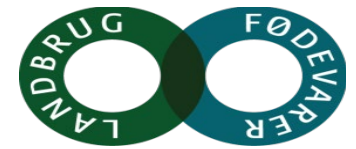# Revised Codex General Principles for Food Hygiene (GPFH) GHPs and HACCP

MTS Seminar: Food safety in the dairy sector

28 January 2021

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CODEX ALIMENTARIUS
The International Food Code

- ➢ **International Governmental Organization**
- ➢ **Founded in 1963**
- ➢ **Participants**
  - ➢ **188 member countries**
  - ➢ **1 member organization (EU)**
  - ➢ **> 200 INGOs (including IDF)**
- ➢ **Financed by FAO & WHO**
- ➢ **In 2001 Codex became reference in WTO SPS & TBT Agreements**
- ➢ **Objectives: To provide internationally adopted food standards presented in a uniform manner to**
  - ➢ **Protect consumer health**
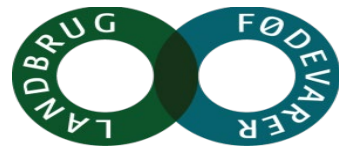 - ➢ **Facilitating trade by removing barriers**

CODEX STANDARDS

➢ **191 Commodity standards (CXS)**

➢ **76 Guidelines (CXG)**

➢ **50 Codes of Practice (CXC)**

➢ **4037 MLs for 303 food additives**

➢ **4846 MRLs for pesticide residues 294 pesticides**

➢ **610 MRLs for 75 veterinary drugs**

CODEX ALIMENTARIUS
INTERNATIONAL FOOD STANDARDS

Codex and CCFH

Past 15+ years of IDF involvement

2004	CoHP for Milk and Milk Products	CXC 57
2007	Guidelines on Microbiological Risk Management (MRM)	CXG 63
2008	CoHP for Powdered Formulae for Infants and Young Children	CXC 66
2008	Guidelines on the Control of Listeria monocytogenes	CXG 61
2013	Guidelines on Validation of Food Safety Control Measures	CXG 69
2013	Guidelines on Microbiological Criteria	CXG 21
2014	Guidelines on Microbiological Risk Assessment (MRA)	CXG 30
2016	Guidelines on the Control of Foodborne Parasites	CXG 88
2020	CoHP on Food Allergen Management	CXC 80
2020	General Principles of Food Hygiene: GHPs and the HACCP system	CXC 1

HACCP CHALLENGES
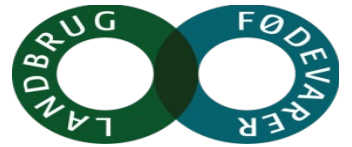
- ➤ **Inadequate PRPs**
- ➤ **Poorly implemented HACCP systems**
  - ▪ Incomplete process flow diagrams
  - ▪ Generalization of the hazard analysis
  - ▪ Lack of understanding of the product's intrinsic safety factors
  - ▪ Inability to focus, leading to too many CCPs
  - ▪ Lack of transparency up and down the supply chain
  - ▪ Poor understanding of monitoring, verification and validation
  - ▪ Monitoring and corrective action procedures rarely adequate
- ➤ **Failure to maintain systems once implemented**
- ➤ **Common errors:**
  - ➤ Lack of attention to detail and therefore lack of value
  - ▪ Believing that having a HACCP Plan = HACCP
  - ➤ Seeing a certificate of compliance as the end goal

Conclusions of the Colloquium I

➢ **In some cases, GHPs suffice (no need of HACCP)**

➢ **Hazard analysis is key – should be integrated in GPFH**

➢ **The 7 HACCP principles should be retained**

➢ **Validation is not correctly understood and wrongly addressed in the current GPFH**

➢ **Control measures can be implemented in many ways**

➢ **Need to abandon the bias on microbial hazards**

➢ **Concepts in ISO 22000 should be considered**

There is a need to revise the GPFH and its HACCP Annex, preferably in the same document

The General Principles of Food Hygiene (GPFH)

- ➢ **The GPFH outlines the general principles of food hygiene:**
  - ➢ That should be understood and followed by FBOs
  - ➢ That provide a basis for competent authorities to oversee food safety and suitability
- ➢ **The objective is to enable food businesses to develop their own food hygiene practices and necessary food safety control measures, while complying with requirements set by competent authorities**
- ➢ **Good Hygiene Practices (GHPs) are the foundation of any effective control of hazards associated with their businesses. For some FBOs effective implementation of GHPs will be sufficient to address food safety.**

GHPs, CCPs and OPRPs?

