Food traceability

Standards and guidelines

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Plan

1. Fundamentals

2. Regulations

3. How to introduce a food traceability

4. Costs and effects consideration

5. Illustration:
   - Components of a livestock traceability system
   - Film
1. Fundamentals

1.1 Introduction : Risks
1.2 Risk management
1.3 Définition
1.1 Introduction : Risks

You see
I take precautions.
From farm to table…
Risks at all stages...

**Chemical**
- Contaminant residues from veterinary medicine, additives, pesticide residues...

**Physical**
- Radioactivity, extraneous matter

**Biological**
- Pathogenic germs, parasite, virus, prions

**Economical**
- Fraudulent trading
1.2 : Risk management

- GMP
- HACCP
- Autocontrôles
- Sanitary measures associated with relevant laws and regulations
- Internal audit, external audit, authorities’ control, quality certification
But...never

risk = nul

The importance of traceability
1.3. Définition : Traceability

- Ability to trace the background history, the use or the localisation of an item or an activity by means of a recorded identification.

Traceability enables to guarantee the origin or the components of foodstuffs.
Ability to follow the movement of food through every stage (tracing both directions)
by means of recorded identification
Contribution to food safety: Traceability is meant to ensure:

- Quick withdrawal and recall of unsafe food/feed from the market
- Appropriate information to consumers and food business operators.
- Risk assessment can be performed by control authorities
Rationale

**Risk management tool**

- Used in order to assist in containing a food safety problem (contribution to quality improvement)

**Marketing tool**

- Means for consumers trust
- Origin = « Label »
Quick withdrawal from the market

Ex: The Rapid Alert System for Food and Feed (RASFF)
Consumers Trust

European Commission 29/05/2009

“Food labels revisited

One day not so far in the future, Europeans may be able to buy a loaf of bread knowing where the flour came from. The EU is considering expanding the use of food labels to show where the product was farmed. European farmers, producers and consumers voiced strong support for greater use of «place-of-farming» labels.”
2. Regulations

2.1 Laws and Regulations
2.2 Principles
2.3 Requirements
2.4 Implementation
2.1 Laws and Regulations

- The General Food Law
  

- CODEX ALIMENTARIUS
  
  PRINCIPLES FOR TRACEABILITY/ PRODUCT TRACING AS A TOOL WITHIN A FOOD INSPECTION AND CERTIFICATION SYSTEM CAC/GL 60-2006
2.2 Principles
(CE 178/2002, Art.18)
5 points

1. Products
2. Operators
3. Identification - Information
4. Labelling
5. Spécific sectors
The traceability of **food, feed, food-producing animals, and any other substance** intended to be, or expected to be, **incorporated** into a food or feed shall be established **at all stages** of production, processing and distribution.
Food and feed business operators shall be able to identify any person from whom they have been supplied with a food, a feed, a food-producing animal, or any substance intended to be, or expected to be, incorporated into a food or feed.

To this end, such operators shall have in place systems and procedures which allow for this information to be made available to the competent authorities on demand.
Food and feed business operators shall have in place systems and procedures to identify the other businesses to which their products have been supplied.
This information shall be made available to the competent authorities on demand.
Food or feed which is placed on the market or is likely to be placed on the market shall be **adequately labelled** or identified to facilitate its traceability, through relevant documentation or information in accordance with the relevant requirements of more specific provisions.
Provisions for the purpose of applying the requirements of this Article in respect of specific sectors may be adopted.
Stages in entire food chain covered by the traceability regulation

- Production
  - Feed industry
  - Transport – importation - storage
  - Distribution to final consumer
  - Distribution – wholesalers– retailers
  - Processing
Rationale

The identification of the origin of feed and food is of prime importance for the protection of consumers.

- Objectives:
  - Secure food safety
  - Fair trading
  - Reliable information
Traceability enables

- To ensure that targeted and accurate withdrawals or recalls can be undertaken.
- To provide appropriate information to consumers and food business operators.
- To facilitate risk assessment performed by control authorities.
- To avoid unnecessary wider disruption of trade.
2.3 Requirements
creates a new general obligation for all food business operators: to identify the suppliers and direct recipients of their food/feed.

is worded in terms of its goal and intended result, rather than in terms of prescribing how that result is to be achieved.
identify suppliers and buyers

«one step back/one step forward»

*excluding final consumer
stressed on goal and intended result

greater flexibility in the implementation of the requirement
likely to reduce compliance costs
requires an active role of both food businesses and the control authorities
Scope of the traceability requirement
1. Covered products

- «any substance ....»
  - veterinary medicinal products, plant protection products, fertilisers

- «incorporated»
  - food packaging materials

  *specific regulations*: (CE) n° 852/2004; n° 1935/2004

  - all types of food and feed ingredients, (included grain when incorporated in a feed or food)
Scope of the traceability requirement

2. Covered operators

- food business operators at all stages of the food chain, from primary production (food producing animals, harvests), food/feed processing to distribution. (including charities organisations but taking into consideration particular situation of donation activities)

- Haulage contractor and food storage enterprises
Scope of the traceability requirement

3. Applicability to third country exporters

- from the importer up to the retail level (But it requires that food/feed imported into the Community complies with the relevant requirements of EU food law.)

