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## A PERSPECTIVE OF STANDARDS AND REGULATIONS FROM THE FOOD SAFETY AREA

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### Abstract

*The food safety and security represents one of the most important domains for many countries and organizations in the last period of time. This paper will present a short overview about the concept of food traceability. Some of the most important international standards regarding food safety are presented. Conclusions and future directions of the research are discussed.*

**Key words:** *food safety, food safety standards and regulations, traceability system*

### Introduction

In the last decade the food safety and security represents one of the most important issue for many researchers, organizations and governments. This fact was determined by the actual economic context, which conducted the agro-food economy to be focused on a responsive fulfillment of consumer demands regarding quality, safety and security of food and foodstuff (Wolfert et al., 2010). Therefore, the EU legislation, determined a framework that gives to the end-consumer important rights regarding safe-food and, in the same time, accurate and honest information regarding food.

In the Regulation (EC) No 178/2002 of the European Parliament and of the Council it is specified that **food** (or **foodstuff**) represents “*any substance or product, whether processed, partially processed or unprocessed, intended to be, or reasonably expected to be ingested by humans*”, including “*drink, chewing gum and any substance, including water, intentionally incorporated into the food during its manufacture, preparation or treatment*”.

In the national or international regulations or standards exists many definitions regarding the concept of traceability:

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The Regulation (EC) No 178/2002 of the European Parliament and of the Council states that the **traceability** represents “*the ability to trace and follow a food, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, through all stages of production, processing and distribution*”.

Global GAP defines the **traceability** as “*the ability to retrace the history, use or location of a product (that is the origin of materials and parts, the history of processes applied to the product, or the distribution and placement of the product after delivery) by the means of recorded identification*”.

ISO 22005:2007 considers that the **traceability** represents “*ability to follow the movement of a feed or food through specified stage(s) of production, processing and distribution*”.

Codex Alimentarius considers that the **traceability** represents “*the ability to follow the movement of a food through specified stage(s) of production, processing and distribution*”.

GS1 standards states that the **traceability** represents “*ability to track forward the movement through specified stage(s) of the extended supply chain and trace backward the history, application or location of that which is under consideration*”.

The Australian standards defines the **traceability** as “*the ability to, and the mechanisms designed for, the tracing of an animal product along all steps in the production chain back to the farm from which the product was derived*”.

The Romanian Law 150/2004 regarding food and feed safety defines **traceability** as “*the ability to identify and trace over all stages of production, processing and distribution food, feed or food-producing animal that will be used for food or substance production which will be incorporate or can be incorporated in a food or feed*”.

Taking into consideration all these definitions we can conclude that the **traceability** represents the ability to trace back a food to its origins and furthermore, to trace back all the components of that food to origins (using data and information stored in traceability systems).

A traceability system has two main objectives: (a) to identify the foods that can be dangerous for human consumption in order to recall those products from the sale; (b) to trace back the product on the supply chain food in order to identify where the problem appear and which are the causes that generated the problem in order to prevent new apparitions of the problem.

## International Standards

Some of the most known international standards regarding the process of traceability for foods are: GLOBALGAP, Codex Alimentarius’ food safety standard HACCP, GS1 - Global Traceability Standard, ISO 9001 and ISO 22005.

### GLOBALG.A.P

GLOBALG.A.P is a private sector body that has developed and continuously

updates sets of standards in order to certify the agricultural products. The objective GLOBALG.A.P is “*to establish one standard for Good Agricultural Practice (G.A.P.) with different product applications capable of fitting to the whole of global agriculture*”.

An initiative from the retailers belonging to the Euro-Retailer Produce Working Group (EUREP) determined in 1997 the establishing of the EUREPG.A.P. In the context of globalization, after 10 year of expertise in the domain of elaborating and implementing standards for certifying agricultural products, in 2007 the Board announced, during the 8th global conference in Bangkok, that the new name of the body is GLOBALG.A.P.

GLOBALG.A.P developed the following standards: (1) GLOBALG.A.P Integrated Farm Assurance Standard (IFA); (2) GLOBALGAP Compound Feed Manufacturer Standard (CFM); (3) GLOBALG.A.P Plant Propagation Material Standard (PPM); (4) GLOBALG.A.P Risk Assessment on Social Practice (GRASP).

According to the GLOBALG.A.P website, Integrated Farm Assurance (IFA) Standard represents “*a single integrated standard with modular applications for different product groups, ranging from plant and livestock production to plant propagation materials and compound feed manufacturing*”. The scope’s typology of the farms that are covered by IFA is: (a) crop base; (b) livestock base and (c) aquaculture base, for each scope being defined more sub-scopes:

- Crop Base (CB)
  - ✓ Fruit and Vegetables (FV)
  - ✓ Combinable Crops (CP)
  - ✓ Coffee - green - (CO)
  - ✓ Tea (TE)
  - ✓ Flowers and Ornamentals (FO)
- Livestock Base (LB)
  - ✓ Cattle and Sheep (CS)
  - ✓ Dairy (DY)
  - ✓ Calf / Young Beef (CYB)
  - ✓ Pigs (PG)
  - ✓ Poultry (PY)
  - ✓ Turkey (TY)
- Aquaculture Base (AB)
  - ✓ Finfish (FN)
  - ✓ Molluscs (MC)

## **Codex Alimentarius**

Another important organism is represented by the Codex Alimentarius Commission (CAC) which was founded by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) in 1962. Codex Alimentarius represents a set of standards, good practices and recommendations, one of the most important issues

adopted by CAC being Hazard Analysis and Critical Control Point (HACCP) system, which identifies, evaluates, and controls hazards which are significant for food safety. The HACCP system is based on the following principles: (a) conduct a hazard analysis; (b) determine the critical control points (CCPs); (c) establish critical limit(s); (d) establish a system to monitor control of the CCP; (e) establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control; (f) establish procedures for verification to confirm that the HACCP system is working effectively; (g) establish documentation concerning all procedures and records appropriate to these principles and their application.

## GS1

GS1 is an international not-for-profit association which design and implement global standard and provide solutions in order to enhance the efficiency of supply chains. GS1 was founded in 1977 by 12 organizations from Europe and in 2005 changed his name from EAN (European Article Numbering) International into GS1. According to GS1 website, “*The GS1 system of standards is the most widely used supply chain standards system in the world*”. From GS1 point of view, the traceability is a business process which describe the key element “independently from the choice of enabling technologies” and, in the same time, it is defined a set of minimum requirements that must be fulfill for each company.

## Conclusions

The using of an information system for monitoring the traceability on the wine supply chain can represent an activity which can generate some important advantages:

- enhancing food safety and security (Liddell and Bailey, 2001);
- increasing the trust of consumers in the acquired foodstuff;
- enhancing the protection of the consumers against fraud or the producers from competitors from “black market” (Golan et al., 2002).

The process of designing, developing and implementing traceability systems by companies represents a proactive approach to manage food safety and security.

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