Analysis of results

Nutritional assessment of household food availability

As mentioned earlier, the Consumer Expenditure Survey - POF 2008-2009 collected data on the type and amount of food purchased by Brazilian families. These data re fl ect the availability of food for consumption at home and not your actual consumption by individuals. To that extent, the analysis of such data does not provide all the information necessary for the complete assessment of the nutritional adequacy of food consumption in Brazil. A more complete assessment of adequacy will be made in due course from data on actual food consumption collected from a sub-sample of households surveyed by the research.

Still, data on household food availability, such as the POF 2008-2009, can provide useful information on the nutritional adequacy of the food the family pattern, since two assumptions are made: the fraction not used the food does not vary much food for food and when the food consumed in the home represent a considerable proportion of total food consumption.

Regarding the untapped fraction of food, admitese it is relatively small and not very different between the various consumer items, excepted perhaps the case of highly perishable foods such as vegetables. As regards the relative importance of consumption of household food, it is estimated that in POF 2008-2009, it represents at least 70% of total calories consumed. Comes to this amount taking into account that

68.9% of total food expenditures stem from food purchased for consumption at home and assuming that the cost per calorie of these foods is at least slightly less than the cost of food made outside the home.

The indicators used in this study will focus on participation in household food availability groups with different nutritional properties and the suitability of all the food available in the relative contribution of selected nutrients. In the latter case, to take into account nutritional recommendations made by the United Nations through its agencies World Health Organization - WHO (World Health Organization - WHO) and Food and Agriculture Organization - FAO (United Nations Food and Agriculture) (DIET ..., 2003).

The description of the relative share of food in household availability, came from the 334 items of consumption (food or combinations of foods) previously categorized from POF information [1]. These items were classified fi ed into 15 groups: three groups of basic foods of plant origin, which are energy sources

and in different proportions, also protein, micronutrients and fi arms (derived from cereals and beans and other legumes and roots, tubers and derivatives thereof); Three groups of food of animal origin, simultaneous sources of energy, protein, fat (especially saturated fat) and micronutrients (meat and meat products, dairy products and eggs); two groups of plant foods, low energy density, but rich in micronutrients and bras fi (fruit and natural juices and vegetables); four groups of mainly high-calorie foods (vegetable oils and fats, animal fats, table sugar and soft drinks and alcoholic beverages); and two groups of foods with less substantial participation of the population in food (oil and seasonings)

and also a group of ready meals and industrialized mixes. The relative contribution of each nutrient in the food availability considered only the contribution of macronutrients, ie carbohydrates, proteins and lipids. Carbohydrates were subdivided into free sugars (table sugar, brown sugar and honey more mono and disaccharides added to processed foods) and other carbohydrates, including those naturally occurring sugars in staple foods such as milk and fruit. Proteins were subdivided as animal or vegetable origin while lipids were subdivided into monounsaturated fatty acids, polyunsaturated and saturated. Both for food as in the case of macronutrients,

For processing the raw quantity (in kilograms and the way in which they were acquired) of food in calories and macronutrients, it was considered the original list of 334 items elaborated in the aforementioned context. In the case of items composed of more than a food, it was considered the food with greater participation in the item. This transformation started with the application to 334 items of consumption correction factors that exclude non-edible parts of food

[1] This list of items resulted from work performed to generate the publication ***Search for family budgets 2008-2009: household food acquisition per capita,*** IBGE simultaneously to the study presented here. That publication describes the methodology for the construction of the quantities in kilograms associated list items 334, which are the starting point for obtaining the indicators discussed herein.

(TABLES ..., 1999). Next, to get to the available amount of calories and macronutrients, was used preferably TACO table - Brazilian Food Composition Table, prepared by the Center for Studies and Research in Food - NEPA, State University of Campinas - U NICAMP, with fi nancing of the Ministry of Health and Ministry of Social Development and Fight against Hunger (TABLE ..., 2006), also using the of fi cial tables of nutritional composition of the Department of Agriculture of the United States (United States Department of Agriculture - USDA).

The indicators used in this study include the average of the total caloric value of household food availability (expressed in kcal *per capita* per day) and the relative share in that availability of food groups and selected macronutrients. Estimates for these indicators will be presented for the group of Brazilian families and families of these strata constituted from the urban or rural household situation, Major Region and income classes. Estimates of household food availability in each of the Brazilian states and their capitals are presented in Appendix 1. In addition, they present comparisons between estimates obtained from POF 2002-2003 and POF 2008-2009.

household food availability in 2008-2009

The average domestic availability of food at home estimated by POF 20082009 amounted to 1611 kcal per person per day, from 1536 kcal in urban areas and 1973 kcal in rural areas (Table 1). As mentioned earlier, it is not possible to assess the adequacy of this caloric availability, since they are not objects of study the fraction of the food actually consumed by households, the amounts for the consumption outside the home and even the variation in energy requirements of various strata of the population. Thus, it would not be correct, for example, assume that the probability of *dé fi cits* calorie in the country is higher in urban areas than in rural areas. In this case, most likely, in fact, it is that the reduced availability of calories in urban areas re fl ita the highest frequency of food consumption away from home (POF 2008-2009 data on spending on food con fi rm it) and possibly also, lower energy requirements than in rural areas.

The relative share of food groups in total food available for consumption at home indicates that basic plant foods (cereals, pulses and roots and tubers) account for 45% of total calories coming, then, with 28%, food essentially calorie (vegetable oils and fats, animal fat, table sugar and soft drinks and alcoholic beverages) and with 19%, animal products (meat, dairy products and eggs). Fruits and vegetables and vegetables account for only 2.8% of total calories, or about a quarter of recommendations for the consumption of these foods (at least 400 grams daily, or about 9% -12% of total calories from a 2 diet 000 kcal daily (TAB ...,

2005). Finally, ready meals and industrial mixtures correspond to 4.6% of the total calories while, as expected, the participation of condiments (0.3%) and oil (0.2%) and very little significant (Table 1).