1st draft for CCFH 48 (2016):
- Good Hygiene Practices (GHPs)
- CCPs – Type A
- CCPs – Type B

2nd draft for CCFH 49 (2017)
- GHPs
- Enhanced GHPs
  - Are targeted a specific hazard
  - Require more attention
  - Are less effective than CCPs
- CCPs

GHPs, CCPs and OPRPs?

1st draft for CCFH 48 (2016):
- Good Hygiene Practices (GHPs)
- CCPs – Type A
- CCPs – Type B

2nd draft for CCFH 49 (2017)
- GHPs
- Enhanced GHPs
  - Are targeted a specific hazard
  - Require more attention
  - Are less effective than CCPs
- CCPs

3rd draft for CCFH 50 (2018):
- GHPs
- "Enhanced GHPs" replaced by "GHPs that may warrant greater attention"
- CCPs

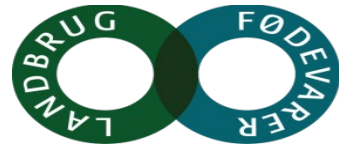**4th draft for CCFH 51 (2019):**
- GHPs
- "GHPs that need greater attention", e.g.
  - Cleaning and disinfection of food contact surfaces for control of Listeria.
  - Increased stringency of cleaning of a mincer for producing raw minced meat
- CCPs

The new GPFH – General changes

➢ **Less emphasis put on the importance of HACCP, as:**

  ➢ GHPs always needed – in some circumstances also HACCP

  ➢ GHPs are considered sufficient in many cases, e.g.

    ➢ In FBOs not able to conduct hazard analysis

    ➢ In FBOs able to document that GHPs are sufficient

➢ **Chapter on GHPs is drafted as a stand-alone text**

➢ **More integration between HACCP and PRP's/GHP's.**

  ➢ In HACCP systems, GHPs are included in PRPs

  ➢ Physical/chemical hazards and allergens are addressed as GHPs

  ➢ Description of products and processed requested

  ➢ Monitoring and corrective actions.

  ➢ Flow diagrams are described as helpful.

The new GPFH – New concepts

Management should ensure the effectiveness of the food hygiene systems in place by:

- ensuring that roles, responsibilities, and authorities are clearly **communicated** in the food business;

- **maintaining the integrity** of the food hygiene system when changes are planned and implemented;

- verifying that controls are carried out and working and that documentation is up to date;

- ensuring that the **appropriate staff training and supervision** are in place;

- ensuring **compliance with relevant regulatory requirements**; and

- encouraging **continual improvement**, where appropriate, taking into account developments in science, technology and best practice.

The new GPFH – New concepts

Management should build a positive **food safety culture** by demonstrating their commitment to providing safe and suitable food and encouraging appropriate food safety practices, in particular by ensuring:

- **commitment** of the management and all personnel to the production and handling of safe food;

- **leadership** to set the right direction and to engage all personnel in food safety practices;

- **awareness** of the importance of food hygiene by all personnel in the food business;

- open and clear **communication** among all personnel in the food business, including communication of deviations and expectations; and

- the availability of **sufficient resources** to ensure the effective functioning of the food hygiene system

The new GPFH – New concepts

Allergen management

➢ Systems should be in place to take into account the allergenic nature of some foods

- Correct identification of allergens (raw materials, ingredients and other products)

- Control measures in place at receipt, during processing and storage to control cross-contact

➢ Where allergen specifications are used for food safety or suitability, such specifications should be based on sound scientific principles

➢ Reference to Code of Practice on Allergen Management (CXC 80)

The new GPFH – Changed concepts
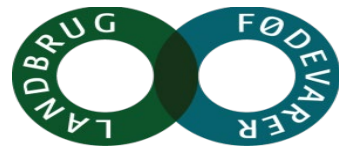
Changes highlighted: ~~Text deleted~~ **New text added**

Dedicated containers for bulk transport

~~Where appropriate, particularly in bulk transport,~~ **Containers and conveyances for bulk food transport** should be designated and marked for food use and used only for that purpose, **unless controls are taken to ensure that the safety and suitability of the food are not compromised**.

