THE ROLE AND PLACE OF AGRO-FOOD PRODUCTS IN HUMAN CONSUMPTION

ZOICAN EUGEN CĂTĂLIN[1], MARIN SORIN[1], BOLD MARINELA LIDIA[1], VĂDUVA LOREDANA[1], PETROMAN CORNELIA*[1]

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

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

Abstract: *Agricultural products designed for human consumption are subjected to some processing processes suffering a series of transformations. Due to the variety of agro-food products, they are classified basis of some distinct criteria, taking into account their composition, the presence of nutrients in the dynamic composition, which gives the products a series of properties that fundamentally and qualitatively distinguish them from other sedimentary or processed, unprocessed, products human consumption.*

Key words*: human consumption, agro-food product, role in human consumption.*

INTRODUCTION

An agricultural product refers to that product in the natural or processed state, designed to consume and which processing transforms into an agro-food product.

The main transformations that the agricultural product suffers are: [1,5]

- change of shape, it consists in a physical and/or chemical transformation, for example, milk processed into cheeses.
- moving to the ground, an example may be growing vegetables in greenhouses for their sale in the markets of big cities.
- the transformation over time, for example, wheat harvested in July is consumed throughout the year.
- change of products ownership, which may have different owners.

By completing a natural growth cycle in the agricultural system, are obtained agricultural products which have the ultimate goal the agro-food consumption and in order to reach this state, they undergo certain processing steps. [7,9]

Because there is a wide range of products of this type, it has been necessary to make a classification according to a number of criteria such as:

a. The origin of the product:

- Animal products
- Horticultural products
- Products from cereal and technical crops

b. Transformation degree:

- Gross, which is consumed fresh, it does not suffer the necessary transformations for consumption, human intervention only refers to preservation, packaging, sorting, storage;
- Intermediate products, they are subject to superficial processing, specific to the first processing steps.
- Processed agro-food products, they suffer to the finite state, a process of industrial transformation.

c. From the point of view of the characteristic of the consumption:

- Products independent of each other, the difference between them is not reflected in the sphere of consumption
- Substitute products, the consumption of such a product eliminate the consumption

of a similar product.

- Complementary products, the consumption of such a product trains the consumption of another product.

Another category of products with the same specific elements are the ecological ones, the difference between them is the way of obtaining and certifying, marking them, labeling, storing and even advertising. [4,11,12]

In this category, we have a higher degree of stringency regarding the system of legal regulation than in case of conventional agro-food products. [6,13,14]

The conditions for a product to be environmentally friendly according to the actual rules are:

- To be achieved by non-polluting technologies.
- The amount of waste resulting from the technological process and obtaining it to be smaller.
- To be recyclable
- To use raw materials and available materials instead of deficient ones
- To be obtained through the efficient use of the resources necessary for its production and use.

A very large influence of these products is directly found in human health. Food consumption is strictly necessary to meet primary needs, hunger, thirst, but according to the level of education and budget of each individual, they can afford to purchase such organic products. [2,3,8,15]

MATERIALS AND METHODS

For the elaboration of this scientific material, we conducted studies regarding the place and role of agro-food products in human consumption according to their main functions, nutritional function, catalytic function, of protection and sanogenesis, therapeutic function, psychosensorial and aesthetic function, hygiene-sanitary function, symbolic function, all for the purpose of product improvement, production technology.

RESEARCH RESULTS

The composition of agro-food products is formed in most cases from a complex of organic and inorganic substances necessary for the human organism, besides which are found indifferent substances and sometimes unnutritional and harmful substances, aspects that lead to the shortness of the functions.

The presence of nutrients in the chemical composition gives it a number of properties that differ fundamentally and qualitatively from those of the non-food product.

Having a primordial role in everyday life in all stages of the formation and development of human personality, the food product influences human factors of life, fulfilling distinctive functions to non-food products.

The main functions of agro-food products are shown in Figure 1:

