



EUROPEAN COMMISSION

Cooperation in Science and Technology
with Central and Eastern European Countries



COST 99-
Food Consumption and Composition Data



DAFNE
Data Food Networking

NETWORK FOR THE PAN-EUROPEAN FOOD DATA BANK
BASED ON HOUSEHOLD BUDGET SURVEYS (HBS) DATA

**METHODOLOGY FOR THE EXPLOITATION
OF HBS FOOD DATA AND
RESULTS ON FOOD AVAILABILITY
IN 5 EUROPEAN COUNTRIES**

Edited by: **Antonia Trichopoulou & Pagona Lagiou**
National Nutrition Center, Athens Greece

European Commission

COST ACTION 99

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Directorate-General
Science, Research and Development

DAFNE I
DAta Food NETworking

*Network for the pan-European food data bank
based on household budget surveys (HBS) data*

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ADDENDUM

The German HBS data used for the purposes of the DAFNE project (i.e. German contract data base) do not necessarily correspond to the non-anonymised statistical microdata from which the contract data base was prepared.

ERRATA				
Page	Correction			
47	Notes for Hungary / Poland			
	HU-1 / PL-2	1lt vegetable oil = 0.9 kg vegetable oil		
66	Canned fruits (360):	2.5 DM/kg		
69	CERBAK	Belgium	Germany (g/person/day)	Greece
	elementary incomplete	33		18
	elementary complete	41		19
	secondary incomplete	40		21
	secondary complete	42		26
	university	42		29
	rural	39	57	15
	semi-urban	41	58	22
	urban	44	59	24
	overall mean	41	58	21
70	RICCER	Belgium	Germany (g/person/day)	Greece
	elementary incomplete	18		30
	elementary complete	9.1		25
	secondary incomplete	9.3		27
	secondary complete	12		25
	university	15		24
	rural	9.9	25	32
	semi-urban	10	25	29
	urban	16	24	23
	overall mean	11	24	26
87	OFRFRUI - Germany	(g/person/day)		
	rural	26		
	semi-urban	34		
	urban	41		
	overall mean	35		
87	PROCFRU - Greece	(g/person/day)		
	elementary incomplete	6.9		
	elementary complete	8.2		
	secondary incomplete	11		
	secondary complete	13		
	university	15		
	rural	7.7		
	semi-urban	12		
	urban	11		
	overall mean	9.9		
88	SUGPROD - Germany	(g/person/day)		
	rural	27		
	semi-urban	31		
	urban	33		
	overall mean	31		
97	FRESH FRUITS - Germany	(g/person/day)		
	rural	112		
	semi-urban	128		
	urban	140		
	overall mean	129		
97	TOTAL FRUITS - Germany	(g/person/day)		
	rural	183		
	semi-urban	203		
	urban	211		
	overall mean	202		

Corresponding changes should also be considered in the case of graphs and histograms.

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Methodology for the exploitation of HBS food data and results on food availability in 5 European countries

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Data Food Networking

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PREFACE

COST Action 99: The DAFNE component

The DAFNE project, an initiative for Creation of a European Food Data Bank containing nutrition data from Household Budget Surveys (HBS), has been carried out in close collaboration with the framework of the COST Action 99.

COST (Cooperation in Scientific and Technical Research) is a Programme to foment Scientific and Technical Cooperation at European level, complementing in particular the EU framework programmes and EUREKA. COST cooperation takes the form of concerted actions, which involve the coordination of national research projects. The Actions focus on specific themes which are targeted by participating countries according to their research priorities. The coordination avoids duplication of research, at both European and national level, and helps build larger, more effective scientific communities. At present, COST offers the possibility to cooperate between scientists from up to 25 European countries. COST is funding projects involved in precompetitive and basic research as well as other activities of public utility. The scientific quality of COST projects is well recognized and contributes to a coherent structure for European Research.

In the field of Food Science and Technology, COST is mainly concerned with improving food safety, food quality and nutrition. Taking into account these main topics, COST Action 99 is specifically referred to "Food consumption and Composition data". This project started in 1994 and it will be under development until 1999. The proposer and chairman of the Action is Professor Clive West from the University of Wageningen in The Netherlands. The Action is supported by the European Commission Directorate General for Science, Research and Development, and in particular Unit DG XII/B1, responsible for COST support and its Scientific Secretariat.

