ALIMENTARY SAFETY VERSUS FOOD CRISIS

SECURITATEA ALIMENTARA VERSUS CRIZA ALIMENTARA

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Abstract: *Alimentary safety and food crisis represents the main problems that humanity faces nowadays. Last 40 years are defined by a rate of agricultural production growth higher than the population rate of growth. However productivity has increased more in the developed countries while those developing have just kept pace with population growth. Humanity has made huge steps on the line of search, knowledge and attraction of new alimentary sources. From an absolute point of view, resources have continuously increased and diversified, but compared to population's needs growth and diversifying resources they have always been limited. I believe there is a straight connection between food crisis and alimentary safety. Lack of alimentary safety can lead to food crisis.*

Key words: *alimentary safety, food crisis, consumption, population growth, agricultural production*

INTRODUCTION

The global issue of alimentation captured the attention of the international scientific community, because it influences the present situation, as well as the evolution of many other economic, social and political issues of our century. Despite all the past warning signals, the present status of the global alimentation and its immediate perspectives are not reassuring at all. During the last decades, the alimentary issue has become more stringent and acquired new features and dimensions from a qualitative point of view. ***Being at the beginning a national or regional issue, it has turned into a global issue now.*** [3]

Given the present circumstances, the big and growing global differences act like a vacuum, the only difference being that in the complex systems, like the social ones, the consequences are less predictable than in

the case of the simple systems. Therefore, it is in the interest of the whole mankind to act and think rapidly.

In order to deal with this situation, the most important step is now to understand where we are, where we are going to and where is mankind going if the actual state of facts continues.

One can not deal with global issues individually, because they depend on each other and are amplifying themselves, becoming a real threat for human condition. Therefore, it is mandatory to analyze the validity of our ways to develop, of our ways to manage the world. Confronting the unprecedented demographic rise and present technological evolution, human system will become so immense and complicated that ***the holistic approach and evaluation*** will be indispensable.

Another problem is that of the imbalance we cause to ecosystem, by its devastation and pollution, by intensifying pasturing and fishing, by clearing the woods and overexploit the soil. Soil resources are running short exactly when world population and its needs are exponentially growing. Environment issues are to deal with at once. Therefore, it is necessary that the relationship between technical man and nature to be reconsidered with an unparalleled maturity and responsibility.

Solving the alimentary problem and ending starvation require precise and detailed projects, foundation for an adequate alimentary policy. Such projects can be solved only on after a detailed analysis of the alimentary production functions, consumption functions and cultural practices taking into consideration the alimentation of urban and rural families having different levels of income and also the way agriculture production influences pay balance and inflation's control.

In order to decently provide with food a population of 6 billion people, global agricultural production has to be carried out mainly in the developing countries, where alimentary needs will double in the next years.

Through constant efforts and an efficient utilization of the available natural and human resources, alimentary and agricultural production of the developing countries can be at least doubled. This aspect will not do to end starvation and malnutrition. It is necessary a better distribution of the product per capita, especially of the income of marginal, disadvantaged segments of society.

MATERIALS AND METHODS

Alimentary safety is constantly analyzed by the international organizations, through some indicators.

Alimentary consumption per capita is the main general indicator available for watching world alimentary safety evolution, measured on a national scale by **average energetic alimentary availabilities (EAA)**, expressed in kilocalories/day/capita.

The AEA evolution (kilocalories/day/capita) in the developed and developing countries is presented in the following table. This indicator allows following in time and space of average alimentary availabilities.

Table No. 1

Evolution of EAA (kilocalories/day/capita)

	1969 – 1971	**1990 - 1992**	**2010**
Global total, out of which:	2440	2720	2900
- developed countries	3190	3350	3390
- developing countries	2140	2520	2770

Source: Sommet mondial de l'alimentation, Nov.1996, Rome

Unlike the worldwide average, daily energetic alimentary availabilities fluctuations per capita on the continents are not very large, except in North America (a surplus) and Africa (a deficit). Most serious aspect is revealed after analyzing on sources of origin the energetic availabilities, showing a great weight of vegetal origin sources, indicating a system lacking in food of animal origin, particularly in Africa and Asia. Exceptions are made by North America and Europe, where daily energetic alimentary availabilities coming from animal origin sources are double comparing to the worldwide average.

