

## LACK OF FOOD SAFETY MAY CREATE FOOD CRISIS

Morna Anamaria

University of Oradea, Faculty of Environmental Protection, 26 Gen. Magheru St., 410048 Oradea;  
Romania, e-mail: anmaria\_simut@yahoo.co.uk

### **Abstract**

*Many regions and countries worldwide are facing real food crises, that often results in an inadequate diet to basic physiological requirements of individuals and even their chronic malnutrition. In this context, the need to assess the nutritional status of populations worldwide is obvious, at a regional and national level, given the extremely negative consequences that poor diet and systematic malnutrition have on human health. [Csosz I., 1997] The issue of food safety is very broad, complex and contradictory, and understanding its real dimensions requires systemic and systematic approach to economic phenomena and processes, in order to deeply understand the particular time and space we live in, the trends and contradictions that are found in the way the evolution of mankind, especially during the last decades.*

**Key words:** food security, food crisis, food safety, diet, consumers

### **INTRODUCTION**

Food safety, the achievement of which can be considered a true indicator of success, is strictly dependent on ensuring a sustainable balance between food production, which depends, in its turn, on the existing food resources, and the growth of population and their income, respectively its food necessity.

In order to achieve this goal, expressing coherent food and nutritional policies is very useful, explicitly structured in a series of measures and actions of government and nongovernmental organizations – at a national, regional and global level as well - based on a good knowledge of food availability and nutrition standards of the population.

Only under these terms we can really talk about meeting physiological nutritional requirements of an individual in order to ensure his harmonious physical and mental development and to allow him to successfully cope with his everyday tasks [Miron M., 1996].

In a broader context, each country is keen to correlate their food and nutrition policies with those of other countries, especially from regions with maximum interest, but also with those recommended by international organizations with responsibilities in this area, especially since today we can not conceive of an economic activity in a self-sufficient form, far from the current integration processes from several parts of the world and from the international economic exchanges that are increasingly bearing the imprint of the globalization phenomenon.

From this point of view, a particular interest is presented by the analysis of the consequences on Romanian agriculture and trade with food products – and on defining national nutritional policies as well – “Agenda 2000”, adopted by the European Union, aimed at a thorough reform of EU agricultural policy, which Romania also has to consider.

## **MATERIAL AND METHODS**

Mankind is facing various crises [Zahiu L., A. Dachin, 2001]. However, those having virtually incalculable implications on certain segments of population are the lack of material and energy resources and the widespread phenomena of hunger and malnutrition.

The acute lack of food for a large part of the world population is known as the food crisis. Generally speaking, the food crisis occurs as a consequence of the farms low productivity, especially in underdeveloped countries, but also due to the population growth. According to FAO (United Nations Food and Agriculture Organization), many countries lack the daily requirements of protein and calories. Most affected are the countries from the Andean region, from the desert regions of Africa and the densely populated Asian countries.

Lately there has been recorded a significant increase in food demand that has led to changes in the size and structure of food supply. Global food production is heavily influenced by factors like population growth, water resources, the area of the agricultural land, yields per hectare and per fed animal, fishing areas capacity and climate.

In order to analyze the access to food sources at a global level it is necessary to study the food availability situation in relation to food demand and food products supply [Zahiu L., V. Toncea, A. Lapușan, F. Toderiu, M. Dumitru, 2003]. Demand for food is directly influenced by population number, which is in continuous growth worldwide.

On the other hand, during the last decades the global food production has recorded a growth that relatively exceeds population growth. However, mankind is faced with phenomena such as hunger and malnutrition because of population growth occurs in regions other than those where food production exceeds [Dona I., 2010]. Mankind has made significant steps in searching, detecting and attracting new food sources. Viewed absolutely, resources have continuously increased and diversified, but in relation to growth and diversification of people’s needs, resources were and remain limited.

Analyzing trends in food production, FAO researches considers that vegetal and animal production, especially in developing countries, will experience a very slow growth (2.7% annually), poorly paced and inadequate year after year.

Food production in agro-food system aims finally to satisfy population consumption needs [Strauss W. P., 11 - 15 octobre 1999]. In order to achieve food production to ensure food needs of the population, in line with population growth, we have to preserve the permanent character of resources: soil, water, forest, solar energy and climate. The continuous growth of population and mismanagement of the environment can lead to a food shortage.

The general trend of modernizing the agriculture in all regions of the world has to consider the specific diet regime of each region, the possibilities of increasing food systems productivity in terms of limited availability of land intended for crops (e.g. Japan).

Even if the increase of global food production barely exceeded population growth, global picture is extremely diverse: if in economically developed countries production exceeded demand, in developing countries, although high growth rates were recorded, food production has barely kept pace with population growth, with insignificant improvements of food, in quantity and quality as well.