One of the characteristics of this Action is the effort that is being done to involve most of European countries in the project. Actually, this is the only COST Action that has the participation of all COST countries. Scientific contacts with newcomer countries to the COST Programme are carried out because the interest of the Action is to cover the whole of Europe in this field. The first idea to develop this Action came from the need of high quality data on food consumption and composition. This is a very important aspect in the context of European communities, some major diseases may be associated with some sort of nutritional imbalance and also changes in dieting may help to counteract some illnesses such as obesity, cardiovascular diseases and cancer of various sites. Thus, high quality data on food intake and nutrient composition are necessary to study relationships between diet and health. This information may help to further design nutrition policy programmes at European level but also at regional or national level. Implications in other areas, such as scientific research, education, food production, processing and marketing are also envisaged.

The main aim of COST Action 99 is to combine the knowledge, expertise and work of European experts in the field of food consumption and composition in order to improve both essential aspects, the quality and compatibility of data, thus giving to this work a pan-European approach. Action 99 has three main scopes:

- to improve the knowledge of European food consumption,
- to improve the tables on food composition data and also,
- to improve the description and classification of such foods.

The tasks of the DAFNE project have also considered these three aspects. In this initial approach the first and third topics have been developed in greater depth. However, it is clear that it is not useful to collect a large amount of information on food consumption in the various countries for the purpose of inter-country comparisons, unless it has been assured that all countries are clear on the food definitions used and the limitations of their food composition tables. Thus, the three topics are very interconnected.

Concerning the food consumption data, there is an interest in improving the way of collecting data. COST Action 99 follows different sources of data which covers from country level to individual level. In this key point, the contribution of DAFNE is specially important because it provides a useful source of food availability at household level. Then, using validated conversion factors it is possible to estimate individual intake and assess risk groups. From a nutritional point of view, the household surveys are sources of complementary data to food balance sheets and individual intake studies. COST Action 99 is also regarding individual intake of food and monitoring intake of foods, nutrients and non-nutrients, to improve food intake measurements and characterization of diets. This work carried out in close collaboration allows discussion on the methodology used by various countries, comparison and exchange of experience and formulation of guidelines or a check list to increase the comparability of the results.

Concerning the second aim of the Action, in order to measure the consumption of nutrients (of individuals or populations) it is necessary to have data on the composition of foods. This data has to be of high quality and readily available. Before a network of compatible food composition data bases can be constructed, such as proposed by COST Action 99, food composition tables of high quality have to be used. The most important factors that affect quality of data are: procedures for sampling foods, choice of analytical methods, ways of expressing constituents and conversion factors used. These and others factors are being considered by the working groups involved in these projects. Furthermore, the way data are compiled and presented will affect their dissemination and the access of different users. It is the aim of the Action and DAFNE to obtain data which exchange is available and efficient in pan-European context. Only by working towards comparable and compatible results for inclusion in food composition tables and databases will enable the efficient exchange of information between institutes and countries.

Finally, food coding systems are important tools when comparing data, specially from different countries. The aim of the COST Action 99, in which DAFNE has also been involved, is to have both, a description and a classification of foods comparable on a European-wide basis. Thus, they are working to have harmonization of terminology and to develop a fast, good and friendly coding system.

Thus, to my knowledge the DAFNE project and COST Action 99 are contributing to develop a very useful tool, an European Food Database of quality which will allow to share, combine and compare nutrition information between different countries across Europe. Here are presented the results of the first efforts, of great significance specially because of the setting up of the methodology but also because this has been the initial work that will allow incorporation of comparable data from other countries, which is already in process, and all together will constitute the first approach to the knowledge of food intake of European populations.

Francisca Serra
Scientific Secretary

EXECUTIVE SUMMARY

DAFNE is the acronym for Data Food Networking and aims at the creation of a pan-European food data bank based on household budget surveys. The project was conceived in the early '80s. It had long been recognized that the FAO food balance sheets data are a valuable resource for ascertaining trends of food availability over time, but are less satisfactory for inter-country comparisons. On the other hand, individual nutrition surveys, apart from being expensive and labor intensive, are frequently implemented with different methodologies and are regularly undertaken in a minority of the European countries. In 1987, a WHO workshop took place in Athens, Greece, and the proceedings were published in the European Journal of Clinical Nutrition. The participating scientists examined the possibilities offered by the household budget surveys (HBS) for the development of harmonized and comparable between the European countries data.

The DAFNE I project was supported by the European Commission's "Cooperation in Science and Technology with Central and Eastern European Countries" program and by the COST 99 program on Food Consumption and Composition Data. In the context of this project, raw nutritional data from HBS undertaken in comparable time periods were utilized. These data refer to households as the statistical unit and originally covered 5 European countries, namely Belgium, Germany, Greece, Hungary and Poland. The methodology followed in order to derive comparable nutritional data for individuals, rather than households, as well as the results obtained through this process are presented in this Compendium as a show piece of the importance of this data source. DAFNE I documented the feasibility of the proposed approach and generated some important results that are briefly considered further on.