Table 1 - Relative participation of foods and food groups in total of calories determined by household food acquisition, by household situation - Brazil - 2008-2009 period

Foods and food groups	relative share (%)		
	Total	household situation	
		urban	Rural
Total	**100.0**	**100.0**	**100.0**
Cereals and derivatives	35.2	35.2	35.3
polished rice	16.2	15.4	19.3
French bread	6.4	7.4	2.5
Cookies	3.4	3.6	2.8
spaghetti	2.7	2.7	2.4
Wheat flour	2.1	1.9	3.1
Others	4.4	4.2	5.1
Beans and other legumes	5.4	5.1	6.8
Roots, tubers and derivatives	4.8	3.7	8.9
Potato	0.5	0.6	0.3
Manioc	0.3	0.3	0.6
manioc flour and other	3.9	2.9	8.0
Meat	12.3	12.6	11.4
Bovina	4.4	4.6	3.8
Chicken	4.0	4.2	3.5
swine	0.7	0.6	1.0
Fish	0.6	0.5	1.0
inlaid	2.2	2.4	1.5
other meat	0.4	0.3	0.7
Milk and dairy products	5.8	6.1	4.5
milk	4.4	4.6	3.9
cheese	1.1	1.2	0.5
other derivatives	0.3	0.3	0.1
eggs	0.7	0.7	0.7
Fruits and natural juices	2.0	2.3	1.2
bananas	0.9	0.9	0.6
oranges	0.3	0.3	0.2
other fruits	0.8	0.9	0.5
Natural juices	0.1	0.1	0.0
And vegetables	0.8	0.9	0.6
Tomato	0.2	0.2	0.1
Lettuce	0.0	0.0	0.0
Others	0.6	0.6	0.4
Vegetable oils and fats	12.6	12.9	11.5
Soy oil	9.7	9.7	9.9
Margarine	1.7	1.9	1.1
Others	1.2	1.3	0.6
animal fats	1.5	1.5	1.2
butter	0.3	0.4	0.2
lard	0.6	0.5	0.8
Others	0.6	0.7	0.2
table sugar and soft drinks	13.0	12.5	14.9
Table sugar	11.2	10.5	14.1
Soft drinks	1.8	2.0	0.8
Alcoholic beverages	0.7	0.8	0.4
Beer	0.4	0.5	0.2
brandy	0.1	0.1	0.1
Others	0.2	0.2	0.1
oilseeds	0.2	0.2	0.4
Spice	0.3	0.4	0.2
ready meals and industrialized mixes	4.6	5.3	2.0
Total calories (kcal / day *per capita)*	**1 610.49**	**1 536.14**	**1 972.85**

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2008-2009.

The relative participation of macronutrients indicates that 59% of total calories available for consumption in Brazilian households come from carbohydrates, 12% protein and 29% fat, which would demonstrate an adequate diet with nutritional recommendations: between 55% and 75% for calories carbohydrate, between 10% and 15% for protein calories and between 15% and 30% lipid calories. A proportion of more than 50% of animal proteins (higher biological value) and a content of saturated fatty acids (associated with cardiovascular diseases and diabetes) than the maximum recommended limit of 10% of the total calories are also adequate evidence nutritional average household food availability in Brazil. The only evidence of an imbalance is the excess free sugars fraction 16

Table 2 - relative participation of macronutrients in the total calories given by household food acquisition, by household situation Brazil - 2008-2009 period

macronutrients	relative share (%)		
	Total	household situation	
		urban	Rural
carbohydrates	**59.2**	**58.0**	**63.8**
free sugars	16.4	16.2	17.2
too many carbs	42.9	41.9	46.7
proteins	**12.1**	**12.3**	**11.4**
animals	6.7	6.9	6.0
Vegetables	5.4	5.4	5.4
lipids	**28.7**	**29.7**	**24.8**
monounsaturated fatty acids	9.2	9.6	7.6
Polyunsaturated fatty acids	9.2	9.4	8.4
Saturated fatty acids	8.3	8.7	7.0

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2008-2009.

household food availability in urban and rural areas

The relative contribution of cereals and derivatives was similar in urban and rural areas of the country (about 35% of total calories), having, however, rural-urban substantial differences with respect to food components of this group. They were more important in the urban bread (7.4% of total calories compared to 2.5% in rural), biscuits (3.6% vs. 2.8%) and pasta (2.7% vs. 2.4%) as were most important in rural rice medium (19.3% of total calories from 15.4% in urban areas), wheat flour (3.1% vs. 1.9%) and other cereals and derivatives (5.1% against

4.2%). Participation beans and other legumes and roots and tubers was higher in rural areas than in urban areas (6.8% of total calories from 5.1% and 8.9% against
3.7%, respectively). The share of meat and dairy products was higher in urban areas than in rural areas (12.6% versus 11.4% and 6.1% vs. 4.5%, respectively).

A similar situation was observed for the three most important components of the group of meat - beef (4.6% vs. 3.8%), chicken meat (4.2% vs. 3.5%) and meat (2.4% versus 1.5%) - and all components of the milk and dairy group. The opposite situation, namely, evidence of greater relative food consumption in rural areas was observed for pork meat, fish and other meat. The joint participation of

and fruits and vegetables was higher in urban areas than in rural areas (3.2% of total calories compared to 1.8% respectively) although, even in urban areas, such participation is well below the 9% -12 recommendations % of total calories.

Participation of calorie foods was essentially similar in urban and rural areas (about 28%), but the speci fi ca participation of table sugar was higher in rural areas than in the urban environment (14.1% vs. 10.5%) while the share of soft drinks was higher in urban areas than in rural areas (2.0% versus 0.8%). Participation of alcoholic beverages in total calories, although reduced, was more important in urban areas (0.8%) than rural areas (0.4%). Finally, both the participation of ready meals and mixtures industrialized as the condiments were higher in urban areas than in rural areas (5.3% and 2.0% of total calories from 0.4% and 0.2%, respectively), while the participation of oil, even of very small generally was higher in rural areas than in the urban environment (0.4% vs. 0.2%) (Table 1).

The relative contribution of nutrients in the diet of urban and rural populations in the country indicates a slight difference with respect to protein content, in the substantial differences with respect to carbohydrates and lipids (Table 2). While in rural areas
63.8% of the calories come from carbohydrates and only 24.8% of lipids, in urban areas
58.0% of the calories come from carbohydrates and 29.7% lipids. The "exchange" of carbohydrate calories a lipid calories in urban areas is not done at the expense of reducing the fraction of free sugars (similar and very high - about 16% -17% of total calories - in urban and rural areas) but rather at the expense of reduction of other carbohydrates.

