



NUGATA.... *Food Safety & Trade Facilitating Solutions!!*



Food Safety & Key Standards In Fruits & Vegetables Production/ Marketing

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by

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Introduction (1)

- Food safety is an assurance that the food we eat does not harm us or cause illness if prepared according to its intended use.
- Consumers expect food, including fruit & vegetables, to be safe, nutritious and affordable (food safety and food security). However a food safety hazard can occur at any point in the food chain therefore adequate control is important
- Food safety is a shared responsibility. Everybody has a role to play i.e. regulators, farmers, processors/manufacturers, transporters, retailers, consumers etc.

Introduction (2)

- Increased demand for fruit and vegetables is due to the realization that several chronic diseases of major public health concern such as coronary heart disease and some types of cancer, are associated with dietary excess or imbalance.
- Health professionals recommend an increased consumption of fruit and vegetables (five or more servings daily) and grain products (six or more servings daily) and a decreased consumption of fats (especially saturated fat) and cholesterol in addition to maintenance of a desirable body weight¹.

Introduction (3)

- Fruit and vegetables:
 - ✓ Contain valuable nutrients with a lot of health benefits. They are rich in fibre, vitamins, minerals, including potassium, folate, vitamins A and C and phytochemicals (which give them colour).
 - ✓ Provide antioxidants which help protect the body against major illnesses, such as heart disease and cancer.
 - ✓ Help maintain a healthy body weight because they are filling and low in energy
- Production, harvesting, handling, packing, storage, transportation of fruit & vegetables requires implementation of pre-requisite programmes such as GAP, GHP & GDP to ensure that safety & quality standards are maintained and consumer satisfaction is guaranteed.

Who are Operators in the Horticulture Supply Chain?

Operators in the supply chain include farmers or small-scale producers, extension staff, processors, transport and storage operators (warehouses), retail and food service outlets and also interrelated organizations such as producers of packaging materials, cleaning agents, additives and equipment.

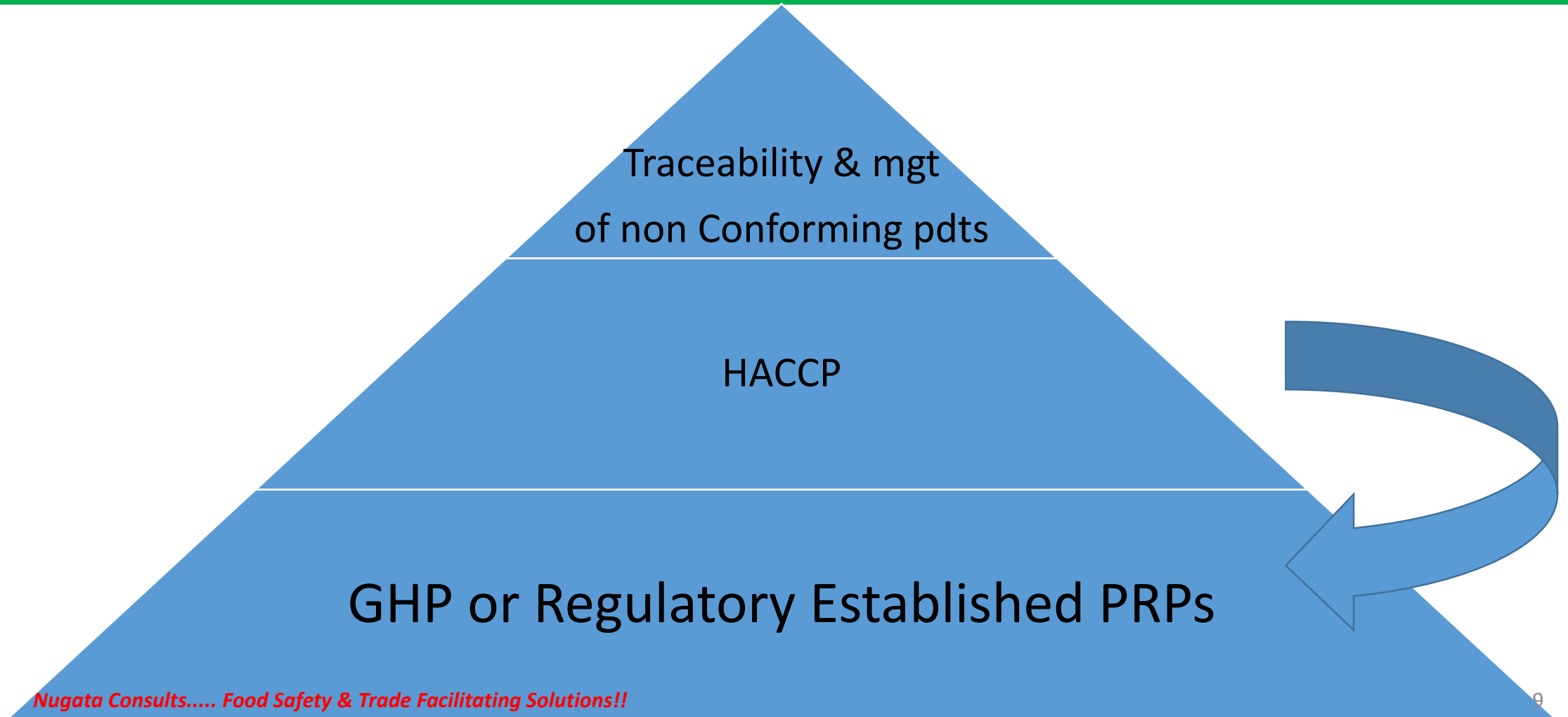
All operators have an obligation to promote food safety and placing in the market wholesome products that:

