second Session)  
Virtual, 28 February and 1, 2, 3, 4, 9 March 2022**

**European Union Comments on**

**Agenda item 7:**

**Proposed draft Guidelines for the control of Shiga toxin-producing  
Escherichia Coli (STEC) in raw beef, fresh leafy greens, raw milk and raw  
milk cheeses, and sprouts (CX/FH 22/52/7)**

**(Reply to CL 2021/63/OCS-FH)**

***Mixed Competence  
European Union Vote***

In response to the request for comments, the European Union and its Member States (EUMS) would like to make the following comments.

**I. General Comment**

The EUMS would like to thank and congratulate the chairs for this new version and the efforts made to address comments made or to provide a clear justification when certain comments have not been addressed.

The EUMS consider that further improvement is possible and the Annex on STEC in sprouts has not been developed. It is therefore proposed to maintain the draft at step 3.

**II. Comments on the general part**

**Par 2, Introduction, sixth sentence:** the EUMS propose to replace the sentence “*These genes, in addition to genes encoding Stx, are considered predictors of pathogenicity of strains*” by “*The presence of these genes is an aggravating factor for the prediction of pathogenicity, already caused by the presence of Stx genes in their own.*” Stx genes are the predictors of pathogenicity while the presence of the eae and aggR genes are aggravating factors, not predictors of pathogenicity (See 2020 EFSA Opinion)

**Par 13: Use:** It seems relevant to refer also to the *Principles and Guidelines for the Conduct of Microbiological Risk Management (MRM)* (CXG 63-2007) as referred to several times in the text. It can be questioned if a reference to the Code of Practice on Good Animal Feeding (CXC 54-2004) is very relevant since feed is not considered as a source of STEC and paragraphs dealing with feed (e.g. 13 to 16 in Annex I) are not examples of good feeding practices.

**Par 19: Definition of fresh leafy greens:** the EUMS prefer the second option: “Vegetables of a leafy nature that may be consumed without cooking, ...”

**Par. 20: Definition of indicator microorganism:** the EUMS prefer the second option: “-microorganisms used as a sign of quality or hygienic status in food, water, or the environment, often used to signify the potential presence of pathogens, a lapse in sanitation or a process failure. Common indicator microorganisms include total bacterial counts, coliform or faecal coliform counts, total *E. coli* counts and counts of Enterobacteriaceae.”

**Par. 21: Definition of raw beef:** It should be clarified if meat preparations (meat tenderized with injection of brine, etc.) are included in the scope/definition. It is included in the scope (Annex I, 2) but is not mentioned in the definition.

**Par. 30 to 33: Development of risk-based control measures:** These paragraphs do not contain any specific information related to the control of STEC. The EUMS therefore proposes to delete or replace by a cross-reference to the *Principles and Guidelines for the conduct of Microbiological Risk Management (MRM)* (CXG 63-2007).

**Par. 43 Industry responsibility:** The EUMS would prefer to delete the word “primary”, as FBO have the responsibility of marketing safe food.

**Par. 45 Regulatory systems:** The EUMS prefer the word “could”.

**Par. 48 Industry testing:** Testing by the industry is not only quite inefficient due to the cost of testing but also to the low prevalence, making it necessary to take a lot of samples to verify the presence of STEC. The EUMS therefore propose the following addition at the end of the first sentence: “ ... due to the high cost of testing for detection of STEC **and its low prevalence in food.**”

**Par. 61 Monitoring:** The paragraph seems to be purely repetitive of paragraph 60. The EUMS propose to delete.

**Par. 62-68 Laboratory Analysis Criteria for Detection of STEC (general):** The EUMS highly appreciate these paragraphs, in particular the consideration of virulence genes. Such consideration is of core interest in the appropriate management of STEC in food commodities, in particular in the consideration of corrective actions. It is the main reason why analysis for virulence genes is considered necessary in these guidelines. The EUMS consider therefore that it is necessary to develop this more in a separate paragraph. The paragraph should better explain how virulence genes can be taken into account in corrective actions, considering in addition other elements such as whether food is ready to-eat (raw milk and raw dairy products!), eating/cooking habits, ...

**Par. 63 Laboratory Analysis Criteria for Detection of STEC (specific):** the EUMS propose the following change to better reflect the current scientific knowledge<sup>1</sup>: “Based on current scientific knowledge, all STEC strains are pathogenic for humans and capable of causing severe illness. However, STEC strains with stx2a and adherence genes eae or aggR have the greatest association with severe illness such as diarrhoea, bloody diarrhoea (BD), and haemolytic uremic syndrome (HUS) and hospitalisations. ~~stx2a combinations showing the highest rates of HUS, hospitalisation and BD. However, all other stx subtypes, or combinations thereof, were also associated with at least one of these severe illness outcomes. Strains of STEC with other stx subtypes may cause diarrhoea, but their association with HUS is less certain and can be highly variable.~~”

**Par. 69-71: Review:** These paragraphs do not contain any specific information related to the control of STEC. The EUMS therefore proposes to delete or replace by a cross-reference to the *Principles and Guidelines for the conduct of Microbiological Risk Management (MRM)* (CXG 63-2007).

