

POSSIBILITIES TO DIVERSIFY THE AGRI-FOOD PRODUCTS OFFER

MARIN DIANA*¹, PETROMAN CORNELIA¹, CIOLAC RAMONA¹, PETROMAN IOAN¹,
VĂDUVA LOREDANA¹

¹*Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania", Faculty of Management and Rural Tourism, Timisoara*

*Corresponding author's e-mail: diana_rachiciu@yahoo.com

Abstract: A strong impact have had on the agricultural and food sectors around the world the progress achieved recently in the field of science and technology. The supply of agri-food products influences the consumer demand through its volume and structure. In the case of a limited supply of a product, the consumer demand is only partially satisfied or the demand will be temporarily directed to other products, intended for the same consumption needs.

Key words: agri-food, products, offer, diversification

INTRODUCTION

On the market, in general, there is a tendency to balance supply with consumer demand, the relationship between them can generate three categories of situations: penury, balance and abundance [1,2].

In case of penury, the size of the supply is lower than the consumption demand, the products have ensured the sale, the time in which they remain in circulation in the form of stock is reduced, and there are interruptions in the sale of the products. The seller controls the market; in this case, there is the phenomenon of inflation that generates accelerated price increases [5,6,].

In the equilibrium situation, both the seller and the producer must deal mainly with the quality of the products, their assortment variety, but also the level of customer service [4,13]. Consumer tastes and demands are taken into account, while a wide range of information and influence of buyers is carried out.

In the situation of abundance, the supply of agri-food products is higher than the consumer demand. Consumer demand has a major role, in this situation, the sale becomes more difficult, and consumers have a choice [3,8,11,15,16]. The assortment structure of the products is diversified, meant to completely satisfy the most varied tastes of the population [10].

MATERIAL AND METHOD

In order to determine a balance between supply and demand on the agri-food market through this scientific approach we came up with a proposal to diversify the supply of agri-food products, in this regard we undertook studies on the importance and characteristics of genetically modified products, organic food and nutritional supplements and functional foods.

RESEARCH RESULTS

Numerous traditional systems, as well as food production capacity for a booming population, have been revolutionized by innovative methods of production and processing.

The United States has created genetically modified organisms, cultivating them on a large scale, they have been accepted by many countries around the world, which consider them a problem to solve hunger, received with distrust by others and vehemently rejected by environmental organizations have become a very controversial topic [14].

Numerous genetically modified plants of major importance in the diet have been created (Table 1), such as maize, potatoes that are resistant to insects, beans, glyphosate-

tolerant soybeans, delayed ripening tomatoes, but with a high solids content. This new generation of GMOs includes oils whose composition has been modified to improve the ratio between saturated and unsaturated fatty acids, "golden" rice, with a much higher content of provitamin A, starch with the ratio of amylose to modified amylopectin.

Table 1

The purposes of genetic modification in some plant products

No.	Species	The purpose of genetic modification
1	Potato	Potato resistance at Colorado beetle (<i>Leptinotarsa decemlineata</i>)
2	Soybean	Glyphosate tolerance
3	Sugar beet	Glyphosate tolerance
4	Corn	Tolerance to ammonium glufosinate

The followers of genetic modification techniques say that their use would only bring advantages, especially for producers and traders of transgenic plants: improving the organoleptic qualities of products (taste, colour, shape), and extending the term of validity of products, by increasing resistance to storage.

However, genetic changes can also have many adverse effects on human health and the environment:

- allergic and toxic effects on people;
- plant and animal diseases, including allergic and toxic effects;
- modified susceptibility of pathogens, facilitating the spread of infectious diseases or the creation of new vectors.

Based on the threats that GMOs presents for the human immune system and the planet's biodiversity, researchers in various fields of knowledge, as well as environmental organizations have created a strong current of opinion against the production of transgenic plants, but nevertheless, GMOs are widely grown in the world.

The problem of organisms which are modified from genetic point of view and food security are connected in the minds of consumers, and this aspect will influence in large part the future decisions regarding this specific technology.

With regard to transgenic organisms, consumer concerns have some specific lines:

- food safety represents an aspect which concerns organisms which are modified from genetic point of view, because of the allergies, or of the residues from pesticide,
- risks and benefits are put in balances by the consumer in purchasing goods;
- transparency - in order to respect transparency, one of the simplest means is the labelling of agri-food products;
- responsibility – consumer must be an active part when it is speaking about organisms which are modified from genetic point of view;

The consumer must remain in the centre of all the concerns of the specialized authorities, but also of all the other decision-makers. In order to prevent human health or even life, food quality monitoring must be taken very seriously.

Organic food has undeniable trophic, sanogenetic and socio-economic valences. Since 2000, the regime of organic food products has been regulated.

According to the standards, four categories of biological products are identified:

- 100% organic, designating products that contain only organically produced ingredients;
- organic, meaning products containing 95% of organically produced ingredients;

- preparations with organic ingredients, meaning products containing more than 70% organic ingredients, but a maximum of three biologically produced components may be specified on the main label of the package;

- processed products, containing less than 70% organically produced ingredients, and the term "organic" can no longer be written on the main label of the package, but the list of ingredients can specify the components that are organically produced.

Organic food production aims to achieve sustainable, diversified and balanced agricultural systems, which ensure the protection of natural resources and consumer health [7,9,12].

Organic food has a fundamental role in ensuring and maintaining human health, with self-healing functions much more important than those reported so far and a superior hygienic value to other types of food (figure 1).