Note also that the proportion of lipid calories in urban areas is already approaching the limit of 30% fi xed by nutritional recommendations. It is noted also that the saturated fat content in urban areas (8.7% of total calories) is higher than in rural areas (7.0%) and that in this case the urban consumption also approaches maximum recommended. The relative excess of saturated fats in urban areas due to a greater share of animal products (beef, chicken, sausages, and dairy products) while the relative excess fat generally takes place additionally, the greater share of oils and fats vegetables (mainly margarine and other vegetable fats other than soybean oil).

household food availability in the Major Regions

Per fi s of different household food availability characterize the five Great Country Regions (Table 3). Thus, for example, the share of rice in food availability in the Midwest Region and the participation of the wheat flour in the South exceed in one and a half to two times and four to six times, respectively, the same participation observed in other regions of the country.

Similar situations are seen in connection with beans and biscuits in the Northeast; cassava flour in the North and Northeast; meats in general, in the North and South Regions; fish in the North; pork in the South; fruits in the South and Southeast; soybean oil in the Midwest and Southeast; bacon in the South; soft drinks, alcoholic beverages, condiments and ready-made meals in the South and Southeast; and oilseeds (brown-nut) in the North.

Examples of availability well below the national average occur in the North and Northeast with respect to dairy products and vegetables. The pro fi l of household food availability in urban and rural areas of each region can be seen in Table 4.

Table 3 - Relative participation of foods and food groups in total calories determined by household food acquisition, by Major Regions

period 2008-2009

Foods and food groups	relative share, by Major Regions (%)				
	North	Northeast	Southeast	South	Midwest
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Cereals and derivatives	29.7	37.2	35.0	34.2	37.6
polished rice	15.4	16.7	16.5	12.4	23.3
French bread	5.5	6.8	7.3	4.7	4.8
Cookies	2.6	4.1	3.3	3.3	2.5
spaghetti	2.2	2.9	2.6	2.9	2.0
Wheat flour	1.1	0.7	1.6	6.6	1.9
Others	2.9	6.1	3.8	4.5	3.1
Beans and other legumes	5.2	7.4	5.0	3.5	5.2
Roots, tubers and derivatives	14.4	7.7	2.0	2.4	2.2
Potato	0.2	0.3	0.7	0.9	0.5
Manioc	0.5	0.3	0.2	0.7	0.4
manioc flour and other	13.7	7.2	1.1	0.8	1.4
Meat	16.2	12.0	11.4	13.6	11.3
Bovina	5.4	4.4	3.8	5.1	5.1
Chicken	5.6	4.6	3.5	3.8	3.4
swine	0.5	0.4	0.7	1.2	0.6
Fish	2.5	0.8	0.4	0.2	0.3
inlaid	1.3	1.3	2.9	3.0	1.7
other meat	0.9	0.4	0.2	0.4	0.2
Milk and dairy products	3.7	4.6	6.6	7.3	5.2
Leites	3.2	3.7	4.9	5.6	4.1
cheese	0.4	0.8	1.4	1.4	0.9
other derivatives	0.1	0.2	0.3	0.3	0.2
eggs	0.7	0.7	0.7	0.8	0.6
Fruits and natural juices	1.3	1.9	2.2	2.3	1.9
bananas	0.6	1.0	0.9	1.0	0.7
oranges	0.2	0.2	0.3	0.2	0.3
other fruits	0.5	0.7	0.9	1.0	0.8
Natural juices	0.1	0.1	0.1	0.1	0.1
And vegetables	0.5	0.7	0.9	0.9	0.9
Tomato	0.1	0.2	0.3	0.2	0.3
Lettuce	0.0	0.0	0.0	0.0	0.0
Others	0.4	0.5	0.6	0.6	0.6
Vegetable oils and fats	11.1	10.3	13.9	12.9	15.3
Soy oil	8.9	7.8	10.8	9.5	13.0
Margarine	1.4	1.8	1.7	1.7	1.4
Others	0.8	0.7	1.4	1.8	0.9
animal fats	0.8	1.0	1.8	1.8	1.4
butter	0.5	0.4	0.4	0.1	0.2
lard	0.2	0.2	0.7	1.0	0.6
Others	0.2	0.4	0.8	0.7	0.5
table sugar and soft drinks	11.8	13.1	13.5	12.1	13.1
Table sugar	10.5	12.2	11.3	9.8	11.4
Soft drinks	1.3	1.0	2.2	2.3	1.7
Alcoholic beverages	0.3	0.4	0.9	0.9	0.7
Beer	0.2	0.2	0.6	0.6	0.5
brandy	0.1	0.1	0.1	0.1	0.1
Others	0.1	0.1	0.3	0.3	0.2
oilseeds	1.3	0.1	0.1	0.2	0.1
Spice	0.2	0.2	0.4	0.5	0.3
ready meals and industrialized mixes	2.9	2.7	5.6	6.6	4.3
Total calories (kcal / day *per capita)*	**1 818.28**	**1 602.02**	**1 529.68**	**1 785.37**	**1 530.53**

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2008-2009.

Table 4 - Relative participation of foods and food groups in total calories determined by household food acquisition, by Major Regions and household situation - 2008-2009 period