The DAFNE I data firmly document the remarkable disparity of food habits among European countries. The disparity has both qualitative and quantitative elements. In addition, there are important nutritional disparities among socioeconomic groups as defined by their educational level and permanent residence. Indeed, the distribution patterns of food availability provide new insight into the socioeconomic determinants of food preferences as conditioned by market forces.

From the abundant information available in the DAFNE data bank, we have chosen - for the purposes of this publication - to concentrate on 9 principal food groups: meat; fish and seafood; total added lipids; fresh vegetables; total vegetables; fresh fruits; total fruits; alcoholic beverages; and non-alcoholic beverages.

Average meat consumption exceeds 140 g per person per day and decreases as the level of education gets higher or one moves from the rural to the urban areas. Fish and seafood consumption is higher in Greece (39 g/person/day), followed by Belgium (27 g/person/day), whereas it is minimal in Hungary (5 g/person/day). In Belgium, more educated and urban residents have generally higher fish consumption. In Greece, there is no educational gradient, rural residents, however, consume more fish and seafood, probably because of immediate availability in the coastal areas and in the islands.

Total added lipids cover both liquid oils, generally of vegetable origin, and solid or semi-solid fat, either from animal sources, or following industrial processing of vegetable oils (margarine). The

distinction between the terms "fat" and "lipid" is particularly important for the olive oil consuming countries, because although olive oil is included in the total lipids, it is not a fat, which usually implies saturated fat. Thus, consumption of total added lipids is 90 g/person/day in Greece, 59 g/person/day in Poland, 53 g/person/day in Hungary, 45 g/person/day in Belgium and 40 g/person/day in Germany. In all countries, however, there is a remarkable decrease in lipid consumption as the education level gets higher or one moves from the rural to the urban areas (a decrease that should have beneficial health effects for northern and central Europeans, but detrimental effects for the olive oil consumers). Segregation of total lipids into specific fats and oils is revealing. Butter availability is 26 g/person/day in Poland, 15 g/person/day in Germany, 3 g/person/day in Belgium, 3.5 g/person/day in Hungary and 1.3 g/person/day only in Greece. Availability of other types of animal fat (e.g. lard) follows a different pattern: it is very high in Hungary (27 g/person/day), followed by Poland (16 g/person/day), Germany (1.6 g/person/day), Belgium (1.2 g/person/day) and Greece (0.1 g/person/day). Analysis of the data for vegetable oils reveals a striking peak for Greece at 82 ml/person/day, essentially from olive oil, with Hungary a distant second at 14 ml/person/day mostly from seed oils. The consumption of vegetable fat (mainly margarine) is higher in Belgium (22 g/person/day), followed by Germany (18 g/person/day), Poland (12 g/person/day), Hungary (7.5 g/person/day) and Greece (6.6 g/person/day). Vegetable fat consumption in Belgium shows a clear differentiation among the different socioeconomic groups, being high among the less educated (22 g/person/day) and lower among the more educated (16 g/person/day).

For eggs, consumption varies little between and within countries and is about one egg every other day.

For vegetables, consumption is highest in Greece with 268 g/person/day. Next come Poland with 202 g/person/day, Hungary with 201 g/person/day, Belgium with 162 g/person/day and Germany with 143 g/person/day. The proportion of vegetables consumed fresh, however, is 94% in Greece, 93% in Hungary, 87% in Poland, 64% in Belgium and only 58% in Germany. This is interesting because it indicates that total vegetable consumption in a country does not necessarily represent the desirable intake of fresh vegetables. There are also subtle disparities by educational level and degree of urbanization, reflecting different agro-economic systems in different countries.

For fruit availability the pattern is similar to that for vegetables, with Greece having an overall fruit availability of 341 g/person/day (100% fresh), followed by Germany (236 g/person/day - 69% fresh), Belgium (198 g/person/day - 76% fresh), Hungary (159 g/person/day - 94% fresh) and Poland (100 g/person/day - 95% fresh). The higher availability of fruits among the urban households in all countries could be accounted for by market dynamics, good transportation systems and, to some extent, under-reporting of fruit consumption at source by the rural population.