The new GPFH – Changed concepts
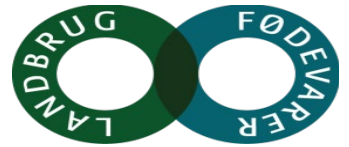
Water

- Water, ice and steam made from water, should **be fit for its intended purpose** based on a risk-based approach.

- They should not cause contamination of food and should be stored and handled in a manner that does not result in their becoming contaminated

- Water that is not fit for use in contact with food should have a separate system that does not connect with or allow reflux into the system for water that will contact food.

- Water **recirculated** for reuse and **water recovered** from e.g. food processing operations by evaporation and/or filtration, should be treated where necessary to ensure that the water does not compromise the safety and suitability of food.

The new GPFH – Changes to HACCP

➢ **The CCP-decision tree was removed for possible further work**

    ➢ No detailed guidance on how to differentiate between

        ▪ GHPs,

        ▪ GHPs that require more attention than others

        ▪ CCPs

➢ **Flexibility on relative location of CCPs**

➢ **Validation included in HACCP principles 2 and 6**

➢ **Guidelines on validation under step 11 of the HACCP step procedure, encompassing validation of:**

    ▪ Control measures and combinations

    ▪ Critical limits

   ▪ Implementation of the HACCP-plan

THE REVISED 7 HACCP PRINCIPLES

Changes highlighted: ~~Text deleted~~ **New text added**

1	Conduct a hazard analysis **and identify control measures**.
2	Determine the Critical Control Points (CCPs).
3	Establish **validated** critical limits
4	Establish a system to monitor control of ~~the CCP~~ **CCPs**.
5	Establish the corrective actions to be taken when monitoring indicates ~~that a particular CCP is not under control~~ **a deviation from a critical limit at a CCP has occurred**.
6	Validate the HACCP plan and then establish procedures for verification to confirm that the HACCP system is working ~~effectively~~ **as intended**
7	Establish documentation concerning all procedures and records appropriate to these principles and their application
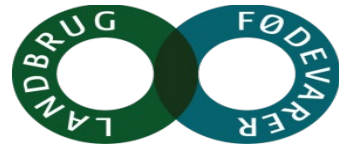
Key definitions changed

➢ **Hazard**

A biological, chemical or physical agent in~~, or condition of,~~ food with the potential to cause an adverse health effect

➢ **Critical Control Point (CCP)**

A step at which **a control measure or control measures,** ~~control can be applied and is~~ essential to **control a significant hazard is/are applied in a HACCP system** ~~prevent or eliminate a food safety hazard or reduce it to an acceptable level~~.

➢ **Significant hazard**

A hazard identified by a hazard analysis, as reasonably likely to occur at an unacceptable level in the absence of control, and for which control is essential given the intended use of the food
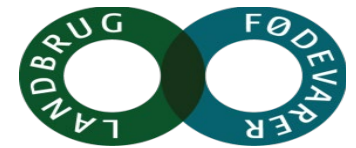
Key definitions changed

➢ **Critical limit**

A criterion**, observable or measurable, relating to a control measure at a CCP** which separates acceptability from unacceptability **of the food**

➢ **Acceptable level**

A level of hazard in a food at or below which the food is considered to be safe according to its intended use.