Foods and food groups	Relative share, by Major Regions and household status (%)									
	North		Northeast		Southeast		South		Midwest	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Cereals and derivatives	32.1	24.7	37.2	37.2	34.6	38.6	34.2	34.3	37.7	37.2
polished rice	15.6	15.0	15.0	20.4	15.4	24.0	12.4	12.4	23.1	24.5
French bread	7.4	1.8	8.6	2.9	7.8	3.2	5.5	1.6	5.4	1.4
Cookies	2.7	2.2	4.2	3.8	3.5	2.2	3.6	2.0	2.6	1.6
spaghetti	2.5	1.7	3.0	2.6	2.6	2.8	3.0	2.6	2.0	1.7
Wheat flour	1.1	1.2	0.7	0.7	1.5	2.7	5.3	11.3	1.7	3.4
Others	2.9	3.0	5.7	6.9	3.7	3.8	4.6	4.5	2.8	4.7
Beans and other legumes	4.7	6.1	6.8	8.5	4.8	6.5	3.5	3.6	5.0	6.6
Roots, tubers and derivatives	11.3	20.7	6.2	11.1	1.9	2.6	2.1	3.5	2.1	3.1
Potato	0.3	0.1	0.3	0.2	0.7	0.4	0.9	0.9	0.5	0.2
Manioc	0.2	1.1	0.3	0.2	0.2	0.3	0.5	1.6	0.3	0.8
manioc flour and other	10.9	19.5	5.5	10.7	1.0	1.9	0.7	1.1	1.2	2.0
Meat	16.3	16.0	12.8	10.1	11.8	8.8	13.3	14.8	11.5	9.9
Bovina	6.1	4.1	4.6	4.0	3.9	2.7	5.3	4.5	5.3	3.8
Chicken	6.2	4.5	5.2	3.5	3.5	2.8	3.7	3.9	3.5	3.1
swine	0.3	0.8	0.3	0.5	0.7	0.8	0.9	2.3	0.5	1.6
Fish	1.8	3.8	0.7	0.8	0.4	0.3	0.3	0.2	0.3	0.3
inlaid	1.6	0.9	1.5	0.9	3.0	2.1	3.0	2.7	1.9	0.9
other meat	0.3	2.0	0.4	0.4	0.2	0.1	0.2	1.1	0.1	0.3
Milk and dairy products	3.8	3.5	5.2	3.2	6.8	4.9	7.2	7.7	5.2	5.7
milk	3.1	3.4	4.0	2.9	5.0	4.1	5.3	6.4	4.0	4.9
cheese	0.5	0.1	1.0	0.3	1.5	0.7	1.5	1.2	0.9	0.7
other derivatives	0.2	0.0	0.2	0.1	0.3	0.1	0.4	0.1	0.3	0.1
eggs	0.7	0.5	0.8	0.7	0.7	0.5	0.8	1.1	0.5	0.9
Fruits and natural juices	1.4	1.0	2.3	1.2	2.4	1.0	2.4	1.9	2.0	1.0
bananas	0.6	0.5	1.1	0.7	0.9	0.4	1.0	0.8	0.8	0.4
oranges	0.2	0.2	0.2	0.1	0.3	0.2	0.3	0.2	0.3	0.2
other fruits	0.5	0.4	0.9	0.4	1.0	0.4	1.1	0.9	0.8	0.4
Natural juices	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
And vegetables	0.6	0.4	0.7	0.4	1.0	0.6	0.9	0.8	0.9	0.6
Tomato	0.1	0.1	0.2	0.1	0.3	0.1	0.3	0.2	0.3	0.2
Lettuce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Others	0.5	0.3	0.5	0.3	0.7	0.5	0.6	0.6	0.6	0.4
Vegetable oils and fats	11.4	10.4	10.1	10.8	14.0	13.6	13.6	10.4	15.2	15.9
Soy oil	8.8	9.2	7.2	9.0	10.6	12.2	9.8	8.1	12.8	14.6
Margarine	1.7	0.9	2.1	1.2	1.9	0.8	1.8	1.3	1.5	0.9
Others	1.0	0.3	0.8	0.6	1.5	0.6	2.0	1.0	1.0	0.4
animal fats	1.1	0.4	1.2	0.7	1.8	1.9	1.7	2.2	1.4	1.2
butter	0.6	0.1	0.5	0.3	0.4	0.2	0.1	0.1	0.2	0.1
lard	0.1	0.2	0.2	0.3	0.6	1.3	0.8	1.8	0.6	1.0
Others	0.3	0.1	0.5	0.2	0.8	0.3	0.8	0.3	0.6	0.1
table sugar and soft drinks	11.6	12.2	12.6	14.3	12.9	17.8	11.4	14.7	12.8	15.1
Table sugar	10.0	11.6	11.4	13.8	10.6	16.6	8.9	13.3	11.0	14.2
Soft drinks	1.6	0.6	1.2	0.5	2.3	1.2	2.6	1.4	1.8	1.0
Alcoholic beverages	0.4	0.2	0.5	0.2	0.9	0.5	1.0	0.7	0.8	0.5
Beer	0.3	0.1	0.2	0.1	0.6	0.3	0.7	0.4	0.5	0.3
brandy	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Others	0.1	0.0	0.1	0.1	0.3	0.1	0.3	0.2	0.2	0.1
oilseeds	0.7	2.4	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1
Spice	0.2	0.1	0.2	0.1	0.4	0.2	0.5	0.3	0.3	0.2
ready meals and industrialized mixes	3.6	1.4	3.3	1.3	6.1	2.5	7.3	3.9	4.7	2.0
Total calories (kcal / day *per capita*)	**1 692.71**	**2 143.60**	**1 531.23**	**1 784.19**	**1 478.12**	**2 067.96**	**1 673.03**	**2 376.36**	**1 495.99**	**1 771.52**

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2008-2009.

The composition of the diet relative to macronutrients shows appropriate protein intake in the five Large regions of the country (between 11% and 13% of total calories), of the total content of excess fat in the Southeast and South (31% and 32% of total calories), saturated fat content very close to the limit in the Southeast and South (8.9% and 9.4% of total calories, respectively) and excess of sugar content in the five major regions (ranging from 13.9% of the calories totals in the Northern Region

Southeast 17.4%) (Table 5).

Table 5 - Relative participation of macronutrients in the total calories given by household food acquisition, by Major Regions period 2008-2009

macronutrients	relative share, by Major Regions (%)				
	North	Northeast	Southeast	South	Midwest
carbohydrates	**60.0**	**63.4**	**57.6**	**55.7**	**58.9**
free sugars	13.9	15.8	17.4	16.3	16.3
too many carbs	46.1	47.6	40.2	39.4	42.6
proteins	**12.9**	**11.9**	**11.9**	**12.7**	**11.5**
animals	8.2	6.1	6.5	7.5	6.1
Vegetables	4.7	5.8	5.4	5.2	5.4
lipids	**27.1**	**24.7**	**30.6**	**31.6**	**29.6**
monounsaturated fatty acids	8.5	8.0	9.8	10.2	9.1
Polyunsaturated fatty acids	8.4	7.8	9.9	9.7	10.5
Saturated fatty acids	8.2	7.0	8.9	9.4	8.0

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2008-2009.

The subdivision of Major Regions in urban and rural areas con fi rms the appropriate protein intake diet and excessive intake of sugars throughout the country. It also shows that, in urban areas of Southeast and South, the fat content is excessive and the saturated fat content is very close to upper limit (Table 6).