## **RESULTS AND DISCUSSION**

An overview of the situation on the global food issue shows a clear line between the industrialized and developing countries [Tracy M., 1994]. FAO/WHO global surveys on food divides world countries according to the food energetic availability per capita, into five categories: over 3000 kilocalories, 2701 to 3000 kilocalories, 2301 to 2700 kilocalories, 2001 to 2300 kilocalories and less than 2000 kilocalories.

Developed countries fall, according to FAO classification, in the first two categories and the underdeveloped countries in the last two categories.

Analyzing these data we can see that the largest geographical areas with a population of over two billion people have equivalent food sources consumption below 2700 kcal/capita/day [Tracy M., 1994,]. Among the countries with the lowest level of animal protein availability, expressed in grams/capita/day, we mention: Nigeria, Rwanda, Mozambique, Bangladesh, Guinea, Indonesia, Zaire, Haiti (under 7 grams protein/capita/day). Third World countries are characterized by poverty or extreme forms of poverty (from South Africa to the Sahara, most part of India).

Solving food issue should start by looking at consumer needs, studying the relationship between food needs and traditional or non-traditional food resources, relying on anthropometric research and aiming on individualized groups of populations in accordance with the biological requirements. Anthropometry allows assessing nutritional status of individuals and anthropometric data are used in many works that examine factors that influence nutritional status of individuals [Popescu D. V., martie 2004]. Anthropometric measurements provide information on the nutritional level

of the individuals and vulnerable groups, which are usually the basic component of nutrition surveillance systems, including data collection systems necessary to further checking of the nutritional level development, and these systems have dramatically evolved during the past 25 years. The level of nutritional status of individuals, measured by anthropometric studies, aims at measurements of some body features, such as weight and height, data being then compared with average values of normal individuals of the same age and sex. Most commonly used anthropometric indicators are weight-height ratio or body mass index, weight insufficiency (underweight issue), slowed growth, birth weight. There are many advantages of using these indicators, being a simple and practical method of describing the issue, providing indirect data about other shortcomings such as lack of adequate access to food and high risks of infection or pollution and being ultimately a way of verifying the effectiveness of previously implemented programs.

Currently there are several methods of evaluating the nutritional level of individuals, particularly in terms of vitamins and minerals deficiencies, but these methods are difficult to use on a national scale in countries with less developed health systems [Bulgaru M., 1996]. These methods are the first step of intervention for the authorities for the benefit of disadvantaged social groups affected by malnutrition, or for preventing malnutrition, but they must be complemented by political and economic measures that would have to lead to a sustainable solution to this problem. Thus, the nutritional level of the population can be improved, the access to sources of food could be facilitated and ultimately the food issue can be improved, at a local, national, regional and international level.

Table 1

Nutritional function of essential product groups worldwide (total energy intake)

Food products groups	Proteins %	Lipids %	Glucides %
<i>Products rich in glucides:</i>			
Cereals	10	4	86
Tubers	5	2	93
Sugar and honey	-	-	100
Fruits and vegetables	12	6	82
<i>Products rich in proteins:</i>			
Legumes	25	6	69
Meat and eggs	23	75	2
Fish and seafood products	59	32	9
Milk and milk products	24	50	26
<i>Products rich in lipids:</i>			
Nuts and oleaginous fruits	20	61	19
Fats	-	100	-
Vegetal products	8	12	80
Animal products	22	70	8

Source: Malassis L., M. Padilla, 1986

Under condition of a proper access to food sources (physically and economically), the demand for food is strongly conditioned by the necessities of food consumption: objective nutrient needs for each segment of the population and extremely diverse subjective needs, depending on traditions, customs, fashion, food habits [Gavrilescu D., D. Giurca, 2000,]. Worldwide there are three main groups of food products with nutritional functions, classified by FAO/WHO. This classification directs food consumption so as to ensure minimum quantities of protein, fat and carbohydrates in the human body.

At a macroeconomic level, the demand for food consumption is understood as a component of the global demand and the food status of a population is often approached only at the level of national average results obtained by the method of food balances or national balance sheets.

## **CONCLUSIONS**

A solution for overcoming the food crisis may be to increase soil productivity and also increase the cultivated area worldwide, but both combined with a better distribution of food between countries (there were situations where food was thrown away, instead of being given to other countries).

Overcoming global food crisis requires converged national and international actions, starting from the fact that producing the necessary food availability of the population involves increasing agricultural production in developing countries by more modern technological processes, which must become the highest economic priority of the world.

In this context, national and international action is needed that will increase the efficiency of production inputs to the agriculture of poor countries, will reduce losses of arable land and add new areas to the arable land, providing an agricultural output higher than the population growth rate. It is necessary that the population of these countries have self-assured revenues, that these revenues are well distributed, making the overall development of national economies the basic solution to food crisis.

Numerous international organizations analyzing the food situation at local, regional and global level are focusing their actions in order to improve access to sources of food, to improve nutritional quality and food healthfulness, to achieve food safety in more numerous parts of the world.

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