



Organic food products: definition, principles and rules

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Outline

The main contents include:

- 1. Definition of organic food**
- 2. Rules and procedures for organic food production**
- 3. Consumers perception on organic product**
- 4. Constraints and opportunities of organic food production method**

Learning Outcomes

The main learning outcomes are:

- i. Understanding of organic food
- ii. Increased awareness on rules and procedures
- iii. Understanding the difference between organic and conventional food production methods
- iv. Increased consumers awareness on organic food
- v. Understanding of constraints and opportunities in organic production methods

Definition and labelling of organic food

- Organic agriculture can be described as:
"a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasizes the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using, where possible, agronomic, biological, and mechanical methods, as opposed to using synthetic materials, to fulfil any specific function within the system" (FAO, 1999).

Definition and labelling of organic food

- Organic food production sector should be linked to sustainable food production and it should mainly use locally available renewable resources as well as wastes and by-products of plant and animal origin.
- Organic food production is associated with:
 - ❖ Consumers health
 - ❖ Animal welfare
 - ❖ Food security to feed the world
 - ❖ Environmental advantage

Definition and labelling cont...

- From European practice typical organic farming practices include:
 - ❖ *Multiannual crop rotation;*
 - ❖ *efficient use of on-site resources;*
 - ❖ *strict limits on the use of synthetic pesticides and fertilizers, livestock antibiotics, food additives and processing aids and other inputs;*
 - ❖ *use of plant and animal species that are resistant to disease and adapted to local conditions; and*
 - ❖ *an absolute prohibition of the use of genetically modified organisms.*

Definition and labelling cont...

Organic food labelling

- In food sector, organic label is an indication that the food is produced in organic production method.
- Any official EU language can be used for organic food labeling and advertizment.
- EU organic logo can be used together with national or private logos.



EU organic logo



Sweden organic logo

Definition and labelling cont...

- EU organic logo is designed to create more clarity for EU consumers
- Organic label is allowed only if at least 95% of food ingredients are organic
- EU labeling threshold for GMO is 0.9% i.e. If GMO content 0.9% or less, the food can be labeled organic
- Organic products also referred as '**bio**' and '**eco**' products

Rules and principles for organic food production

There are certain principles or standards established for organic farming. For instance under European Commission (EC)

- ❖ **Regulation (EC) 834/2007:** defines the organic production and labelling of organic products
- ❖ **Regulation (EC) 889/2008:** provides detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control
- ❖ **Regulation (EC) 1235/2008:** provides detailed rules for implementation of Council Regulation (EC) No 834/2007 as regards the arrangements for imports of organic products from third countries

Rules and principles cont...

Overall principles (Regulation (EC) 834/2007):

- Organic production shall be based on the following principles:
 - ❖ the appropriate design and management of biological processes based on ecological systems using natural resources which are internal to the system
 - ❖ the restriction of the use of external inputs
 - ❖ the strict limitation of the use of chemically synthesized inputs
 - ❖ the adaptation of the rules of organic production taking account of sanitary status, regional differences in climate and local conditions, stages of development and specific husbandry practices.

Rules and principles cont...

General rules on the production of **processed food**
(Article 19, Regulation (EC) No 834/2007)

- The preparation of processed organic food shall be kept separate in time or space from non-organic food.
- The product shall be produced mainly from ingredients of agricultural origin;
- Only additives, processing aids, flavorings, water, salt, preparations of micro-organisms and enzymes, minerals, trace elements, vitamins, as well as amino acids and other micronutrients in foodstuffs for particular nutritional uses may be used, and only in so far as they have been authorized for use in organic production;

Rules and principles cont...

General rules on the production of processed food (Regulation (EC) No 834/2007)

- Non-organic agricultural ingredients may be used only if they have been authorized for use in organic production;
- An organic ingredient shall not be present together with the same ingredient in non-organic form or an ingredient in conversion;
- Food produced from in-conversion crops shall contain only one crop ingredient of agricultural origin
- Substances and techniques that reconstitute properties that are lost in the processing and storage of organic food, that correct the results of negligence in the processing of these products or that otherwise may be misleading as to the true nature of these products shall not be used.

Rules and principles cont...

