

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of
the United Nations



World Health
Organization

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Agenda Item 7

CX/FFP 14/33/9-Add.2

ORIGINAL LANGUAGE ONLY

JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

Thirty-third Session

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PROPOSED DRAFT CODE OF PRACTICE FOR FISH AND FISHERY PRODUCTS (SECTION ON STURGEON CAVIAR)

(At Step 3 of the Procedure)

Comments submitted by Canada and United States of America

CANADA

General Comments

Canada supports the view of removing the sections in the code relating to the production of caviar from ovulated eggs because i) currently there are no hormones internationally recognized as safe and approved within Codex/JEFCA/OIE for the production of fish eggs for human consumption ii) the alternative method for releasing factors proposed in the code involves the indirect use of hormones present to trigger hormone production in the fish and iii) there is no guidance provided in the code on the environmental means suggested to induce ovulation without the involvement of hormones. As such we suggest that all references to caviar from ovulated fish eggs (Definitions, General considerations and sections X.6 to X.9 be removed until such time as approved and effective methods become available.

Canada appreciates the work of Iran in preparing the *Proposed Draft Code Of Practice for Fish and Fishery Products – section on Sturgeon Caviar* (at step 3 of the procedure) and continues to support the advancement of this Code of Practice in the Codex Step procedure.

SPECIFIC COMMENTS

Definitions

- Revise: Fish eggs : Non-ovulated eggs separated from the connective tissue of ovaries. [~~Ovulated eggs may be used from aquacultured sturgeons.~~]
- Remove : [~~Caviar from ovulated fish eggs: The product made from ovulated fish eggs of the *Acipenseridae* family by treating with food grade salt and permitted additives~~]

Reason: The code should not include ovulated eggs until it can be demonstrated that there are approved and effective methods to induce ovulation without the direct or indirect use of hormones.

- Revise: Pasteurization: Heating the caviar to a specific temperature, for defined length of time to reduce the number of viable non-spore forming spoilage and pathogenic micro-organisms of public health concern **to a level that is not likely to present a public health risk under normal conditions of distribution and storage.**

Reason: To provide precision on the food safety goal for this step.

- **Revise: Micro-caesarean:** The ~~delivery~~ **extraction** of fish eggs by micro surgical incision through the abdominal wall and ovary.

Reason: Editorial.

General considerations

- **2nd paragraph**

Delete wording in brackets and revise: This section applies to caviar production from sturgeon fish ~~both by slaughtering [and by extracting the eggs after ovulation (without slaughtering the sturgeons; allowing multiple harvests). Ovulation can be induced by releasing factors (synthetic or natural), naturally by homogenates/lysates of carp or sturgeon pituitary gland containing these factors and/or environmental means to trigger natural hormone release from the fish brain under appropriate conditions (light/temperature).]~~

Reason: The code should not include ovulated eggs until it can be demonstrated that there are approved and effective methods to induce ovulation without the direct or indirect use of hormones.

Microbial hazards:

- **2nd paragraph, 1st sentence**

Revise: “Proteolytic and non-proteolytic *Clostridium botulinum* are spore forming microorganisms that present a microbial hazard in ~~vacuum~~ packed caviar.”

Reason: Caviar supports growth of *C. botulinum* whether or not it is packaged under vacuum because other bacterial flora use up the available oxygen by respiration resulting in anaerobic or low oxygen conditions in areas of the package (such as in the centre).

- **2nd paragraph, 2nd sentence**

Revise: “These pathogens are controlled by ~~adding~~ **a combination of** an adequate quantity of salt ~~to the fish eggs~~ (> 5% salt in the water phase or water activity <0.97; **and/or** lowering product pH (pH < 5.0) and proper cold storage (*temperature* < 5°C).”

Reason: For accuracy on the parameters to control the growth of nonproteolytic *C. botulinum*.

- **2nd paragraph, 3rd sentence**

Revise: “The **presence** growth of non-spore forming microorganisms (i.e., *Salmonella*, *Listeria*) can be **reduced/eliminated by pasteurization**. ~~controlled with pasteurization or~~ **Their growth can also be limited/prevented with the combination of microbial hurdles such as** ~~or adding appropriate quantities of~~ **the addition of** permitted additives or **salt in adequate quantities, lowering the pH,** ~~in combination with proper removal~~ **ing available oxygen** ~~of air~~ by vacuum sealing and **appropriate** cold storage ~~under appropriate temperatures (microbial hurdles).~~

Reason: (i) It is not possible to control the growth of microorganisms with pasteurization; (ii) To outline all the microbial hurdles that can be used in combination to limit/prevent the growth of microorganisms.

- **2nd paragraph, last sentence**

Revise: “ ... or cold storing steps should be controlled **and monitored to minimize microbial growth.**”

Reason: To provide further precision.