Consumption of alcoholic beverages reveals interesting patterns, although data were not available for Poland. Beer intake is very high in Germany (146 ml/person/day), followed by Belgium (82 ml/person/day), Hungary (43 ml/person/day) and Greece (18 ml/person/day), whereas intake of spirits is highest in Belgium (13 ml/person/day), followed by Germany (8 ml/person/day), Greece (5.8 ml/person/day) and Hungary (4.8 ml/person/day). Wine consumption is higher in German households (42 ml/person/day) and lower in Greek households (13 ml/person/day). It should be noted, however, that in the Greek culture, wine is usually drunk in taverns with friends rather than at home.

The consumption of commercially available non-alcoholic beverages is a reflection of market penetration which in turn depends on disposable income. Thus, consumption is very high in

Belgium and Germany, very low in Hungary and Poland, with Greece occupying an intermediate position.

In the context of the DAFNE project, individual consumption estimates (one per family) have been used for the estimation of percentile values for food group distributions. Estimates were calculated for all households and for consuming households only. These quantities along with their corresponding confidence intervals are presented in tables and histograms by country. Thus, in Greece, one half of the population consume more than 258 g/person/day of fruits and one quarter of the population consume more than 469 g/person/day. For Belgium, the corresponding figures are 151 g/person/day and 265 g/person/day; for Germany 129 g/person/day and 259 g/person/day; for Hungary 93 g/person/day and 205 g/person/day; and for Poland 65 g/person/day and 129 g/person/day. This presentation of the data is useful when the proportion of the population that meets the recommended daily intake needs to be determined.

These results, along with others that appear in this compendium suggest that large variation between countries and various socioeconomic groups within countries do exist. Nutrition is of paramount importance in disease prevention and health promotion. Therefore these data could be valuable in the identification of groups at higher risk and in the planning of a rational food and nutrition policy.

Antonia Trichopoulou

Pagona Lagiou

DAFNE

Data Food NETWORKing

NETWORK FOR THE PAN-EUROPEAN FOOD DATA BANK BASED ON HOUSEHOLD BUDGET SURVEYS DATA

A. INTRODUCTION

A.1 *Rationale for the creation of a food data bank based Household Budget Surveys data*

A large amount of information concerning nutrition is collected in almost all European countries by the National Statistical Offices through Household Budget Surveys (HBS) at variable time intervals. Although HBS are not designed for nutritional purposes but in order to analyze economic implications of trends in food consumption and to obtain the necessary information for the estimation of price indices, they represent a unique source of dietary patterns data.

There are many sources of data concerning food availability or intake, ranging from the nationally collected and FAO assembled food balance sheets to the specifically designed food consumption surveys and nutritional epidemiologic investigations (*Table 1*). Data from all these sources can be useful for specific purposes and their collation and editing in a single data base represents a very valuable undertaking. However, use of information from different sources, each possessing its own validity attributes and methodological characteristics, rises issues of comparability that are difficult to address. The problem is complicated when explanatory factors for food intake variability are not defined with standard criteria, when expected nutritional variation by time or place is of the same order of magnitude as the presumed systematic error, or when representativeness is questionable or plainly absent. Perhaps more important for a changing world that is being rapidly dominated by similar commercial, economic, regulatory and communication forces, a nutritional database would be useful only if it could be or become:

- truly international, with built-in feedback mechanisms to improve comparability
- representative and linked to explanatory demographic and socioeconomic factors that are themselves subject to rapid changes
- very large, in order to generate precise estimates for inherently complex patterns
- regularly updated
- last, and clearly not least, affordable

Multipurpose household budget surveys, regularly undertaken in order to serve a wide range of objectives in several, indeed most, of the developed countries can form the basis of a system that meets all of the above criteria. Feasibility studies, undertaken by the DAFNE (Data Food NETWORKing, Network for the pan-European Food Data Bank based on Household Budget Surveys, Cooperation in Science and Technology with Central and Eastern European Countries) team have demonstrated that the prospect is realistic and the potential enormous, assuming goodwill and a minimal adjustment in infrastructure.

Table 1
Sources of nutritional data

Level	Source	Type of data
National	Food Balance Sheets	ecological; large units
Household	Household Budget Surveys	ecological; small units
Individual	Dietary Surveys	analytical; individuals

Source: EURONUT, Report 9, 1987

A.2 *Background of the DAFNE Initiative*

Since 1987, the National Nutrition Center in Athens, Greece, has organized a series of workshops, seminars, and pilot research projects aiming at the development of the most appropriate way of using food and related data from Household Budget Surveys.

Household budget surveys have several advantages:

- (i) they are conducted regularly in most European countries with a time interval which varies from 1 to 7 years
- (ii) they use representative samples of households
- (iii) they generate a substantial amount of data concerning nutrition, and
- (iv) they generate cross-linked data concerning socio-demographic characteristics of the households, which could be useful for standardization and exploratory analyses.