Table 6 - relative participation of macronutrients in the total calories given by household food acquisition, by Major Regions and household situation - 2008-2009 period

carbohydrates	**59.0**	**62.0**	**61.7**	**67.1**	**56.8**	**63.6**	**55.1**	**58.2**	**58.7**	**60.3**
proteins	**13.0**	**12.7**	**12.4**	**10.9**	**12.1**	**10.3**	**12.6**	**13.0**	**11.6**	**11.2**
lipids	**28.0**	**25.3**	**25.9**	**22.0**	**31.2**	**26.1**	**32.4**	**28.8**	**29.8**	**28.6**

Household food availability yields according to the classes

Table 7 describes the variation of the fi l per household food availability of the second six classes yields, ranging from monthly income families with up to two minimum wages (20.1% of the lower income households in the country) to income families with monthly more than 15 minimum wages (the 9.1% of the highest income in the country).

to note that the effect of family income is substantial on most foods and food groups. Food groups whose participation tends to increase evenly with the level of household income include dairy products, fruits and vegetables, animal fat, alcoholic drinks and ready meals. Food groups with reverse trend include beans and other legumes, cereals and derivatives (due to the decline in rice with participation income) and roots and tubers (due to the decline of cassava flour participation with income). more complex patterns with respect yields are observed for table sugar groups and soda and meat. In the first case, there is a decrease in income for table sugar and increased for soft drinks. In the second case,

The composition relative to macronutrients shows that increases in income lead to sharp increase in the total fat content and equally intense decrease in carbohydrate content. Regarding the latter, note that the minimum contribution of 55% of total calories is not fulfilled for the class of monthly income higher than 15 minimum wages, with the aggravating circumstance that about 30% of dietary carbohydrates in this income class (16.5% to 54.6%) corresponded to free sugars.

In the case of fats, it is noted that the maximum limit of 30% of total calories is exceeded from the monthly income class more than 6 minimum wages. Saturated fats tend to strongly increase with income, and the maximum limit for this nutrient (10% of total calories) is virtually reached at monthly income level between 10 and 15 minimum wages (9.5%) and exceeded the class more than 15 minimum wages (10.6% of total calories). The upper limit of 10% for the proportion of calories from sugars is substantially exceeded in all classes of income. Although the protein content in the diet tends to increase with income, the proportion of calories from protein was adequate in all income classes. Note, also,

Table 7 - Participation on food and food groups in total calories determined by household food acquisition, by income and total monthly equity variation familiar- Brazil - 2008-2009 period

Foods and food groups	Relative participation by total yield classes and family monthly asset change (%)					
	up to 830 (1)	More 830-1245	More 1245-2490	More 2490-4150	More 4150-6225	More than 6225
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Cereals and derivatives	37.9	36.9	35.5	34.7	33.6	29.7
polished rice	19.4	18.2	16.7	15.2	14.5	9.8
French bread	5.4	6.5	6.7	7.1	6.5	6.1
Cookies	3.5	3.3	3.2	3.4	3.7	3.9
spaghetti	2.9	2.9	2.6	2.5	2.3	2.5
Wheat flour	1.7	1.8	2.5	2.5	0.5	1.8
Others	5.1	2.2	3.9	4.1	4.2	5.6
Beans and other legumes	6.9	6.2	5.8	4.3	3.6	4.0
Roots, tubers and derivatives	7.2	5.8	5.0	3.4	2.7	2.7
Potato	0.3	0.5	0.5	0.7	0.7	0.8
Manioc	0.3	0.3	0.4	0.3	0.3	0.3
manioc flour and other	6.6	5.0	4.0	2.4	1.7	1.7
Meat	11.2	11.9	12.4	13.5	13.2	12.2
Bovina	3.8	4.3	4.4	4.8	5.0	4.6
Chicken	4.2	4.2	4.1	4.2	3.6	3.5
swine	0.4	0.5	0.6	1.0	0.3	0.6
Fish	0.8	0.7	0.6	0.5	0.5	0.6
inlaid	1.6	1.9	2.3	2.8	2.5	2.5
other meat	0.4	0.3	0.4	0.3	0.3	0.3
Milk and dairy products	4.0	4.9	5.6	6.7	7.2	8.1
Leites	3.5	4.2	4.5	5.0	5.2	4.9
cheese	0.4	0.6	0.9	1.5	1.6	2.7
other derivatives	0.1	0.2	0.2	0.3	0.4	0.5
eggs	0.7	0.7	0.7	0.7	0.7	0.7
Fruits and natural juices	1.2	1.5	1.9	2.4	2.6	3.6
bananas	0.7	0.8	0.8	1.0	1.0	1.1
oranges	0.1	0.2	0.2	0.3	0.3	0.4
other fruits	0.4	0.6	0.8	1.0	1.2	1.7
Natural juices	0.0	0.0	0.1	0.1	0.2	0.3
And vegetables	0.5	0.7	0.8	0.9	1.0	1.1
Tomato	0.1	0.2	0.2	0.3	0.3	0.3
Lettuce	0.0	0.0	0.0	0.0	0.0	0.0
Others	0.4	0.5	0.6	0.7	0.7	0.8
Vegetable oils and fats	12.3	12.8	12.8	12.6	12.6	12.0
Soy oil	10.1	10.5	10.3	9.6	9.1	6.9
Margarine	1.5	1.5	1.7	1.9	2.0	1.9
Others	0.7	0.7	0.9	1.1	1.5	3.2
animal fats	0.9	1.2	1.2	1.7	1.9	2.9
butter	0.2	0.3	0.3	0.3	0.3	0.8
lard	0.5	0.7	0.6	0.7	0.5	0.4
Others	0.2	0.3	0.4	0.7	1.0	1.7
table sugar and soft drinks	14.3	13.9	13.6	11.6	11.9	11.7
Table sugar	13.4	12.7	11.9	9.4	9.5	8.0
Soft drinks	0.9	1.2	1.7	2.3	2.4	2.8
Alcoholic beverages	0.3	0.5	0.5	0.9	1.0	1.6
Beer	0.1	0.2	0.3	0.6	0.7	1.0
brandy	0.1	0.1	0.1	0.1	0.0	0.0
Others	0.1	0.1	0.1	0.2	0.3	0.6
oilseeds	0.2	0.2	0.2	0.2	0.2	0.3
Spice	0.2	0.2	0.3	0.4	0.4	0.5
ready meals and industrialized mixes	2.1	2.7	3.8	5.9	7.4	9.9
Total calories (kcal / day *per capita)*	**1 404.80**	**1 548.67**	**1 628.04**	**1 678.19**	**1 752.47**	**1 878.46**

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2008-2009.

(1) Even without yield.