Flowchart:

- **Step 12**

Revise: Ingredient storage

Reason: Editorial.

- **Step 16**

Revise: **Measuring and blending of Fish eggs, salt and additives measurements, as applicable.**

Reason: To clarify that (i) additives may or may not be added and (ii) to align with the nomenclature of the other steps which refer to the actions taken.

- **Step 22**

Revise: Cold storage and rechecking

Reason: To clearly describe the step in accordance to the technical guidance provided in the Code for this step.

Technical Guidance

- **X.4 Belly cutting and ovary removal, 3rd bullet**

Revise: **Cleaning** Hand washing and disinfection agents **used for hand washing and on equipment** should not affect the flavour and odour of the eggs.

Reason: To clarify that this applies broadly to any cleaning and disinfection agent used.

- ~~X.6 Remove brackets:~~

~~[X.6 Laying induction~~

~~**Potential hazards:** Chemical contamination (Residues of veterinary drug)~~

~~**Potential defects:** Deterioration of Quality~~

~~**Technical guidance:**~~

~~• If hormones are used to induce ovulation (or to assist in the release of eggs), the hormones should have undergone regulatory assessment and be approved for use by the competent authority and the dosage and treatment time should be applied in accordance with fish size and manufacturer's instructions.~~

~~• Eggs should only be harvested after the appropriate withdrawal period, following the injection of the hormone has been completed.]~~

Reason: The code should not include ovulated eggs until it can be demonstrated that there are approved and effective methods to induce ovulation without the direct or indirect use of hormones.

X.16 Fish eggs, salt and additives measurements and blending

Revise Title: **Measuring and blending of fish eggs, salt and additives, as applicable**

Reason: (i) To clarify that the use of additives is optional and (ii) to align with the nomenclature of the other steps which refer to the actions taken.

- 4th bullet

Revise: To prevent growth of non-proteolytic *Clostridium botulinum*, there should be 3-5% salt in the final product (the quantity of salt added should result in at least 5% water phase of salt or a water activity of < 0.97).

Reason: The percentage of salt to achieve the desired microbial hurdle must be validated so it is important to outline the objective rather than a range that may or may not result in the desired effect.

- 6th bullet

Revise: **The ambient temperature and humidity as well as the duration of exposure to the ambient temperature** and moisture of the work space should be controlled **and monitored** so that it does not affect the homogeneous distribution of ingredients and additives and to prevent microbial growth.

Reason: To clarify that it is the time-temperature combination of the environment that needs to be controlled and monitored as well as its humidity. Additives are considered ingredients.

- **X.18 Caviar packing (vacuum sealing and primary coding), 7th bullet**

Revise: ...The cans/jars should be weighed prior to sealing to ensure the quantity of caviar added meets the weight for which the pasteurization setting are established and the weight declared on the label.

Reason: Pasteurization is not applied to all productions so the guidance belongs under section X.19 Pasteurizing.

- **X.19 Pasteurizing**

New bullet:

The weight of the cans/jars should be verified to ensure that the quantity of caviar, for the pasteurization setting established, is met.

Reason: In order to achieve the food safety objective, it is crucial, at this step, to ensure that the appropriate quantity of caviar is packed.

New bullet:

The caviar should be heated to a specific temperature, for defined length of time, to reduce the number of viable non-spore forming spoilage and pathogenic micro-organisms of public health concern to a level that is not likely to present a public health risk under normal conditions of distribution and storage.

Reason: To provide technical guidance on the food safety objective.

X.22 Cold storage and rechecking

- Title

Revise: Cold storage and rechecking

Reason: To clearly describe the step in accordance to the technical guidance provided in the Code for this step.

- 6th bullet

Revise: Air existence in **Containers of** caviar cans should be periodically checked **for swelling**, and any containers should be re-exhausted.

Reason: The intent of this guidance is unclear. The presence of air could only be detected by the swelling of containers which could be an indication of microbial activity and for pasteurized containers would be an indication of inadequate processing therefore it is not advisable to re-exhaust the containers without a clear understanding of the reason for the swelling.

X.23 Repackaging

- Revise Title : Repackaging **Final Packaging**

Reason: To clarify intent of step and align with other Codes such as the COP on the Processing of Lobsters.

- Delete: ~~See section X.19~~

- Add: **Technical guidance:**

- **Packaging should be done under clean and hygienic conditions.**
- **Packaging materials should be verified prior to use to ensure that they are not contaminated and are free from physical damage. These materials should be dry.**
- **Shipping containers should be appropriately lot-coded for product tracing in the event of a product recall.**

Reason: To provide guidance in alignment with other Codes and to remove the reference to pasteurization (which does not apply).