➢ *Corrective action*

Any action ~~to be~~ taken when ~~the results of monitoring at the CCP indicate a loss of control~~ **a deviation occurs in order to re-establish control, segregate and determine the disposition of the affected product if any and prevent or minimize reoccurrence of the deviation**

➢ *Deviation*

Failure to meet a critical limit **or to follow a GHP procedure**

Other definitions changed

Changes highlighted: ~~Text deleted~~ **New text added**

➢ **Validation of control measures**

Obtaining evidence that ~~the elements of the HACCP plan are effective~~ **a control measure or combination of control measures, if properly implemented, is capable of controlling the hazard to a specified outcome**

➢ **Monitoring**

The act of conducting a planned sequence of observations or measurements of control parameters to assess whether a **control measure** ~~CCP~~ is under control

➢ **Verification**

The application of methods, procedures, tests and other evaluations, in addition to monitoring, to determine ~~compliance with the HACCP plan~~ **whether a control measure is or has been operating as intended**

Key definitions changed

Changes highlighted: ~~Text deleted~~ **New text added**

➢ ***HACCP System***

~~A system that identifies, evaluates and controls hazards that are significant for food safety~~ **The development of a HACCP plan and the implementation of the procedures in accordance with that plan.**

➢ ***HACCP Plan***

Documentation or set of documents A document**s** prepared in accordance with the principles of HACCP to ensure control of **significant** hazards ~~that are significant for food safety~~ in the ~~segment of the~~ food business ~~chain under consideration~~

➢ **Hazard analysis**

The process of collecting and evaluating information on hazards **identified in raw materials and other ingredients, the environment, in the process or in the food**, and conditions leading to their presence to decide **whether or not these** ~~which~~ are significant **hazards** ~~for food safety and therefore should be addressed in the HACCP plan~~

New definitions
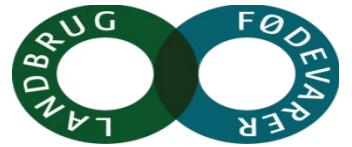
➢ **Allergen cross-contact**

The unintentional incorporation of an allergenic food, or ingredient, into another food that is not intended to contain that allergenic food or ingredient.

➢ **Good Hygienic Practices (GHPs)**

Fundamental measures and conditions applied at any step within the food chain to provide safe and suitable food.
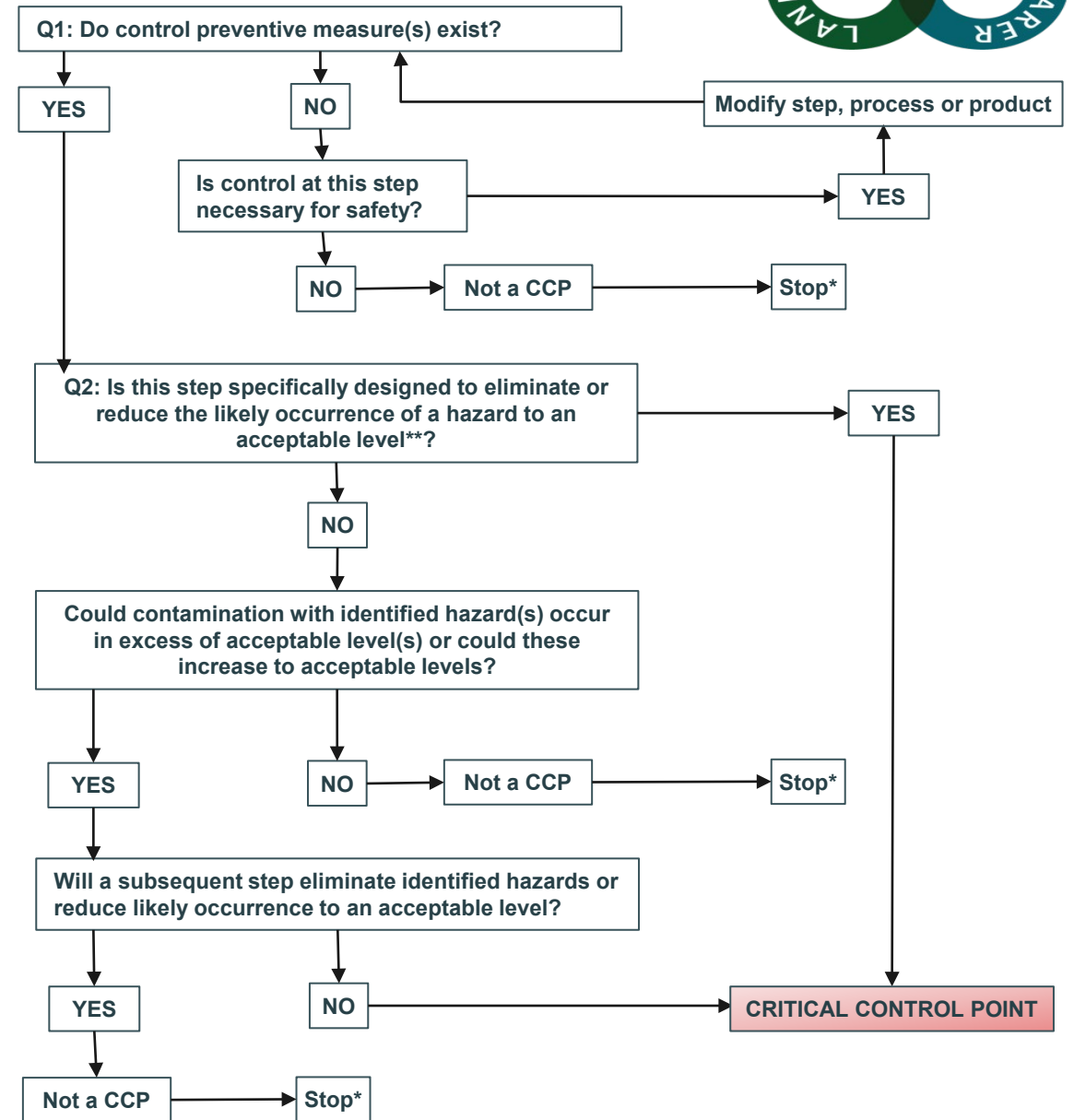
➢ **Prerequisite programme**

