

Monitoring of food supplements in Romania Note I. Food supplements in Banat area

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Abstract

Problems related to food supplements present a special interest because they are used currently for health maintenance and optimizing. Often, in depleted status of the organism, food supplements are used as complementary substances in order to maintain the physiological balance, most rigorously the «biochemical homeostasis» which defines the health status. Also, food supplements are administered to optimize health status in convalescence when the supplementation of the diet with some nutrients is very important. Currently, in such cases the use of food supplements achieves the need. A general study regarding the manufactured and marketed food supplements in Romania was performed in each county and grouped on historical areas: Banat, Moldavia, Muntenia, Ardeal. This paper will present data regarding the situation of food supplements in Banat area which comprises the counties: Arad, Caras-Severin, Hunedoara and Timis. There were identified the food supplement providers from the Banat area and selected some of them for this study.

Keywords: food supplements, monitoring in Banat area

1. Introduction

Human nutrition, regarded from the point of view of a group of disciplines included in the domain of « food science » is of interest in order to know the nutrient composition of the diet, their trophic and energetic intake (Brody, 1994; Mills, 1997; Garban and Garban, 2004). In case of food supplements studies are focused on their importance in completing the exogenous food intake and to the assurance of the nutritional requirements in special physiological status: e.g. pregnancy, lactation; age (infant, children, etc.) and physical activity: e.g. athletes, work places needing physical effort a.o. (Macrae, 1992; Brueckner, 1986)

Since January 1, 2007 Romania is a Member State of the European Union having equal rights with other Member States but also indebtedness regarding the harmonization of rules.

In this context the regulations regarding general problems of nutrition and food supplements (a special domain of food science) more exactly the used raw materials, the processing, composition, admitted concentrations, administration etc. were changed, more exactly the EU directive was transposed.

Based on the Directive 2002/46/EC of the European Parliament and of the Council and Directive 37/2006 amending the first one, there was emitted the new national Regulation 1069 /2007 of the Ministry of Health permitting the free circulation of goods.

For these reasons it was considered necessary the monitoring and inspecting of food supplements at national level, in order to identify the manufacturers, importers and distributors in this section.

Health maintenance is associated with human nutrition and with various nutrients existing in the foods consumed daily.

According to the EU Directive and national Regulations “food supplements are foodstuffs the purpose of which is to supplement the normal diet and which are concentrated sources of nutrients or other substances with a nutritional or physiological effect, alone or in combination, marketed in dose form, namely forms such as capsules, pastilles, tablets, pills and other similar forms, sachets of powder, ampoules of liquids, drop dispensing bottles, and other similar forms of liquids and powders designed to be taken in measured small unit quantities”. The main nutrients present in food supplements are vitamins, minerals and various biologically-active substances (Rannert and Chan, 1981; Garban and Garban, 2005).

The aim of this study was to identify the manufacturer, importers and distributors of food supplements in the counties of Banat area, to register their composition; to verify labeling requirements and to verify the

hygienic conditions in factories, stores and warehouses in order to assure safe products for consumers.

2. Materials and Methods

In Romania the Ministry of Health transposed the EU Directive regarding food supplements and consecutively the health authority started the monitoring and inspecting of food supplements at national level (Garban 2006, 2007, 2008a).

The general presentation of the geographic area – evidencing all the counties of Romania - where the study was performed is presented in Fig.1.

In this context, a methodology was elaborated by the specialists from the Institute of Public Health Timișoara and widespread to 41 County Directorate of Public Health and to the Directorate of Public Health of Bucharest. The task of specialists was the identification of the