Specific principles regarding organic food processing (Council Regulation (EC) No 834/2007)

- ❖ the production of organic food from organic agricultural ingredients, except where an ingredient is not available on the market in organic form;
- ❖ the restriction of the use of food additives, of non organic ingredients with mainly technological and sensory functions and of micronutrients and processing aids, so that they are used to a minimum extent and only in case of essential technological need or for particular nutritional purposes;
- ❖ the exclusion of substances and processing methods that might be misleading regarding the true nature of the product;
- ❖ the processing of food with care, preferably with the use of biological, mechanical and physical methods.

Rules and principles cont...

General rules on the production of **processed feed**
(Council Regulation (EC) No 834/2007)

- Production of processed organic feed shall be kept separate in time or space from production of processed non organic feed.
- Organic feed materials, or feed materials from production in conversion, shall not enter simultaneously with the same feed materials produced by non organic means into the composition of the organic feed product.

Rules and principles cont...

General rules on the production of **processed feed** (Council Regulation (EC) No 834/2007)

- Any feed materials used or processed in organic production shall not have been processed with the aid of chemically synthesized solvents.
- Substances and techniques that reconstitute properties that are lost in the processing and storage of organic feed, that correct the results of negligence in the processing or that otherwise may be misleading as to the true nature of these products shall not be used.

Rules and principles cont...

Specific principles regarding organic feed processing
(Council Regulation (EC) No 834/2007)

- The production of organic feed from organic feed materials, except where a feed material is not available on the market in organic form;
- the restriction of the use of feed additives and processing aids to a minimum extent and only in case of essential technological or zootechnical needs or for particular nutritional purposes;

Rules and principles cont...

- **Specific principles regarding organic feed processing (Council Regulation (EC) No 834/2007)**
 - the exclusion of substances and processing methods that might be misleading as to the true nature of the product;
 - the processing of feed with care, preferably with the use of biological, mechanical and physical methods.
- **The use of ionising radiation for the treatment of organic food or feed, or of raw materials used in organic food or feed is prohibited.**

Rules and principles cont...

KRAV standards

- KRAV is Sweden's most well-known environmental label for food and beverages, based on ecological principles with especially high standards for animal welfare, health, social responsibility and climate impact.
- All KRAV-certified operations have to comply with national laws such as animal welfare and environmental legislation.
- KRAV standards meet other standards of organic production at European and international levels. For instance, KRAV meets standards in IFOAM (international federation of organic agriculture movements); Regulation (EC) 834/2007, Regulation (EC) 889/2008, Regulation (EC) 1235/2008.

Rules and principles cont...

KRAV standards and inspection include:

- ❖ production conditions,
- ❖ products and recipes
- ❖ documentation,
- ❖ Labelling and
- ❖ Sampling and analysis on random basis.

Areas of concern for KRAV include:

- ❖ primary production
- ❖ production aids and inputs,
- ❖ Handling, storage, processing and packaging.
- ❖ sales and marketing,
- ❖ products and raw materials certified according to other standards for organic production

Consumers perception on organic product

- In Europe, consumers often associate locally produced and organic food products with higher quality standards (freshness, nutritional value), healthy eating, good taste, cultural values, more environment-friendly production methods and a less emission.
- With increase of consumers' demand for local produces and organic food in Europe [3], land covered by organic farm increased from 7.27 million hectares in 2006 to 11.63 million hectares in 2014.

Consumers perception cont...

- Recent estimates indicate that organic agricultural land covers about 43.7 million hectares of land worldwide and about 26.6% of this is in Europe. In Europe organic food share has increased
- Only in one year (from 2013 to 2014), the organic agricultural land increased by 2.3%.
- Consumer demand for organic food products in Sweden is increasing sharply. For instance, only in 2015, about 1600 new KRAV-labeled items entered the Swedish market and the market for organic food increased by 39% in the same year.

Constraints and opportunities

Constraints in organic food value chain

- More growth of organic market than increase of organic farm area in EU
- Small scale of production and shortage of organic food supply
- Fragmented food supply chains with increased cost of distribution to consumers (high logistics cost)
- Producers gain less share of added value along entire supply chain, especially in matured markets
- Concentration of market power at retail can discourage other actors
- Similarity between supply chains of organic and conventional food items

Constraints and opportunities cont..

Opportunities for growth of organic food sector:

- Good political and legislative framework at EU level for organic food production
- Availability of government support at national and EU level
- Organic food products have specific quality
- High consumer demand
- Opportunity to create co-operation and increase bargaining power
- Possibility to create organic brands at regional levels
- Involvement of public sectors (example schools, health centres) in purchasing organic food products

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