Another important indicator of alimentary safety analysis is represented by the daily trophic (protides and lipids) alimentary availabilities per capita worldwide. Analysis of data provided by the FAO indicate balanced situation in North America and Europe, both in terms of trophic availabilities and the relationship between sources of vegetal and animal origin. The most serious case is recorded in Africa, where protidic and lipidic availabilities are below normal limits, but there are also imbalances between sources of provenance of these trophins, being known that is necessary that at least 30% (50% ideally) of the amount of protein

consumed has to come from food of animal origin, and the vegetable fats proportion must constitute between 1/3 and 1/2 of the total amount of fat. Large differences between countries and regions appear concerning the availabilities of proteins and lipids per day/capita, as well as in their structure on sources of origin. Worldwide, from the daily average protein availability per capita, about 67% is of vegetal origin and 33% of animal origin.

Structure of daily protein availabilities per capita has evolved in favor of animal origin proteins, except for Africa and South America, and the highest increase rate of animal protein availabilities (APA) was recorded in Asia and the countries of Eastern Europe [2].

In Romania, in the year 2007, was recorded, according to FAO, an amount of daily energetic alimentary availabilities per capita of 3274 kcal, out of which 2598 kcal of vegetal origin and 676 kcal of animal origin. These values of daily energetic alimentary availabilities per capita display our country in the first group of countries according to FAO classification (over 3000 kcal). During the same year, the situation of daily trophins availabilities per capita in our country consisted in 98.4 g for protides, out of which 58.8 g of vegetal origin and 39.6 of animal origin, and 93.4 for lipids, out of which 46.5 g vegetal and 46.9 g animal [2].

Another indicator that allows analyzing global alimentary evolution is represented by alimentary availability per capita intended for direct human consumption (or alimentary availability per capita), situation that covers the population food needs. Thus, in the early '60, over 50 % of people around the world lived in countries with very weak food availabilities per capita (less than 2100 kcal/day), but during 1991-1992 only 410 million people belonged in this category [1].

Analysis of the current situation shows that there are great differences between countries as regards the daily average energy and protein availability per capita. They reflect a polarization in industrialized countries of the global food consumption, with high values, over the limits of a normal and rational feeding.

The global alimentary situation can also be followed by analyzing distribution of alimentary availabilities within a country, respectively the share of the population of a country that has access sat the level given by the alimentary availability per capita. For analyses of food safety is estimated that food availabilities per capita must be equal 1.55 times the basic

metabolism. Interpretation on the national level of average data must be made with great care, whereas, even at high levels of average food availabilities, there may be under-consumption situations of some categories of the population, which can be traced by alimentary investigations [1].

Differences found in food consumption come from the inequality of consumption capacity, which is influenced by productive capacity and the buying power.

Numbers of aquaculture production show the enormous potential this source of food has in fighting alimentary insecurity. If there will be granted sufficient importance to environmental impacts and other aspects of this topic, such as infrastructure, aquaculture may become one of the most important sources of food of the future. Demand for sea food is continuously increasing, fact that made aquaculture to hold a share of 23 % of the world fish production in 1997, prognosis indicating a share increase up to 40 % during the next 20 years.

World piscicultural production has increased in 2007 with 45.3 % as compared to 1995, reaching 35.6 million tones, this increase being based on China's actions in this direction [4].

Sea products provide only 16 % of animal origin proteins, since the average consumption per capita is of 16.38 kg per year, at the level of 2000. This is three times higher in developed countries than in poor ones. In Japan is three times higher than in Europe or North America. The U. E. consumption/capita varies between 8.5 kilograms per year in the Netherlands and 43 kg per year in Portugal. Consumption remains low in countries from Eastern Europe, but also in the Third World countries, with some exceptions [4].