- Exporters in trading partner countries are not legally required to fulfil the traceability requirement imposed within the EU (except in circumstances where there are special bilateral agreements for certain sensitive sectors or where there are specific Community legal requirements, for example in the veterinary sector).

- some EU food business operators to request trading partners to meet the traceability requirements and even beyond the “one step back-one step forward” principle (= food business’s contractual arrangements and not of requirements established by the Regulation)
2.4 Implementation
Identification of suppliers

Individual

Legal person

Enterprise ≠ truck driver!

Enterprise, restaurant, retailer

Excluding final consumers

Identification of customers
Internal traceability

- Food business operators should be encouraged to develop systems of internal traceability designed in relation to the nature of their activities.

- Contributing to more targeted and accurate withdrawals.

- The decision on the level of detail of the internal traceability should be left upon the business operator: any requirement for records to be kept identifying how batches are split and combined within a business to create particular products or new batches.
Traceability systems laid down by specific legislations

- 12 ny other system of identification of products existing within the framework of specific provisions (fair trade purposes) may be used to satisfy the requirement established by Article 18, insofar as it allows the identification of the suppliers and of the direct recipients of the products at all stages of production, processing and distribution.
Types of information to be kept

2 categories according to its level of priority:

1. Information which shall be made available to the competent Authorities in all cases
   • o Name, address of supplier, nature of products which were supplied from him.
   • o Name, address of customer, nature of products that were delivered to that customer.
   • o Date of transaction / delivery. (! Invoices ≠ delivery notes)

2. Additional information which is highly recommended to be kept
   • o Volume or quantity
   • o Batch number, if any.
   • o More detailed description of the product (pre-packed or bulk product, variety of fruit/vegetable, raw or processed product).
Time of records keeping

5 year period (commercial documents are usually registered for a period of 5 years for taxation controls)

- For products without a specified shelf life (ex: wine)
- For products with a shelf life above 5 years
  - period of the shelf-life plus 6 months
- For highly perishable products, which have a “use by” date less than 3 months or without a specified date (ex: fruits - vegetables)
  - 6 months after date of manufacturing or delivery.
3. How to introduce a food traceability
Basis for securing traceability: «identification and linkage»

Summarizing the material flow

Identification

Linkage

Media for identification, records and transmission
Summarizing the material flow

Process flow
- Receiving of raw material
- Storage
- Processing 1 (mixing B+C)
- Processing 2 (adding A)
- Packing
- Storage
- Shipping

Material flow
- Raw materials
  - Batch 1: X
  - Batch 2: Y and Z

Information flow
- Delivery (receiving) notes A-B-C
- Internal traceability
- Delivery (shipping) notes X-Y-Z
Identification
1. Définition of « traceable unit »

- Individual
- Lot
- Individual Product
Identification

2. Précision of ID

- Traceability bar code
- Country where animal was born
- Country where animal was fattened
- Country where animal was slaughtered
Identification

3. Segregation management

- Using different lines
- Separated by using the line at different times
- Separated by using partitioning sticks
Ensuring «One step back - one step forward»

Supplier

Internal traceability

Client
Méthod of attaching ID

- Sealing
- Label
- Printing
- Electronic tag
Media for information recording and transmitting

Bundle of documents

Database
Recording

- Establishing a **procedure**: documents and/or files previously established

- **Choice of information** to be collected
  - Indispensable for the traceability
  - Additional (e.g., accounting, management quality)
Information à enregistrer

<table>
<thead>
<tr>
<th>Indispensable for traceability</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Product name</td>
</tr>
<tr>
<td>• ID</td>
</tr>
<tr>
<td>• Origin /supplier name</td>
</tr>
<tr>
<td>• Receiving date</td>
</tr>
<tr>
<td>• Quantity /Weight</td>
</tr>
<tr>
<td>• Operator name</td>
</tr>
</tbody>
</table>

| For each processing stage:   |
| • Product - ID               |
| • Date and hour              |
| • Quantity /weight           |
| • Identification of the line/|
|   the operator               |
| • semi-finished product -ID  |

| Product name                  |
| ID                            |
| Destination/Buyer name        |
| Shipping / Delivery date      |
| Quantity /weight              |
| Operator name                 |

**Additional**

Quality management (ex: T°) or commercial flow (ex: price – sales tax)
Verifying the traceability system

- Monitoring: coherence of informations? eg: weight – date
- Internal Audit
- External externe
4. Costs and effects consideration
Costs - Effects

Costs

- Increased labor cost and expenses of supplies
- Cost of identification and recording media
- Education and training of staff

Effects

- Reduction of loss through faster detection of problem sources, removal, and recall
- Accountability of staff
- Securing customers’ trust
- Improved handling against claims and inquiries
5. Illustration:
Components of a livestock traceability system
Film