### **III. Comments on Annex 1: Raw beef**

**General comment:** most of the practices included (apart from the ones at primary production) are not specific for the control of STEC and are also included in the *Guidelines for the Control of Nontyphoidal Salmonella spp. in Beef and Pork Meat* (CAC/GL 87-2016). It might be useful to include a cross-reference. More general, it can be questioned if it is opportune to maintain two sets of guidelines covering the same control measures.

**Par. 4 Introduction:** Since the scope also covers ground/minced beef, it might be appropriate to add at the end of the paragraph a sentence of the presence of STEC in such meat.

**Point 3 Definitions:** as the definition of raw beef is already in the introduction, this part could be deleted, as redundant.

**Par 11 Process flow diagram:** The EUMS propose to replace the the flow diagram with the one included in *Guidelines for the Control of Nontyphoidal Salmonella spp. in Beef and Pork Meat* (CAC/GL 87-2016), annex I, 6.1. (or just a cross-reference made), as it was already agreed and it is slightly different from the one included in the draft (for instance, the diagram in CAC/GL 87.2016 does not show the step “carcass washing”, see also comments on paragraph 58).

**Par 45 Weasand meat:** Since the recovery of weasand meat is not authorised for use in minced meat in all countries, the EUMS propose the following modification in the second sentence of paragraph 45: “In some countries, weasand meat may be recovered from the gastrointestinal tract for use in raw ground/minced beef production.

**Par 58 Carcass trimming:** The EUMS consider that it should be emphasized that the best practice for removing visible contamination is trimming, and that abusive washing of carcasses

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<sup>1</sup> EFSA BIOHAZ Panel, 2020. Scientific Opinion on the pathogenicity assessment of Shiga toxin-producing *Escherichia coli* (STEC) and the public health risk posed by contamination of food with STEC. EFSA Journal 2020;18(1):5967, 105 pp. <https://doi.org/10.2903/j.efsa.2020.5967>).

which can lead to splashing and spread of contamination, should be avoided. Moreover, blood and bone dust are not sources of STEC, so washing for their removal does not contribute to the control of STEC (on the contrary). Therefore, the EUMS suggest deleting the last sentence of paragraph 58.

**Par 63 Meat tenderization:** see comment on definition of “raw beef”. If these meat preparations are not included, this paragraph should be deleted.

**Par 82 Intact raw beef cuts:** The EUMS consider that it is often unpredictable whether or not “intact raw beef cuts” will not be used as “finished raw beef products” e.g. by the consumer. These wordings are in addition not defined and might be confusing. It is therefore proposed to delete this paragraph.

#### **IV. Comments on Annex 2: Fresh leafy vegetables**

**Par 6 Definitions:** definition of “fresh leafy vegetables” is already in the introductions so it does not need to be repeated here.

**Par 14 to 16 Water for primary production:** considering the development of specific “Guidelines for the safe use and re-use of water in food production”, including an Annex on fresh produce, the EUMS consider that those guidelines/recommendations should not be duplicated here. Therefore, these paragraphs should be replaced by a cross-reference to the guidelines on the use of water. Wording of the title of the guidelines and its references can be adapted later on if the STEC guidance is adopted before the water one.

**Par 21 Storage and transport from the field to the packing or processing facility:** The EUMS propose that the following sentence is added at the end of the paragraph to complete recommendations: **“When vehicle receptacles or containers have been used for the transport of products other than foodstuffs or for the transport of different foodstuffs, effective cleaning should be carried out between loads to avoid the risk of contamination”.**

**Par 26 Washing fresh leafy vegetables:** considering the development of specific “Guidelines for the safe use and re-use of water in food production”, including an Annex on fresh produce, the EUMS consider that those guidelines/recommendations should not be duplicated here. Therefore, this paragraph should be replaced by a cross-reference to the guidelines on the use of water. Wording of the title of the guidelines and its references can be adapted later on if the STEC guidance is adopted before the water one.

**Par 43 (Section 11) Retail and food service:** the EUMS prefer to keep the section.

**Figure 1 Flow diagram:** Consistently with other Annexes/guidelines, the EUMS consider the flow diagram useful and prefer to keep it.

V. **Comments on Annex 3: Raw milk and raw milk cheeses**

**Par 8, last bullets Definitions:** the EUMS propose to move the definitions of validation, monitoring and verifications to the general part as they are used in all annexes.

**Par 12-15 Scientific knowledge:** The EUMS consider that the inclusion of such section is not appropriate in these kind of guidelines. The scientific information should just be used as a basis for developing recommendations for control measures or briefly mentioned in the introduction. These paragraphs should therefore be deleted.

**Par 16-17 Control measures for STEC at the dairy farm:** The EUMS would like to have a clarification why control measures included in Annex I, 4.2 primary production, are not mentioned here (Diet ingredients, microbials, feed additives, vaccination, good management practices at primary production).

**Par 36, last sentence E coli enumeration and STEC testing:** The EUMS propose the following change, in particular because all STEC are pathogenic and can cause severe illness in particular in ready-to-eat raw milk (products). Periodic testing for virulence genes is beneficial for such food: “Periodic testing for ~~“high-risk”~~<sup>18</sup> STEC **virulence genes** may also be conducted for verification of hygienic practices (FAO/WHO, 2018).”

**Fig 1 and 2: flow diagrams:** the box “milk”, should be replaced by “raw milk”.