RESULTS AND DISCUTIONS

Through the primary food resources it has, our planet can feed a population of several times higher than that which exists today. But food resources of the earth are o none hand insufficiently known and capitalized and on the other hand unfair distributed. For example, between the 35.000 plant species identified by in botanists, 3000 are used in alimentation, but only 150 are more widespread and cultivated in greater proportion. Among

these, 3 species - wheat, rice and corn - cover half the food needs of humanity.

Demand for food in order to meet the food necessities of population depends on many factors [4]:

- economical (supply, income, prices);
- demographical (population number and structure on age and sex, profession, level of culture and education);
- sociological (fashion, social environment, socio-professional mobility);
- organizational (commercial activity quality, promotional actions);
- seasonal;
- conjunctural.

The extension, as well as limited access to food sources, is the result of joining together the factors of exogen nature – formed from the availability of income and aliments themselves, having nutritional value and involving the emotional tonus – and the factors of endogen nature – of physiological, sensorial, psychologically.

With all the progress made, the food situation worldwide is far from being solved, both in developing countries, as well as in those developed. It is a certain fact that the food issue can not be approached in an isolated way, but in close connection with other phenomena and processes which define the contemporary world economy, with other global issues: population, energy, international trade, technical and financial development support.

World alimentary supply is likely to improve only by applying well substantiated agricultural, alimentary and nutritional policies, aiming at restoring food imbalances due either to deficiency, or to plenty [1].

The share of overfed population from industrialized countries has increased in recent years, a large part of the people in these countries going from a traditional alimentation, rich in cereals and vegetables, to a “modern” alimentation, rich in fats and sugars. This "transition" of alimentation was determined by changes in society (income increase, migration to cities, lack of spare time, emancipation of women), which led to a reshape of the alimentary behavior.

At the opposite pole are the poor and weak industrialized countries, where the share of underfed population reaches alarming proportions sometimes, due to the alimentary availabilities deficiency.

We can say that world population is divided, from a nutritional point of view, in two categories – under fed and overfed – both categories suffering from malnutrition, with major impact on health.

The underfeeding issue constitute a permanent point of interest worldwide, a more complex approach being imperative, because of its multiple causes, but also because the difficulty of practical implementing solutions. This approach requires passage from a simple physical distribution of aliments to a closely study of economical, political, social and technical factors at a macro and micro-economical level.

Thus, at the World Food Summit in June, 2002, organized by FAO, it was reiterated the major objective which was established during World Food Summit in Rome, in 1996, respectively reducing up to half of the world underfed population until 2015 [4].

With all the measures taken and recorded progress, the number of underfed is only decreasing with 8 million people per year. This decline is insufficient for the Summit to achieve its objective, 22 million people annually. In this context, FAO believes that the development of agriculture represents the essential factor for eradication of poverty and strengthening alimentary safety. During the meeting it was pointed out that hunger is both a cause and a consequence of extreme poverty, which prevents poor people to benefit from opportunities of development. Therefore, it was reaffirmed that starvation eradication is a vital step in reducing poverty and inequality. Also, 70 % of the poor population and with an insufficiency in alimentation lives in rural areas and depends entirely on the revenue coming from agriculture. This will be added to the fact that a rapid increase of the number and proportion of population takes place in urban areas affected by poverty, starvation and malnutrition. Under these circumstances, it was underlined the importance of measures to increase productivity in agriculture, to a more efficient use of natural resources [2].

In my opinion, food insufficiency will constitute a major problem of a new era, which started in the 90's and continue at present. New era can also be called "environmental stage" and brings changes in the alimentary issue worldwide compared to the period 1950-1990, that can also be called the „economical stage". Adopting the issue of food sources impairment from multidisciplinary perspectives makes possible, during the environmental stage, to trace causes under different aspects and find solutions less limited that in the past.

CONCLUSIONS

In conclusion, I consider that there is a direct link between food crisis and alimentary safety. The lack of alimentary safety can generate food crisis. The food crisis is a phenomenon affecting, generally, the developing countries and countries in transition. In the developed countries the phenomenon of food crisis is less spread and aims mostly at the population having low income or socially assisted. In the developing countries crisis affects wide sections of the population.

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