HBS also have some limitations:

- (i) HBS nutrition data are different from one country to another, not only concerning the number of food items which are recorded but also the type of information provided.
- (ii) There is a problem with the consumption of food commodities and beverages outside the household. There is, however, information of the expenditure involved in these meals.
- (iii) In most countries no information is collected concerning losses and waste of food. However, the resulting overestimation of food availability for humans may not vary substantially across time periods and population groups and can be estimated through small ad hoc studies.
- (iv) Estimation of nutrient intakes from HBS food availability data requires a series of assumptions and approximations, because most countries collect data only for large food groups.

- (v) There is no uniform codification system. Furthermore, the development and validation of rules for the aggregation of food items appearing in the HBS is a prerequisite.

The fact is that, despite their limitations, Household Budget Surveys generate nutrition data at regular time intervals in all European countries. This information provides a valuable background for the conduct of a wide range of nutritional analyses. It also constitutes an affordable alternative to most Mediterranean and Central / Eastern European countries. HBS data could help identify issues such as differences concerning dietary patterns, high risk population groups on account of their nutritional habits, relationships between diet and morbidity / mortality data, and the dietary intake of additives and contaminants. Utilization of HBS data could be of great importance for the realization of various purposes including nutrition and agricultural strategy planning and marketing purposes of food industries.

A.3 *The DAFNE I project*

In 1993, the approach aiming at the exploitation of HBS data for the assessment of nutritional information was granted support of the European Union through the "Cooperation in Science and Technology with Central and Eastern European Countries" program of the Commission of the European Communities.

Thus the Scientific Network for Pan-European Food Data Bank based on Household Budget Surveys, in short DAFNE was created. Its tasks included the study of current methods of HBS data collection and processing, as well as the resolution of all scientific and technical issues for the consolidation of the national data bases. The end product of this effort is the creation of an operational European HBS Food Data Bank, accessible to all.

The main objectives of the DAFNE can be summarized in the following:

- the creation of a coherent infrastructure for nutrition information
- the achievement of integration, modularity and standardization in equipment, software and terminology
- the establishment of methods and ways enabling nutrition information of all types to be shared, combined and compared
- the dissemination of related research results to other European and non - European countries.

The overall aim of DAFNE initiative is the formation of a European Food Data Bank based on HBS.

In this context the project aimed at the development of a HBS food database which would permit all interested bodies to have access to the data collected in each country separately and in all countries at the same time, in order to identify differences concerning dietary patterns and high risk population groups on account of their nutritional habits,

Five countries participated in the DAFNE I project. Each country was represented by a statistician familiar with the HBS data collection and analysis processes and a nutritionist from the following departments:

Belgium:	University of Gent, Faculty of Agricultural Science, Department of Nutrition
Germany:	JLU University, Institute of Nutrition, Giessen
Greece: (coordinator)	National Nutrition Center, National School of Public Health, Athens
Hungary:	National Institute of Food Hygiene and Nutrition, Budapest
Poland:	National Food and Nutrition Institute, Warsaw

B. METHODOLOGY

The objective of the DAFNE I project was to provide comparable and harmonized dietary exposure data for individuals in specified sections of the population based on the HBS data. Studies conducted by the DAFNE team showed that the information available is of many different forms, levels of detail and quality. For this reason, it was considered necessary to establish a common framework for the participating countries and specify the information to be gathered.

A series of studies aiming at the development of the most appropriate way of using food and related data from the HBS was needed and the steps made are presented in the flow chart of *Figures 1 and 2*.

The tasks included:

- study of current methods of HBS data collection and processing.
- selection of parameters from the national HBS that would be of use to the DAFNE project
- comparability and harmonization of sociodemographic data from various countries; the education and occupation of household members and the category of locality of the area where the household is situated are listed among the parameters of interest.
- comparability and harmonization of food data from the various countries; the issues of food codification and food aggregation lie high in the list of priorities.

B.1 Study of the HBS data collection methodology

To assure national representativeness and feasibility of food availability comparisons between participating countries, the DAFNE team started by collecting information on the methodology followed by the statistical offices in organizing and conducting their national HBS.

All HBS, data of which were used in the context of DAFNE I, were conducted circa 1990. The sample sizes for Belgium, Germany Greece, Hungary and Poland were 3,235, 45,085, 6,489, 11,813 and 29,664 households, respectively. In Greece, Hungary and Poland, households which refused to participate in the survey were replaced by others with similar characteristics. In Belgium, refusals were handled as follows: the households which did not wish to participate to the survey were deleted and the final sample was weighted by the use of ponderation factors for each household, so as to assure national representativeness of the HBS. Germany is the only country where no random sampling was conducted, and only households which volunteered to participate joined the survey.