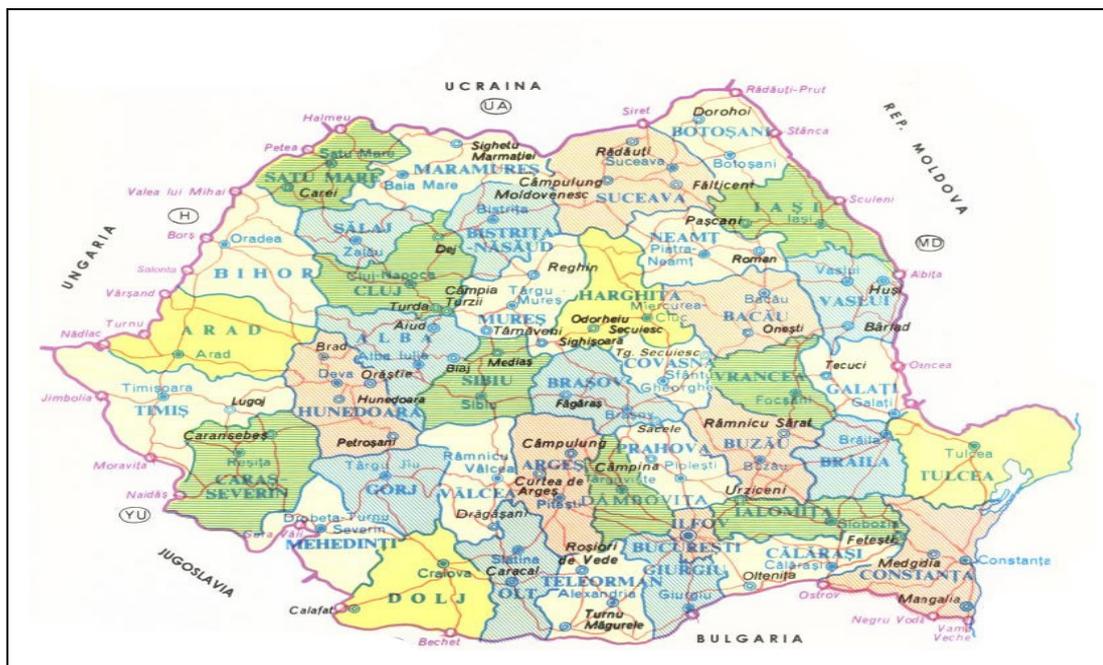


Figure 1. Geographic areas where the study was performed; 1) Banat; 2) Muntenia; 3) Moldova; 4) Ardeal

manufacturers of food supplements in Romania, the food supplements importers and the special stores where food supplements are sold. Afterwards the most representative ones in each county were selected for study.

The problem of food supplements was also the object of the Codex Alimentarius Commission which in the frame of the Common Program WHO/FAO on the XIX Session in 1995 established the directory lines concerning similitudes and discrepancies between food, drugs and food supplements (for more details see Garban and Garban, 2004).

Aspects related to the quantitative and qualitative composition of nutrients present in food supplements, to food safety, traceability (e.g. to avoid chemical xenobiotics in food) are the main studied subject by the United States Food and Drug Administration (USFDA) and of the European Food Safety Authority (EFSA) (Pomerantz and Meloan, 1971; Garban 2008b).

The definition of food supplements (that is the circumscribing of the domain) has in view the fact that these are designated for oral administration. Necessity of their use was enforced by their trophic value and, secondly, by their medical aim (prevention). Trophic value is estimated as a complementary intake beside naturally consumed foods (Mogos, 1999; Williams, 2001).

Specific Guides elaborated by us, for each type of units, the specialists verified the hygienic conditions in the selected factories, stores and warehouses. Labeling requirements of food supplements were also verified and their composition recorded.

Data were centralized in the Institute of Public Health Timișoara (Garban, 2008a).

In the present paper there are discussed data referring to food supplements situation in Banat area (located in the South-West of Romania) which comprise the counties: Arad (AR), Caraș-Severin (CS), Hunedoara (HD) and Timiș (TM).

3. Results and Discussion

Vitamins and minerals may be ingested from a variety of foods that are eaten as part of the daily diet. They can be naturally present in foods or added to them both for technological or nutritional purposes.

It is known that the nutrient content of foods fluctuates widely, depending on the growing conditions. Because of differing geological conditions, minerals may be scarce in the soils of certain areas and rich in other areas. Food processing, use of additives, i.e. artificial colors, preservatives etc. determine the loss of minerals, vitamins and other nutrients. Also, stress depletes the vitamin and mineral stores of organism rapidly.

According to the received data from the Public Health Directorates, there were identified 1430 food supplement providers and selected for study 260 from among 17 were manufacturers, 219 distributors and 24 warehouses.

The situation for the Banat area is given in table 1, evidencing the number of identified providers and the selected ones for inspection and monitoring.