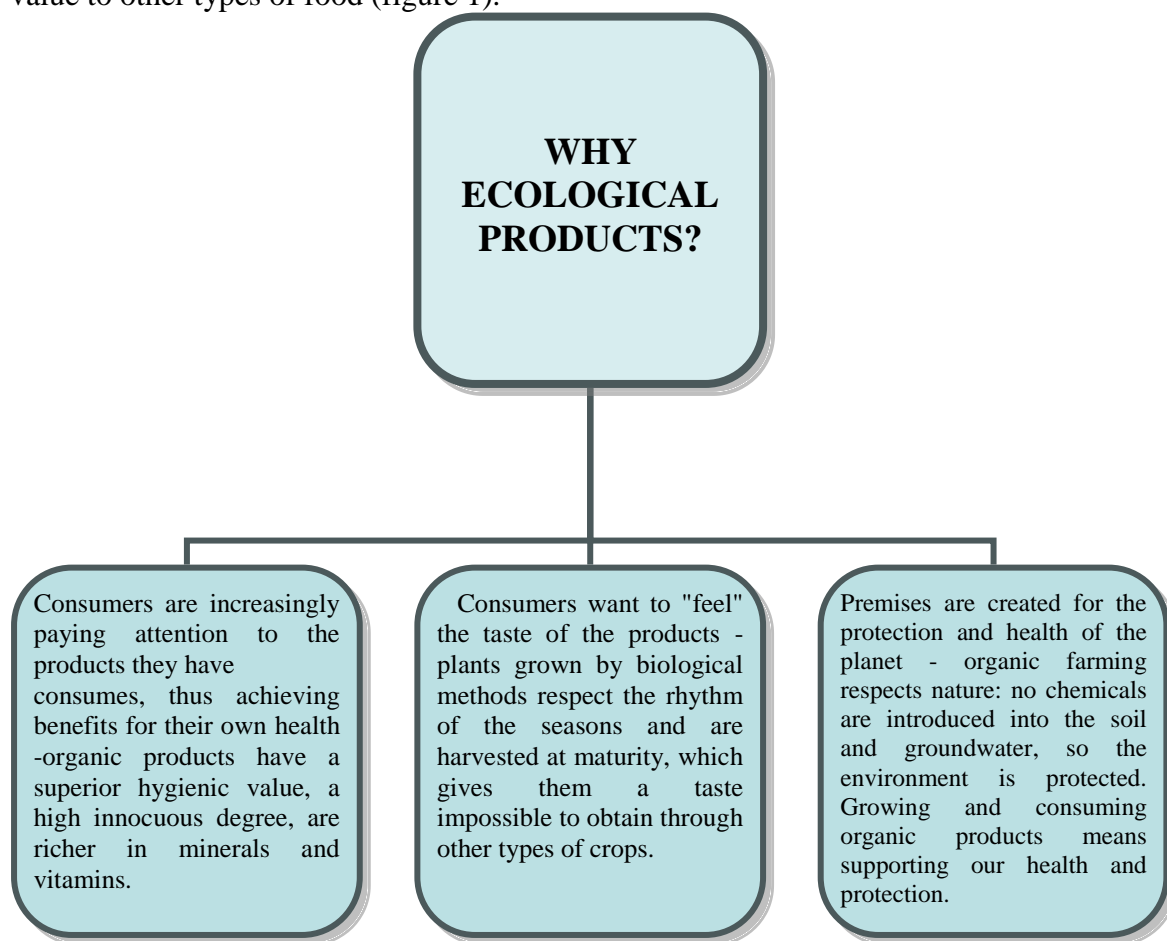


Figure 1. The elements that determine the choice of organic food

Consumers are currently focusing on the use of products that cover their nutrient needs, not covered by the agri-food products consumed, which will provide them with more vitality and energy to carry out daily activities. These products are nutritional supplements, defined as conditioned products in the form of tablets, capsules, dragees, powders or liquids, which contain nutrients (macro- and micronutrients) and/or other edible substances, which are consumed in defined quantities, in addition to the usual food intake.

Various tests performed on food supplements have highlighted the positive effects of some of these products on health, but also the insufficiency, uncertain or even adverse effects of other substances in this category. Consumers have the opportunity to choose from an

unprecedented variety of foods, fortified foods or nutritional supplements, which are now easily promoted and marketed.

In the European Union, nutritional supplements marketed and presented as food are covered by legislation developed by the European Parliament and the Council.

The regime of nutritional supplements, in Romania, is regulated by the normative acts elaborated by the Ministry of Health and Family.

The sanitary approval of nutritional supplements is a mandatory condition for the marketing of these products on the market and aims to ensure the protection of public health by selling products that meet their characteristics and safety.

There is no universal definition for functional food, because a wide variety of agri-food products is or may be classified as such in the future. These foods contain a multitude of components recognized for their ability to influence a wide variety of functions involved in maintaining health and reducing the risk of disease.

Society has had to face the new challenges posed by the lifestyle at the beginning of the 21st century. The science of nutrition has had to adapt to these new conditions, and the continuation of efforts to promote a balanced diet has led to the emergence of a new concept, the one of "optimized nutrition".

At the same time, optimized nutrition aims to meet the specific needs of each individual, proposing certain foods selected based on genetic characteristics and the interaction between food components and genes.

CONCLUSIONS

The production capacity of food necessary for the food of the expanding population has been revolutionized by innovative methods of production and processing, so we can talk about genetically modified organisms that are defined in Romanian legislation, as representing any organism except human, whose genetic material has been modified other than by natural crossbreeding and/or recombination or any biological entity capable of reproducing or transforming genetic material.

Organic food has special trophic, sanogenetic and socio-economic values, so that organic food production aims to achieve sustainable, diversified and balanced agricultural systems, which ensure the protection of natural resources and last but not least the health of consumers.

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