The recording period for food was 1 year in Belgium, 1 month in Germany, 1 week in Greece, 2 months in Hungary and 3 months in Poland. All samples were evenly distributed throughout the year to capture seasonal variability. All countries collected

Figure 1

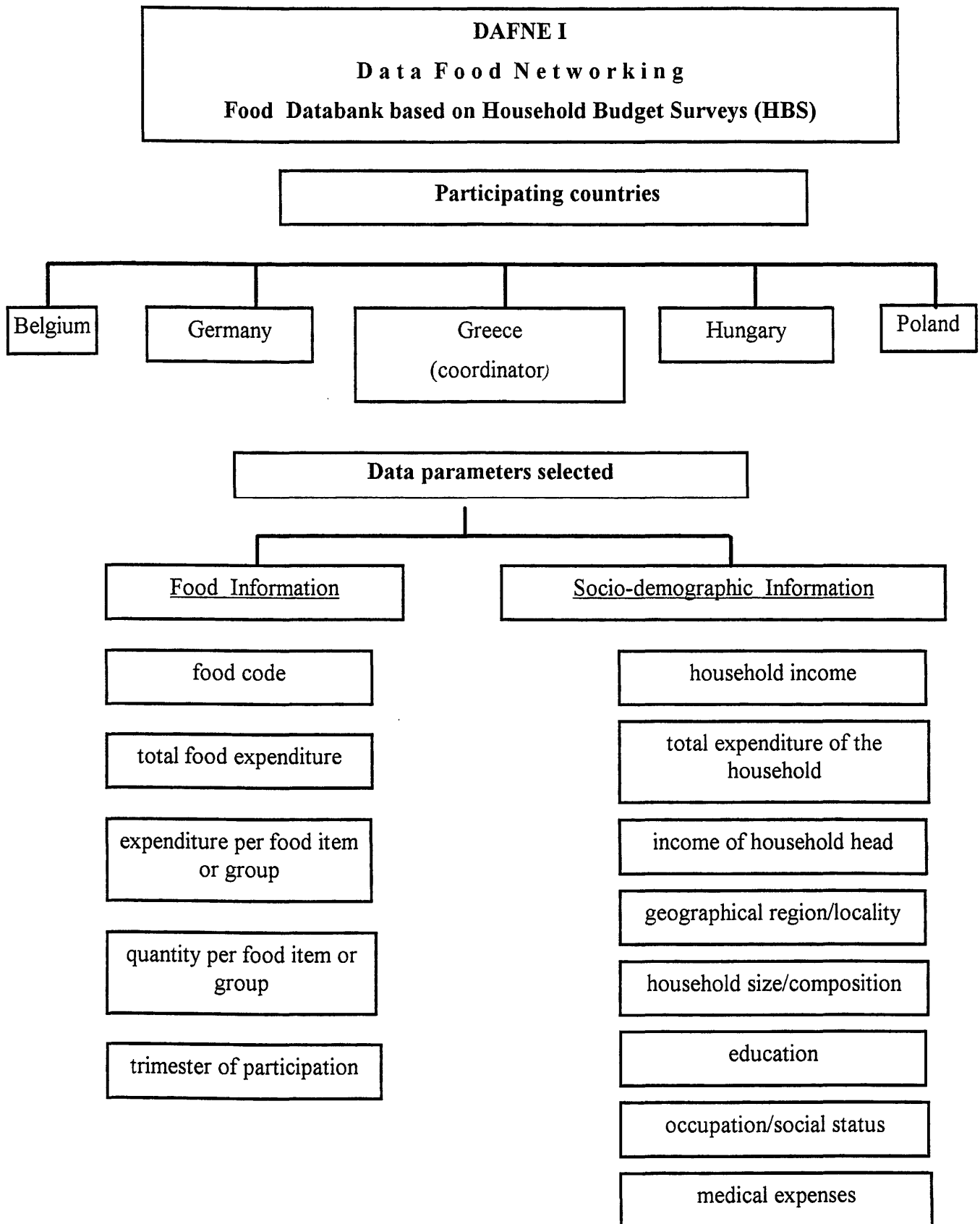
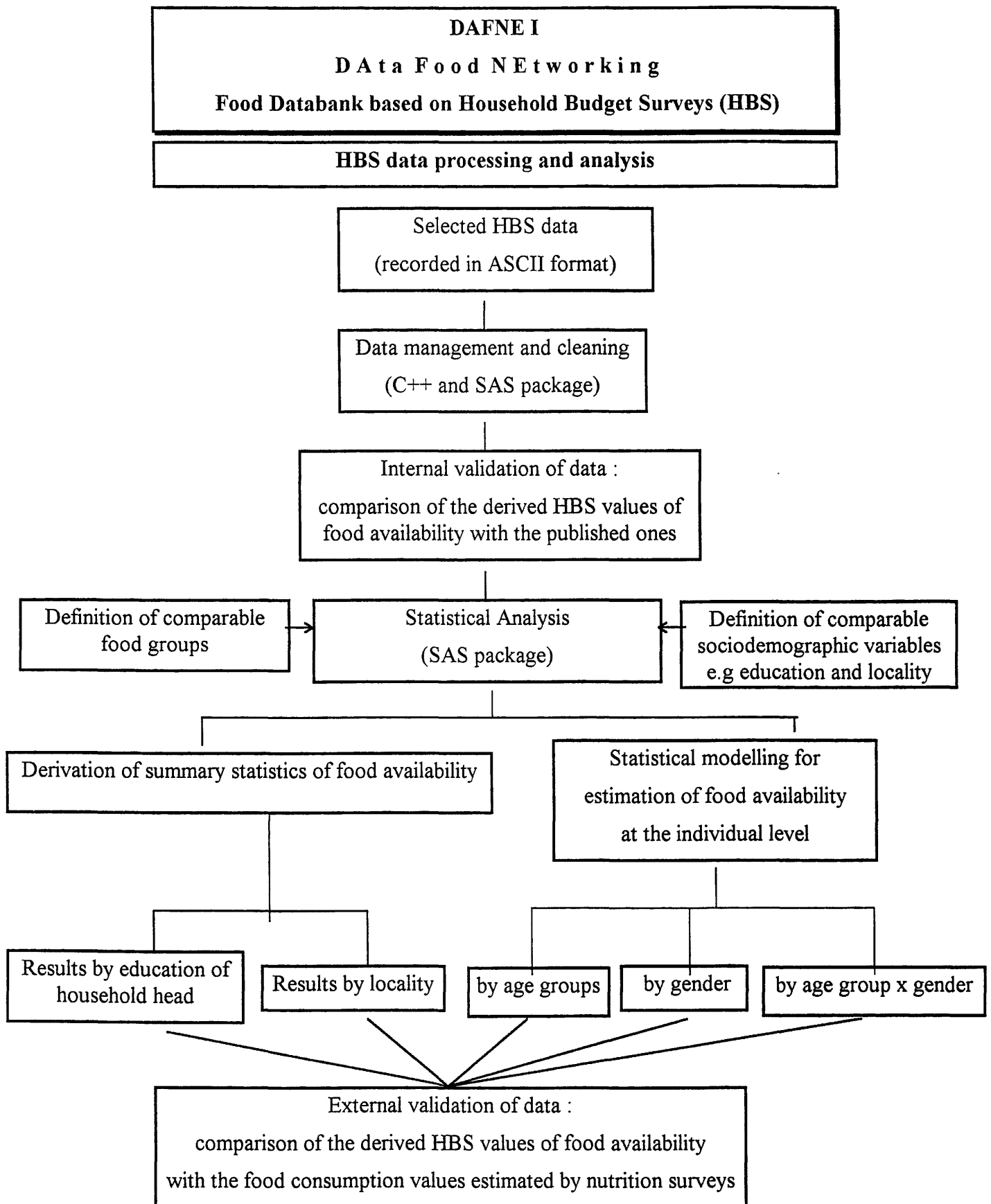