- comply with up-to-date requirements;
- would not have harmful effects on consumer health;
- can be easily withdrawn from the market if defective.

What do You Need to Know?

- Production of safe & good quality commodity is your responsibility
- Cultivation of improved/high yielding varieties is recommended
- Code of Hygienic Practice for Fresh Fruit and Vegetables & Codex Standards for FFV
- International bodies that work on Fresh Fruit & Vegetables (Codex, EU, US, IPPC, OECD, COLEACP, UNECE)
- National bodies with roles in your sector & contact information (FMARD, NAQS, NAFDAC, SON, NEPC, NCS)
- Importing country requirements for FFV
- Export Requirements

Food Safety Control Plan Pyramid



Minimizing Microbial Food Safety Hazards (1)

Good agricultural and management practices reduces the risk of microbial contamination in fresh produce. The principles are¹:

Principle 1: Rely on prevention of microbial contamination rather than corrective actions after contamination has occurred.

Principle 2: Growers, packers, or shippers should use good agricultural and management practices in those areas over which they have control.

Principle 3: Know that contamination can occur at any point along the farm-to-table food chain. The major source of contamination is associated with human or animal feces.

Minimizing Microbial Food Safety Hazards (2)

Principle 4. Water that will come in contact with fresh fruits and vegetable should be of good source and quality to minimize the potential of microbial contamination. Water use includes for irrigation, applications of pesticides and fertilizers, cooling, and frost control. Post-harvest uses include produce rinsing, cooling, washing, waxing, and transport. Water of inadequate quality has the potential to be a direct source of contamination.

Principle 5. Carefully manage the use of animal manure or municipal biosolid wastes. Properly treated manure or biosolids can be an effective and safe fertilizer. Untreated, improperly treated, or recontaminated manure can contaminate produce.

Minimizing Microbial Food Safety Hazards (3)

Principle 6. Workers' hygiene and sanitation practices during production, harvesting, sorting, packing, and transport play a critical role. They can unintentionally contaminate fresh produce, water supplies, and other workers, and transmit foodborne illness.

Principle 7. Follow all applicable laws and regulations or standards for agricultural practices.