Table 8 - Relative participation of macronutrients in the total calories given by household food acquisition by classes and total yield of family monthly asset change - Brazil - 2008-2009 period

macronutrients	Relative participation by total yield classes and family monthly asset change (%)					
	up to 830 (1)	More 830-1245	More 1245-2490	More 2490-4150	More 4150-6225	More than 6225
carbohydrates	**63.4**	**61.2**	**59.7**	**56.7**	**56.0**	**54.6**
free sugars	16.6	16.5	16.6	15.5	16.3	16.5
too many carbs	46.8	44.7	43.1	41.2	39.8	38.0
proteins	**11.2**	**11.6**	**12.0**	**12.7**	**12.9**	**12.9**
animals	5.6	6.1	6.6	7.4	7.8	7.7
Vegetables	5.6	5.5	5.4	5.3	5.1	5.2
lipids	**25.4**	**27.2**	**28.4**	**30.6**	**31.1**	**32.5**
monounsaturated fatty acids	7.9	8.6	9.0	9.9	10.2	10.7
Polyunsaturated fatty acids	8.9	9.2	9.3	9.4	9.2	8.9
Saturated fatty acids	6.8	7.5	8.1	9.1	9.5	10.6

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2008-2009.

(1) Even without yield.

Evolution of household food availability (2002-2003 to 2008-2009)

Table 9 describes the recent evolution of household food availability in Brazil by comparing estimates obtained from POF 2002-2003 and POF 2008-2009.

The daily availability ***per capita*** average food for the household consumption was reduced from 1,791 kcal to 1,610 kcal in 2002-2003 in 2008-2009, probably reflecting a higher frequency of food consumption outside the home. The food expenses away from home, which corresponded to 24.1% of the total power expenditures in 2002-2003 amounted to 31.1% in 2008-2009.

Foods that have relative increase of more than 5% in its share of total calories include French bread (13%), biscuits (10%), cheese (16%) and other dairy products (39%), beef (15 %) and meat (25%), fruit and fruit juices (25%), soft drinks (16%), alcoholic beverages (28%) and ready meals and industrialized mixes (40%). Foods that recorded relative decrease of more than 5% in its share of total calories include rice (6%), beans (18%), wheat flour (25%) and cassava (19%), milk (10%) and sugar (8%).

Among the foods which share little or nothing varied, they stand out vegetable oils and fats (12.7% of total calories in the two studies), animal fats (1.5% in both surveys) and vegetables and legumes (0, 8% in both surveys).

Table 9 - Relative participation of foods and food groups in total calories determined by household food purchase per year results - Brazil - periods 2002-2003 and 2008-2009

Foods and food groups	Relative share, a year of survey (%)	
	2002-2003	2008-2009
Total	**100.0**	**100.0**
Cereals and derivatives	35.5	35.2
polished rice	17.4	16.2
French bread	5.7	6.4
Cookies	3.1	3.4
spaghetti	2.5	2.7
Wheat flour	2.9	2.1
Others	4.0	4.4
Beans and other legumes	6.6	5.4
Roots, tubers and derivatives	5.8	4.8
Potato	0.6	0.5
Manioc	0.4	0.3
manioc flour and other	4.9	3.9
Meat	11.2	12.3
Bovina	3.9	4.4
Chicken	3.9	4.0
swine	0.7	0.7
Fish	0.7	0.6
inlaid	1.8	2.2
other meat	0.3	0.4
Milk and dairy products	6.0	5.8
milk	4.8	4.4
cheese	0.9	1.1
other derivatives	0.2	0.3
eggs	0.3	0.7
Fruits and natural juices	1.6	2.0
bananas	0.7	0.9
oranges	0.2	0.3
other fruits	0.6	0.8
Natural juices	0.1	0.1
And vegetables	0.8	0.8
Tomato	0.2	0.2
Lettuce	0.0	0.0
Others	0.5	0.6
Vegetable oils and fats	12.8	12.6
Soy oil	10.1	9.7
Margarine	1.5	1.7
Others	1.2	1.2
animal fats	1.5	1.5
butter	0.3	0.3
lard	0.8	0.6
Others	0.3	0.6
table sugar and soft drinks	13.7	13.0
Table sugar	12.2	11.2
Soft drinks	1.5	1.8
Alcoholic beverages	0.5	0.7
Beer	0.3	0.4
brandy	0.1	0.1
Others	0.2	0.2
oilseeds	0.2	0.2
Spice	0.3	0.3
ready meals and industrialized mixes	3.3	4.6
Total calories (kcal / day *per capita)*	**1 791.30**	**1 610.49**

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2002-2003 / 2008-2009.

Recent developments in the nutritional composition of the household availability of food shows decrease in carbohydrate content compensated by increasing the level of fat and protein. The carbohydrate fraction reduces more is one that excludes the free sugars, while the fraction of lipids which enhances includes both monounsaturated fatty acids as saturated. The protein fraction increases is of animal origin. The stability of the participation of free sugars in

16.4% suggests that the maximum limit of 10% for the proportion of calories from this nutrient is largely exceeded in the two surveys. The increase in total fat content of saturated fatty acids and indicates that the maximum limit for the consumption of these nutrients tends to be exceeded in Brazil (Table 10).

Table 10 - Relative participation of macronutrients in the total calories determined by household food acquisition, a year of research - Brazil - periods 2002-2003 and 2008-2009

macronutrients	Relative share, a year of survey (%)	
	2002-2003	2008-2009
carbohydrates	**60.6**	**59.2**
free sugars	16.4	16.4
too many carbs	44.1	42.9
proteins	**11.6**	**12.1**
animals	6.1	6.7
Vegetables	5.5	5.4
lipids	**27.8**	**28.7**
monounsaturated fatty acids	8.7	9.2
Polyunsaturated fatty acids	9.2	9.2
Saturated fatty acids	7.9	8.3

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2002-2003 / 2008-2009.

Table 11 shows the evolution of household food availability between the periods 2002-2003 and 2008-2009, according to the fifth of the monthly family income.

Most foods with increasing share of total calories showed relatively large increases in the lower income strata leading to a decrease of the distance between higher and lower income families. This occurred with french bread, cheeses, meats, fruits and fruit juices, soft drinks, alcoholic drinks and ready meals and industrialized mixes. For example, the participation of French bread increased from 3.7% to 5.2% of total calories in the first fifth of income (relative 40% increase) and even lower in the top fifth of the income,

6.9% to 6.3% (relative reduction of 10%). ready meals and mixtures industrialized nearly doubled its participation in the first fifth of income (1.1% to 2.1%) and increased by 25% in the higher income fifth (6.6% to 8.3%).