USA**General Comments**

The electronic working group has made many improvements to the draft COP. Corrections to the definitions (discussed below), should also be made to the adopted Standard. The United States also believes that further discussion is warranted on treatments used to stabilize ovulated eggs, and approval and use of animal drugs and egg treatments.

The U.S. produces caviar from farmed sturgeon. The fish are slaughtered in a humane manner. Both the meat and eggs are used for human consumption. Codex has a mandate to protect the health of consumers and promote fair trade practices. Animal welfare is not part of the Codex mandate (it is within the purview of the World Organization for Animal Health), so there is no rationale for including consideration of the ethics of fish slaughter in a Codex document.

The use of farmed sturgeon to help sustain wild populations does not depend on the use of ovulated eggs, hormones and egg treatments. U.S. sturgeon farms produce non-ovulated eggs obtained in the traditional way, without the use of hormones, additives, or “biological treatments.” “Caviar from ovulated fish eggs” is a completely different product from “caviar,” and is considered to be of lower value due to its different organoleptic characteristics. It is important to emphasize in the COP, as in the Standard, the need for clear labelling to differentiate these two products in order help avoid consumer confusion/deception.

Specific Comments**Definitions:**

Fish eggs – Delete this definition here and in the Standard:

~~Non-ovulated eggs separated from the connective tissue of ovaries. [Ovulated eggs may be used from aquacultured sturgeons.]~~

Reason:

- The current definitions for “caviar,” and “caviar from ovulated fish eggs,” cover anything that may have been originally intended by this definition.
- The definition causes confusion about the difference between “caviar” and “caviar from ovulated fish eggs”.
- The statement that “ovulated eggs may be used from aquacultured sturgeons” is not a definition, but a provision, and it does not indicate what they may be used for, implying “caviar.” The statement also appears to disallow the use of ovulated eggs from wild sturgeon.

Caviar – We support the definition for “caviar” in the proposed draft COP and recommend changing the definition in the Standard to match.

Caviar from ovulated fish eggs – Remove brackets. Revise definition in the COP, and add definition to the Standard, as follows:

{The product made from ovulated fish eggs of the *Acipenseridae* family ~~by~~ **and treating treated** with food grade salt and permitted additives.}

Reason:

- To align the wording with the “caviar” definition.
- The different wording implies that salt and additives have a more direct and complete function in making “caviar from ovulated fish eggs” than in making “caviar”.

X.6 Laying induction, Potential hazards – Add the following hazard:

Use of unapproved drugs

Reason: This is a hazard implied in the *Technical guidance*

X.7 Anaesthesia for big fish, Potential hazards – Add the following hazard:

Use of unapproved drugs

Reason: This is a hazard implied in the *Technical guidance*

X.9 Treatment of eggs with shell improving methods, Technical Guidance – Revise and rearrange as follows:

~~Chemical~~ Shell improving agents **additives/substances that** are **not** ~~un~~permitted as additives in accordance with the Standard for Sturgeon Caviar (CODEX STAN 291-2010)

Physical shell improving methods **that are not substances (i.e., heat, light)** should be applied in a manner that does not result in microbiological contamination and growth

Biological shell stabilisation from the eggs themselves through enzyme activation should occur in a manner that does not result in [promote?] microbiological contamination and/or growth.

The eggs should be handled with care to protect them from damage.

Reason: Improver clarity and consistency with food additive definition. Depending on terminology used, additives might be labeled “physical” or “biological” as well as “chemical” agents. For example, clay (physical) or sperm (biological) additives have been used to stabilize leakage from ovulated sturgeon egg membranes.

Definition of “food additive” from the Codex Procedural Manual:

Food Additive means any substance not normally consumed as a food by itself and not normally used as a typical ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly), in it or its byproducts becoming a component of or otherwise affecting the characteristics of such foods. The term does not include contaminants or substances added to food for maintaining or improving nutritional qualities.

X.16 Fish eggs, salt and additives measurement and blending, Technical guidance, 2nd bullet – Revise as follows:

Use ~~permitted~~ additives **permitted by the Standard for Sturgeon Caviar (CODEX STAN 291-2010)** in compliance with General Standard for Food Additives (CODEX STAN 192-1995) and importing country requirements.

Reason: It is easier to understand the additives permitted if referred to the Caviar Standard first, in addition the GSFA may not yet be aligned with the Caviar Standard.

X.20 Weighing and labeling, Potential hazards – Add hazard:

Incorrect labeling

Reason: If the product needs to be refrigerated to control C. botulinum growth and toxin formation, then incorrect labeling becomes a hazard.

Question: Is there any production of shelf-stable caviar? If so, such a product would not be covered in the Standard or COP.

X.23 Repackaging

Comment: This section only says “See section X.19”, which is the pasteurizing step. If it is meant that the product should be pasteurized again when repackaged, then this should be clarified.