Programmes including GHPs, GAPs and GMPs, as well as other practices and procedures such as training and traceability, that establish the basic environmental and operating conditions that set the foundation for implementation of a HACCP system.

The CCP Decision Tree

Q1: Do control preventive measure(s) exist?

YES

NO → **Is control at this step necessary for safety?** → YES → **Modify step, process or product** →(back to Q1)

NO → **Not a CCP** → **Stop***

YES →

Q2: Is this step specifically designed to eliminate or reduce the likely occurrence of a hazard to an acceptable level?** → YES

NO

Could contamination with identified hazard(s) occur in excess of acceptable level(s) or could these increase to acceptable levels?

YES

NO → **Not a CCP** → **Stop***

Will a subsequent step eliminate identified hazards or reduce likely occurrence to an acceptable level?

YES

NO → **CRITICAL CONTROL POINT**

Not a CCP → **Stop***
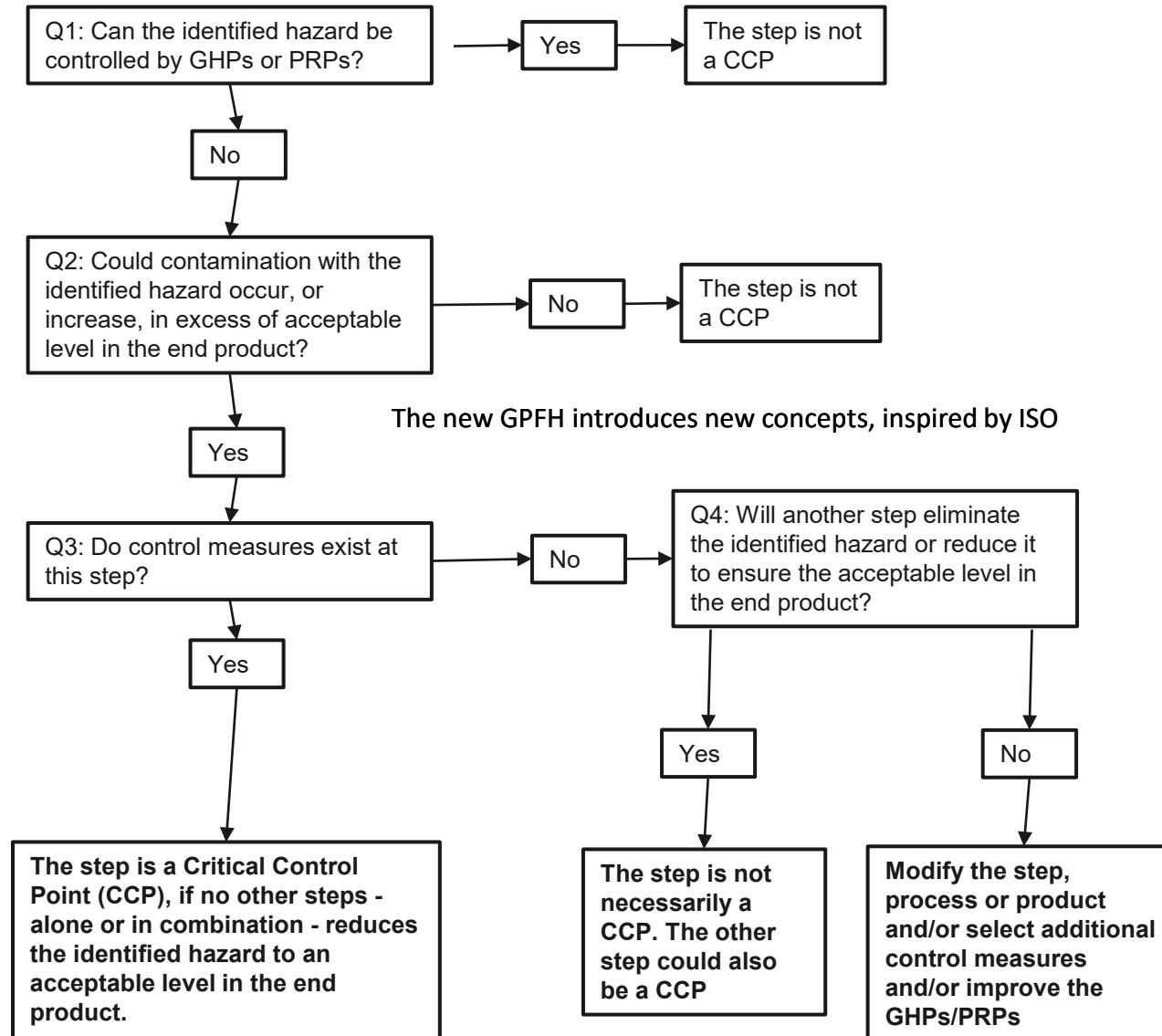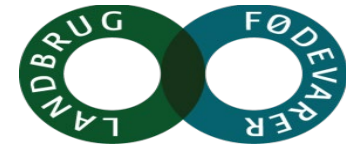
*)Proceed to the next identified hazard in the described process
**) Acceptable and unacceptable levels need to be defined within the overall objectives in identifying the CCPs of HACCP plan

ALTERNATIVE CCP DECISION TREE
(Suggested by ISO SC17, supported by IDF)

Q1: Can the identified hazard be controlled by GHPs or PRPs? → **Yes** → The step is not a CCP

↓ **No**

Q2: Could contamination with the identified hazard occur, or increase, in excess of acceptable level in the end product? → **No** → The step is not a CCP

↓ **Yes**

The new GPFH introduces new concepts, inspired by ISO

Q3: Do control measures exist at this step? → **No** → **Q4: Will another step eliminate the identified hazard or reduce it to ensure the acceptable level in the end product?**

↓ **Yes**

The step is a Critical Control Point (CCP), if no other steps - alone or in combination - reduces the identified hazard to an acceptable level in the end product.

Q4 → **Yes** → **The step is not necessarily a CCP. The other step could also be a CCP**

Q4 → **No** → **Modify the step, process or product and/or select additional control measures and/or improve the GHPs/PRPs**

Any
questions?

FØDEVARER

LANDBRUG