The variation in food with decreasing share of total calories was relatively homogeneous in the various strata of income, except for the situation of cassava flour, whose decline was concentrated in the first two fifths of the income. A little variation view for all the families on the participation of vegetable oils and fats, animal and vegetable fats and vegetables is con fi rmed in all income strata.

Table 11 - Relative participation of foods and food groups in total of calories determined by household food acquisition by the 5th of total income and family monthly asset change and year results - Brazil - periods 2002-2003 and 2008-2009

(to be continued)

Foods and food groups	relative share, for total income of the 5th and family monthly asset change (%)					
	Fifth 1²		Fifth 2²		Fifth 3²	
	2002-2003	2008-2009	2002-2003	2008-2009	2002-2003	2008-2009
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Cereals and derivatives	36.8	37.9	37.0	37.0	36.4	35.6
polished rice	20.5	19.5	19.7	18.4	18.2	16.8
French bread	3.7	5.2	4.7	6.5	5.9	6.6
Cookies	3.1	3.5	2.8	3.3	2.9	3.1
spaghetti	2.6	2.9	2.6	2.9	2.5	2.6
Wheat flour	2.1	1.7	3.0	1.7	3.1	2.5
Others	4.8	5.2	4.1	4.2	3.9	4.0
Beans and other legumes	8.4	7.0	7.3	6.2	6.9	6.0
Roots, tubers and dervados	10.0	7.3	7.9	5.7	5.5	5.2
Potato	0.3	0.3	0.4	0.5	0.6	0.5
Manioc	0.3	0.3	0.5	0.3	0.5	0.4
manioc flour and other	9.4	6.8	7.1	5.0	4.5	4.3
Meat	9.5	11.2	10.4	11.9	11.8	12.3
Bovina	3.4	3.8	3.6	4.3	3.9	4.4
Chicken	3.4	4.2	3.8	4.2	4.3	4.2
swine	0.5	0.4	0.6	0.5	0.9	0.6
Fish	0.9	0.8	0.8	0.7	0.6	0.6
inlaid	1.1	1.6	1.3	1.9	1.8	2.2
other meat	0.3	0.4	0.3	0.3	0.4	0.4
Milk and dairy products	4.0	3.9	4.7	4.9	5.7	5.4
milk	3.7	3.4	4.1	4.2	4.9	4.4
cheese	0.2	0.4	0.5	0.6	0.7	0.8
other derivatives	0.1	0.1	0.1	0.2	0.2	0.2
eggs	0.3	0.7	0.3	0.7	0.4	0.7
Fruits and natural juices	0.8	1.2	1.1	1.5	1.4	1.8
bananas	0.5	0.7	0.6	0.8	0.7	0.8
oranges	0.1	0.1	0.1	0.2	0.2	0.2
other fruits	0.3	0.4	0.3	0.6	0.5	0.7
Natural juices	0.0	0.0	0.0	0.0	0.0	0.0
And vegetables	0.5	0.5	0.6	0.7	0.7	0.8
Tomato	0.1	0.1	0.2	0.2	0.2	0.2
Lettuce	0.0	0.0	0.0	0.0	0.0	0.0
Others	0.3	0.4	0.4	0.5	0.5	0.5
Vegetable oils and fats	12.3	12.3	12.2	12.7	12.7	12.9
Soy oil	10.5	10.1	9.9	10.4	10.2	10.4
Margarine	1.0	1.5	1.4	1.6	1.5	1.6
Others	0.8	0.7	0.9	0.8	1.0	0.9
animal fats	1.2	0.8	1.4	1.2	1.4	1.1
butter	0.2	0.2	0.3	0.3	0.3	0.3
lard	0.8	0.4	1.0	0.7	0.9	0.5
Others	0.1	0.2	0.1	0.2	0.2	0.4
table sugar and soft drinks	14.7	14.3	14.8	13.9	13.9	13.7
Table sugar	14.0	13.5	13.8	12.7	12.5	12.2
Soft drinks	0.6	0.9	1.0	1.2	1.4	1.6
Alcoholic beverages	0.2	0.3	0.3	0.5	0.4	0.5
Beer	0.1	0.1	0.1	0.2	0.2	0.3
brandy	0.1	0.1	0.1	0.1	0.1	0.1
Others	0.1	0.1	0.1	0.1	0.1	0.1
oilseeds	0.2	0.3	0.2	0.2	0.2	0.3
Spice	0.1	0.2	0.2	0.2	0.2	0.3
ready meals and industrialized mixes	1.1	2.1	1.6	2.7	2.5	3.4
Total calories (kcal / day *per capita*)	**1 618.86**	**1 405.71**	**1 803.23**	**1 537.81**	**1 763.48**	**1 619.97**

Table 11 - Relative participation of foods and food groups in total of calories determined by household food acquisition by the 5th of total income and family monthly asset change and year results - Brazil - periods 2002-2003 and 2008-2009

(conclusion)