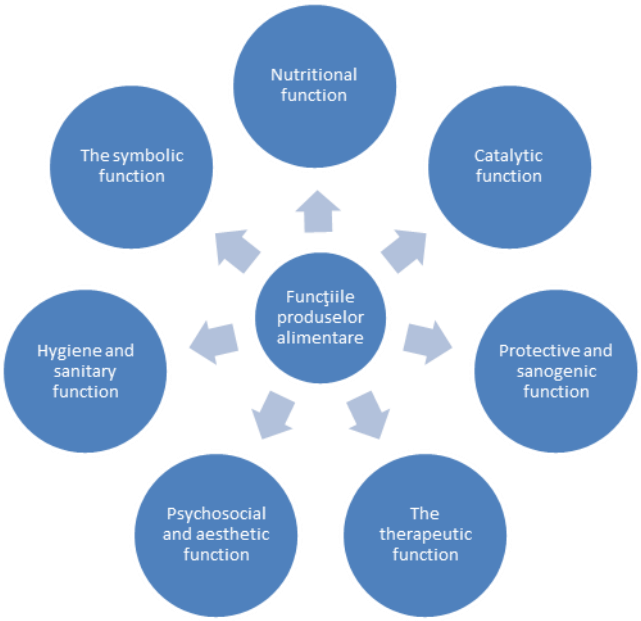

Figure 1. Functions of agro-food products

Nutritional function

It is considered to be one of the most complex functions from the composition of the food, which provides the nutrition of the human body, namely carbohydrates, lipids, mineral salts, vitamins, organic acids and enzymes. Through the food, the body acquires the necessary substances to grow and develop, in order to obtain energy necessary for the vital processes of restoring cells and weeds. The nutritional function is a function dependent on several variables:

F(N) = f (G,L,P,SM,V,A,E)

G = represents the carbohydrates from the composition

L = are the lipids from the composition

P = are the protids from the composition

SM = are the mineral salts from the composition

The specific form through which is expressing the nutritional function of the product is the nutritional value. Being the most important function of the food product has a very high complexity compared to other functions. This is largely influenced by substances from the chemical composition of the product but also by other factors such as: technological processing degree, trophin assimilation coefficients, etc.

Due to the changes and improvements in agricultural or manufacturing technology, under the influence of technical progress, in the chemical composition of agricultural raw materials, in the food product network, we can also talk about a direct improvement in nutritional value and nutritional function.

Catalytic function

This function is given by the action of certain substances in the composition of the food (mineral salts, vitamins, enzymes) that directly intervene in the assimilation and decomposition of certain nutrients existing in product.

The catalytic function is dependent on the following variables:

F (C) = f (P, SM, V, E)

Protids exercise this function by participating in enzyme formation, intervening in the development of all the vital processes of the body. Mineral substances participate in the

proper functioning of some glands (zinc helps the pancreas, thyroid gland iodine etc.) or entering in the composition of vitamins and enzymes.

Function of protection and sanogenesis

This function has a protective role by fulfilling its task through some nutrients from the composition of the food product, which are at the same time health generators for the human body. The food product is not only an element indispensable to life due to its nutritional value and energy value, but also a first-class sanogenicity factor.

In the human body, the ingredients of the product's composition intervene in the defense against microbes, viruses and toxins, also paralyzing the formation of antibodies whose role is well known

The function of protection and sanogenesis is dependent on the following variables of the chemical composition:

F (PS) = f (P, G, L, SM, V, E)

Following studies, it has been found that the whole process of achieving the food product must pursue the manifestation of this function so that it strengthens the body's strength and resistance, its ability to adapt to the ever-changing action of environmental factors and increase the power for work.

Therapeutic function

It is represented by vegetables and food products (cereals, vegetables, fruits) that act as adjuvants in the treatment of certain diseases. In the past, Hippocrates was the one who laid the foundations for this concept and the one who wrote the first books about healthy diet at healthy and sick man.

The therapeutic function is dependent by a set of variables (carbohydrates, lipids, antide, mineral salts, vitamins, enzymes, organic acids) from the composition of the food, whose synergistic action suppresses or attenuates the symptoms of some diseases:

F (T) = f (G, L, P, SM, V, E, A)

Psychosocial and aesthetic function

It is given by shape, color, clarity, consistency, flavor and taste. In the selection of food, the consumer is seduced in most cases by the desires and pleasures offered by the product and less by the nutritional value of the product. The package of these products is normally designed to perform protection functions (mechanical, physical, physico-chemical, biochemical, microbiological), but in the market is used as a marketing strategy to increase sales. This function is dependent by a large number of variables

F (PSE) = f (G, L, SM, Pg, A, Amb)

Pg = pigments

Amb = packaging aesthetics

Hygienic-sanitary function

Designates the sine qua non property, that has to be fulfilled by the food product. In production, this function is the most important because it has a great importance besides the nutritional aspects, the product being strictly checked to meet hygiene standards.

There may be situations when food contains harmful additives, turning into health and disease undermining factors. The hygienic-sanitary function is dependent on a set of specific factors, namely

F (IS) = f (A, MT, Morg, T, Ps, Ad, R)

in which:

MT = toxic substances

Ps = pesticides
Morg = microorganisms
Ad = additive
T = toxins
R = radionuclides

The symbolic function

It is manifested by the message that it transmit to the consumer a food product, suggesting or strengthening the name he designates, the attitude towards food, a certain idea of daily, periodical, limited consumption.

CONCLUSIONS

Agricultural products for human consumption suffer a number of transformations through processing technologies, the presence of nutrients in their chemical composition gives them a number of properties that increase their digestibility and distinguish them from non-consumable products. The main functions of agro-alimentary products, nutritive, catalytic, protective, therapeutic, psychosensory, aesthetic and symbolic and, last but not least, hygienic-sanitary determines the behavior and attitude of consumers towards a particular food.

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