Table 1. Food supplement providers in Banat area of Romania

Nr	County	No. of identified providers				No. of studied providers			
		Manu- factu- rers	Distri- butors	Ware- houses	Total	Manu- factu- rers	Distri- butors	Ware- houses	Total
1.	Arad	-	313	-	313	-	3	-	3
2.	Caraș-Severin	-	6	-	6	-	1	-	1
3.	Hunedoara	2	11	-	13	2	11	-	13
4.	Timiș	2	20	5	27	2	12	5	19
Total		4	350	5	359	4	27	5	36

One can observe that the food supplements marked in Banat area come mostly from distributors and less from manufacturers, meaning that the number of national manufacturers are reduced. Also, from table 1 we can see that only a few providers were selected for study.

performed focusing on labeling aspects, storing conditions a.o. – table 2.

Excepting a distributor from Caras-Severin, having minor problems, the other controlled objectives presented no risk for health.

In table 3 there are depicted the number of

Table 2. Hygienic inspection at the selected providers

Nr	County	No. of identified providers				Results
		Manu- factu- rers	Distri- butors	Ware- houses	Total	
1.	Arad	-	3	-	3	No problems
2.	Caras-Severin	-	1	-	1	Minor problems
3.	Hunedoara	2	3	-	5	No problems
4.	Timiș	2	10	3	15	No problems
Total general		4	17	3	24	No problems

During the control the composition of each food supplements were recorded in order to permit their categorization: simple one with vitamins and minerals in their composition and complex one having beside vitamins and minerals vegetal extracts or various other biologically-active substances.

food supplements identified in each county and type of provider.

According to the obtained data there were identified 897 types of food supplements and mostly with complex composition.

In the economy of the whole organism food nutrients have well defined roles: morpho-genetic, energogenetic, effectors (activator/inhibitors) in metabolic processes, informational (nucleic acid macromolecules), physico-chemic (maintenance of homeostasis).

In all the four counties of the Banat area there are a large number of distributors. In Hunedoara county there were identified 399 distributors. As to the manufacturers, their number is reduced and they are present only in Hunedoara and Timis counties. Warehouses were found only in Timiș county.

Reduced quantum of some nutrients in the diet may produce disturbances in the organism. In such cases food supplements are recommended. Their safe use is conditioned by respecting the principles of a good manufacturing practice by the manufacturers but also by controls regarding their composition and hygienic conditions they are sold.

It is known that food supplements improve, support or optimize the normal physiological processes within the boundaries of homeostasis without modifying, altering or blocking any physiological process outside these boundaries.

After the identification and selection of providers in order to be studied by the specialists, a hygienic control was

Nowadays mineral insufficiency and trace element insufficiency states as well as vitamin insufficiency occur frequently. Those at increased risk of such insufficiencies include people who eat low-calories diet, the elderly, pregnant women,

Table 3. Food supplements types according composition

Nr Crt	County	No. of food supplements types			
		Manu- facturers	Distri- butors	Ware- houses	Total
1.	Arad	-	78	-	78
2.	Caraş-Severin	-	1	-	9
3.	Hunedoara	56	399	-	455
4.	Timiș	85	128	135	348
Total general		143	613	132	897

people taking certain drugs (e.g. diuretics), vegetarians and those living where the soil is deficient in certain minerals. Because of different geological conditions minerals and trace elements may scarce in the soil of certain region and rich in those of other regions (Hamilton et al., 1988; O'Dell and Sunde, 1997; Merian et al, 2004).

Various diseases reduce also the mineral and vitamin nutrients intake and especially those that interfere with the ingestion, digestion, absorption and requirement of nutrients: celiac disease, Crohn disease, irritable bowel syndrome, lactose intolerance, bacterial, viral and parasitic infections.

4. Conclusions

In the Banat area there were identified four food supplements manufacturers – 2 in Hunedoara county and 2 in Timis county.

The controls regarding hygienic conditions in the selected units did not reveal problems which lead to using restrictions.

According to the food supplements types they are mostly of complex composition, containing not only vitamins and minerals but also other ingredients.

The monitoring revealed 897 products of which 143 were manufactured in Romania.

Note: This study was performed in the framework of the National Health Programme 4 of the Ministry of Health. It is based on the Directive 46/2002/EC and three national regulations: Regulation Nr. 1069 / 2007 of the Ministry of Health - which transposes the EU Directive 46/2002 ; Regulation No. 1228 /

2005 / 244 / 63 /2006 of Ministry of Agriculture, Forestry and Rural Development, Ministry of Health, National Sanitary-Veterinary and Food Safety Authority and Regulation No. 244 / 401 / 2005 of Ministry of Health and Ministry of Agriculture, Forestry and Rural Development.

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