Foods and food groups	relative share, for total income of the 5th and family monthly asset change (%) Fifth 4²			
			Fifth 5²	
	2002-2003	2008-2009	2002-2003	2008-2009
Total	**100.0**	**100.0**	**100.0**	**100.0**
Cereals and derivatives	35.0	35.0	32.4	31.8
polished rice	16.2	15.5	13.1	12.5
French bread	6.6	7.1	6.9	6.3
Cookies	3.0	3.4	3.5	3.7
spaghetti	2.4	2.5	2.4	2.4
Wheat flour	3.2	2.5	2.7	2.1
Others	3.5	3.9	3.8	4.8
Beans and other legumes	5.6	4.7	5.2	4.0
Roots, tubers and dervados	4.0	3.8	2.8	2.8
Potato	0.7	0.7	0.8	0.7
Manioc	0.4	0.4	0.3	0.3
manioc flour and other	2.8	2.8	1.7	1.8
Meat	12.3	12.9	12.2	13.0
Bovina	4.5	4.6	4.4	4.8
Chicken	4.1	4.0	3.6	3.7
swine	0.8	0.8	0.9	1.0
Fish	0.5	0.5	0.5	0.6
inlaid	2.1	2.6	2.4	2.7
other meat	0.3	0.4	0.3	0.3
Milk and dairy products	6.4	6.5	8.4	7.5
milk	5.2	4.9	5.9	5.0
cheese	1.0	1.3	2.1	2.1
other derivatives	0.2	0.3	0.3	0.4
eggs	0.4	0.7	0.3	0.7
Fruits and natural juices	1.8	2.3	2.6	3.0
bananas	0.8	1.0	0.9	1.0
oranges	0.2	0.3	0.3	0.4
other fruits	0.7	1.0	1.1	1.4
Natural juices	0.1	0.1	0.2	0.2
And vegetables	0.8	0.9	1.1	1.0
Tomato	0.2	0.2	0.3	0.3
Lettuce	0.0	0.0	0.0	0.0
Others	0.6	0.7	0.8	0.7
Vegetable oils and fats	13.7	12.6	12.9	12.4
Soy oil	11.2	9.7	8.7	8.3
Margarine	1.7	1.9	1.7	1.9
Others	0.9	1.0	2.5	2.2
animal fats	1.5	1.7	2.1	2.3
butter	0.3	0.3	0.6	0.5
lard	0.9	0.7	0.6	0.5
Others	0.3	0.7	0.8	1.3
table sugar and soft drinks	13.7	12.4	11.8	11.2
Table sugar	11.8	10.3	9.4	8.7
Soft drinks	1.9	2.1	2.4	2.6
Alcoholic beverages	0.6	0.7	1.1	1.3
Beer	0.4	0.5	0.7	0.8
brandy	0.1	0.1	0.1	0.0
Others	0.1	0.2	0.4	0.4
oilseeds	0.2	0.2	0.2	0.3
Spice	0.3	0.4	0.4	0.4
ready meals and industrialized mixes	3.9	5.3	6.6	8.3
Total calories (kcal / day *per capita*)	**1 874.49**	**1 643.75**	**1 892.14**	**1 817.35**

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2002-2003 / 2008-2009.

Recent developments in the nutritional composition of the household food availability according to family income con fi rms in all strata replacing carbohydrates, excluding free sugars for animal proteins and lipids (mostly monounsaturated and saturated fatty acids) and reveals that this phenomenon was more intense in the lower income strata. The stability of the participation of free sugars around 16% -17%, so far above the ceiling of 10% in all strata con fi rm the unsatisfactory situation in the consumption of this nutrient regardless of family income. The increase in the total fat content and saturated fatty acids, also observed in all strata,

Table 12 - Relative participation of macronutrients in the total calories given by household food acquisition by fifth and total yield of family monthly asset change and years of research Brazil - periods 2002-2003 and 2008-2009

macronutrients	relative share, for total income of the 5th and family monthly asset change (%)					
	Fifth 1²		Fifth 2²		Fifth 3²	
	2002-2003	2008-2009	2002-2003	2008-2009	2002-2003	2008-2009
carbohydrates	**65.4**	**63.6**	**63.9**	**61.2**	**60.7**	**60.0**
free sugars	16.4	16.6	16.8	16.5	16.3	16.6
too many carbs	49.0	47.0	47.0	44.7	44.4	43.4
proteins	**10.6**	**11.2**	**11.0**	**11.6**	**11.7**	**11.9**
animals	4.8	5.6	5.3	6.1	6.1	6.5
Vegetables	5.8	5.6	5.7	5.5	5.6	5.4
lipids	**24.0**	**25.2**	**25.2**	**27.2**	**27.6**	**28.1**
monounsaturated fatty acids	7.3	7.9	7.8	8.6	8.7	8.8
Polyunsaturated fatty acids	8.7	8.8	8.7	9.2	9.2	9.3
Saturated fatty acids	6.3	6.8	6.9	7.5	7.7	7.9

macronutrients	relative share, for total income of the 5th and family monthly asset change (%) Fifth 4²			
			Fifth 5²	
	2002-2003	2008-2009	2002-2003	2008-2009
carbohydrates	**58.3**	**57.7**	**55.8**	**55.3**
free sugars	16.7	16.0	15.9	16.2
too many carbs	41.6	41.7	39.9	39.1
proteins	**12.0**	**12.4**	**12.7**	**12.9**
animals	6.6	7.1	7.3	7.7
Vegetables	5.3	5.3	5.4	5.2
lipids	**29.8**	**29.9**	**31.5**	**31.8**
monounsaturated fatty acids	9.4	9.6	10.0	10.5
Polyunsaturated fatty acids	9.9	9.3	9.5	9.2
Saturated fatty acids	8.4	8.8	9.7	10.0

Source: IBGE, Research Board, Work Coordination and Income, Expenditure Survey 2002-2003 / 2008-2009.

conclusions

1) diversi fi ed patterns characterize the household food consumption in the five Large regions of the country, in urban and rural areas and different socioeconomic strata of the population.

2) Positive characteristics of consumption patterns, evidenced throughout the country and in all income classes, were systematically appropriate protein intake of food and the high share of high biological value protein (animal protein).

3) Negative characteristics of consumption patterns, also observed throughout the country and in all income classes, were excessive in sugar (whether from table sugar, or sugar added by the industry to processed foods) and insu fi participation aware of fruits and vegetables.

4) In the more economically developed regions (South, Southeast and Central West) and, generally, in urban areas and among families with higher income, and the consumption insu cient of fruit and vegetables and excessive consumption of sugar, common in all strata, there is excessive consumption of fats in general and excessive consumption of saturated fats.

5) the evolution of household consumption of food in the past six years indicates persistence of an excessive sugar content (reducing the participation of the table and increased sugar in the fraction coming from processed foods) and increase in relative fat intake in general and saturated fat. The slight increase in the consumption of fruits and stagnation observed as the vegetables and legumes kept the consumption of fruits and vegetables set far below the nutritional recommendations for the intake of these foods. Note, also, that basic and traditional food in the Brazilian diet, such as rice, beans and manioc flour, lose importance in the period while growing relative share of processed food ready for consumption, such as bread, sausages, biscuits, soft drinks and ready meals.

6) The recent developments in food consumption according to fifths of household income indicates more intense increase in the share of processed food ready for consumption in the strata of lower income, leading to a decrease in the relative consumption excess of these foods observed in the higher income groups . The evolution of food with decreasing participation in consumption was relatively homogeneous in the different strata, except for the situation of cassava flour, whose decline was concentrated in the lower income strata.

7) Recent developments in the nutritional composition of the household food availability according to income does not indicate change in the excessive participation of sugar in any strata. The increase in the total amount of fat and saturated fatty acids observed in all segments, indicating the general trend of increased consumption of these nutrients and shows that in the top fifth of income maximum consumption limit has been reached (saturated fatty acids) or even exceeded (total fat).