Principle 8. Accountability at all levels of the agricultural environment (farm, packing facility, distribution center, and transport operation) is important to a successful food safety program.

There must be qualified personnel and effective monitoring to ensure that all elements of the program function correctly and to help track produce back through the distribution channels to the producer.

Good Agricultural Practice (GAP) 1

- GAP are practices that address environmental, economic and social sustainability for on-farm processes and result in safe and quality food and non-food agricultural products (FAO COAG 2003 GAP paper).
- GAP stands on four pillars (economic viability, environmental sustainability, social acceptability and food safety and quality).
- GAP recommendations are directed toward the primary sources of contamination: soil, water, hands, and surfaces.

Good Agricultural Practice (GAP) 2

GAP involves:

- Site selection and land preparation
- Maintaining soil fertility
- Water resources and irrigation practices
- Seed, crop selection and seedlings production
- Crop pests and diseases

Good Agricultural Practice (GAP) 3

- Integrated pest management (IPM)
- Pesticide application
- Workers welfare, health and safety
- Hygiene in the field
- Assessment of maturity and harvesting
- Traceability and record-keeping

Codex Standards (International Standard):

The Codex Alimentarius or "Food Code" was established by FAO and the World Health Organization in 1963 to develop harmonized international food standards, which protect consumer health and promote fair practices in food trade.

1. Codex Alimentarius Fresh Fruits & Vegetables, First edition, World Health Organization and Food and Agriculture Organization of the United Nations, Rome, 2007, ISBN 978-92-5-105839-8 © FAO and WHO 2007
2. Code of Hygienic Practice for Fresh Fruits & Vegetables [CAC/RCP 53-2003](#)
3. Recommended International Code of Practice for Packaging & Transport of Fresh Fruit & Vegetables [CAC/RCP 44-199](#)

TITLE	EN	FR	ES	AR	ZH	RU
Codex texts on foodborne antimicrobial resistance (1st edition)						
Prevention and Reduction of Food and Feed Contamination (1 st edition)						
Foods derived from modern biotechnology (2 nd edition)				1		1
Food Hygiene - Basic Texts (4 th edition)				3	3	3
Food Labelling - Complete Texts (5 th edition)				4	4	4
Food import and export inspection and certification systems - Combined texts (5 th edition)				2		2
Organically Produced Foods (3 rd edition)						2
Animal food production (2 nd edition)						1
Cereals, Pulses, Legumes and Vegetable Proteins (1 st edition)						
Fresh Fruits and Vegetables (1 st edition)						
Milk and Milk Products (2 nd edition)						1
Working Principles for Risk Analysis for Food Safety for Application by Governments (1 st edition)						
Waters (1 st edition)						
Code of practice for fish and fishery products (2 nd edition)	Nugata Consults..... Food Safety & Trade Facilitating Solutions					17

EU Regulations (Importing Country Standard):

A **regulation** is a legal act of the European Union that becomes immediately enforceable as law in all member states simultaneously. Regulations can be distinguished from directive which, at least in principle, need to be transposed into national law

1. Commission Regulation (EC) No 1221/2008 amending Regulation (EC) No 1580/2007 laying down implementing rules of Council Regulations (EC) No 2200/96, (EC) No 2201/96 and (EC) No 1182/2007 in the fruit and vegetable sector as regards marketing standards Regulation
2. Commission Implementing Regulation (EU) No 543/2011 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors

Other Standards

- OECD International Standards for Fruit and Vegetables

The Organization for Economic Cooperation and Development (OECD) is a group of 30 member countries that discuss and develop economic and social policy. OECD countries are democratic countries that support free market economies.

- UNECE Fresh Fruit and Vegetables – Standards

The standards are published in the three official languages of the United Nations Economic Commission for Europe.

EU General Marketing Standard (1)

COMMISSION REGULATION (EC) No 1221/2008 Fruit And Vegetable Sector **Marketing Standard**

Annex 1

General Marketing Standard

1. Minimum quality requirements

Subject to the tolerances allowed, the products shall be:

- intact,
- sound; products affected by rotting or deterioration such as to make them unfit for consumption are excluded,

EU General Marketing Standard (2)

- clean, practically free of any visible foreign matter,
- practically free from pests,
- practically free from damage caused by pests affecting the flesh,
- free of abnormal external moisture,
- free of any foreign smell and/or taste.

The condition of the products must be such as to enable them:

- to withstand transport and handling,
- to arrive in satisfactory condition at the place of destination.

EU General Marketing Standard (3)

2. Minimum maturity requirements

- The products must be sufficiently developed and display satisfactory ripeness.
- The development and state of maturity of the products must be such as to enable them to continue their ripening process and to reach a satisfactory degree of ripeness.

3. Tolerance

- A tolerance of 10 % by number or weight of product not satisfying the minimum quality requirements shall be permitted in each lot. This tolerance shall not however cover product affected by rotting or any other deterioration rendering it unfit for consumption.

EU General Marketing Standard (4)

4. Marking of origin of produce

- Full name of the country of origin.
- For products originating in a Member State this shall be in the language of the country of origin or any other language understandable by the consumers of the country of destination.
- For other products, this shall be in any language understandable by the consumers of the country of destination.

Highlight on EU Regulation (1)

- Database of each trader exists in each EU member country.
- Database consists of the registration number, name, address, information needed for classification in one of the risk categories, position in the marketing chain, information on the importance of the firm, information on findings made during previous checks of each trader, any other information considered necessary for checks such as information on the existence of a quality assurance system or self-check system related to the conformity to the marketing standards
- Selective checks by national bodies is based on risk analysis and with appropriate frequency, to ensure compliance with the standards and other statutory requirements for marketing fruit and vegetables.

Highlight on EU Regulation (2)

- Risk analysis is based on the information in the trader database.
- Where checks reveal significant irregularities, the authorities check more frequently.
- Traders must give inspection bodies all the information they need to organize and carry out compliance checks to facilitate work of approved exporters & importers
- A List of Countries whose checks on conformity have been approved by the EU exists. It includes South Africa, Senegal & Kenya from Africa

Highlight on EU Regulation (3)

- Fruit and vegetables not covered by a specific marketing standard shall conform to the general marketing standard. However, where the holder is able to show they are in conformity with any applicable standards adopted by the United Nations Economic Commission for Europe (UNECE), the product shall be considered as conforming to the general marketing standard.

Highlight on EU Regulation (4)

EU Regulation 543/2011 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors.

Approved non-EU countries:

- Any country exporting to the EU that has performed its own compliance checks may ask the Commission to judge whether those checks meet the specific EU marketing standards, or at least equivalent standards.
- If they do, that country may be granted "approved" status for products originating on its territory that have passed these checks.
- The Commission may suspend approval if it finds that, in a significant number of batches/quantities, the goods don't correspond to the information in the conformity certificates issued by the non-EU inspection body.

Highlight on US Standards

- Country of Origin Labeling (COOL) is a law requiring food retailers to use product labels that identify the source country of certain foods. These foods include: Fresh and frozen fruits and vegetables Section 8e & Import Requirement.
- Section 8e of the Agricultural Marketing Agreement Act of 1937 (AMAA) applies to specific fruit and vegetable imports into the United States. The law requires imported products to meet the same or comparable grade, size, quality and maturity standards as domestic products covered by Federal marketing orders. Grading and quality inspection by USDA's Agricultural Marketing Service is required for each lot (shipment) imported.

Conclusion

Agriculture is serious business. Your fruit and vegetables is money that must not be allowed to waste. Secure the horticulture supply chain!



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http://ec.europa.eu/agriculture/fruit-and-vegetables/marketing-standards/index_en.htm#definition-of-trader countries whose checks on conformity has been approved
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