Figure 2



sociodemographic data on the households, as well as data both on values and on quantities of purchased food items. The food items recorded in quantities were 221 in Belgium, 73 in Germany, 88 in Greece, 56 in Hungary and 72 in Poland.

It should be stressed once again that all countries, through their HBS, collect data on the quantities or values of the food items purchased by the household and not consumed by each individual household member. In *Annex 1.1* details on the methodology followed by the national statistical offices, as well as on the type of data collected through HBS are presented.

B.2 Selection of HBS parameters

The parameters from the HBS data of the five countries which were asked for and provided by the National Statistical offices to be studied by the DAFNE team are listed below:

1. General information

- household identification number
- trimester of participation

2. Nutritional information

- food code
- total food expenditure
- expenditure per food item
- amounts per food item

3. Socioeconomic information

- location of household (urban, rural, semi-urban)
- name of geographical area
- household size
- household composition
- household disposable income
- household total expenditure
- occupation / employment status of household head and members
- education of household head and members
- income of household head
- medical expenses data

B.3 Data transfer

All data were saved in ASCII format, either on diskettes or on magnetic tapes and were accompanied by detailed descriptions of files and codes. At first, the data were checked by computer experts for possible problems in transferring from the main frames of the Statistical Offices. In the cases where the entire datasets had been sent by the Statistical Offices of the participating countries, the parameters mentioned above were selected and datasets with the desired data were stored in the DAFNE database in Athens.

B.4 Definition of comparable among countries categories of sociodemographic data

Though a number of sociodemographic parameters are recorded in the HBS and could be studied in the future, the DAFNE I team decided to focus on education of household head and locality (degree of urbanization of the area where the household was situated).

Both parameters could be used as proxies for the social and financial situation of the household.

B.4.1 Category of locality

Three comparable categories of locality were formed based on the data collected in the HBS: urban, semi-urban and rural. The different areas were classified under these three categories according to the number of their inhabitants and taking under consideration the population limits already set by the respective national Statistical Services (see *Annex 1.2.a*).

Questions, however, have been raised as to whether these categories really represent different living conditions in the participating countries, as in Belgium, for instance, all three categories experience a semi-urban way of living as stated by the representatives of this country. An exercise performed using the Polish HBS data, indicated that there was good correlation of the degree of urbanization with the parameters of own agricultural production and animal breeding (i.e. own production was higher in the rural areas). Nevertheless, the issue of degree of urbanization needs to be further studied, although the DAFNE participants agree that the existing categories reflect, more or less, the differentiation in access to facilities such as hospitals, supermarkets, schools.

B.4.2 Education of household members

Despite the differences in the educational systems of the participating countries, forming comparable categories in terms of education did not present any major problems. With the exception of Germany, where no data on education of household members are recorded, it was possible to form five comparable categories of education level of the household head for the rest of the participating countries: a) Illiterate/Elementary education not completed, b) Elementary education completed, c) Secondary education not completed, d) Secondary education completed and e) College/University completed (see *Annex 1.2.b*).

B.5 *Definition of comparable among countries categories of food items*

With respect to the food data collected by the HBS, the initial step taken by the DAFNE team was to clarify what exactly was included under each code used by the statistical offices. It was obvious that the level of detail on the recorded food data varied from one country to another (e.g. Belgium records 19 different types of bread while Greece records only two). Furthermore, in certain cases, food groups appeared to overlap among countries. Since the data did not share the same degree of detail, aggregation of the food items to the lowest level of information was necessary. On the other hand, however, whenever more than one food item was included under one food code and the national representatives were in a position -using information from official sources such as ministries, or the industry - to define the percentage of each of the food items in the code, the codes were split.

In *Annex 1.2.c*, the food aggregation tables providing comparable among participating countries information are presented. It should be stated that, although the data were collapsed to the lowest level of information, all detailed data have also been stored in special files for possible future analysis. The list of foods preceding the food aggregation tables summarizes the comparable between countries levels of aggregation.

B.6 Calculation of the average per capita food availability

In the context of the DAFNE I project, the HBS data were analyzed using the SAS software package.

The overall average availability per day per person of comparable among DAFNE countries food items or groups was calculated. Furthermore, the average (per day, per person) availability of households belonging to different locality and educational levels was also calculated. The general formula for calculating the average availability per person of a food item or group is given by the ratio total availability / total number of persons. Due to the sampling schemes, when necessary a weighted factor was incorporated in the formula.

At first, the data were converted into availability per day and in grams. Then, the average per person availability of a food item or group was calculated in the following way:

- let x_i be the availability per day in grams of a food item or group for the household i ,
- let k_i be the size of household i ,
- let n be the number of households in the sample, and
- let w_i be the weighed factor of household i , which reflects the type of the family in the sample relative to the nation. The weighted factor was introduced in the Hungarian HBS data (where it is called expansion factor) and in the Belgian HBS data (where it is called ponderation factor).

Poland

Since the data on urban and semi-urban households were under-representative, food availability and the number of household members in these households had to be multiplied by 2.

$$x = \frac{\sum_{i=1}^{n1} x_i + 2 \sum_{j=1}^{n2} x_j}{\sum_{i=1}^{n1} k_i + 2 \sum_{j=1}^{n2} k_j}$$

where $n1$ is the number of rural households and $n2$ is the number of urban and semi-urban households in the sample.

Hungary

$$x = \frac{\sum_{i=1}^n w_i * x_i}{\sum_{i=1}^n w_i * k_i}$$

Greece

$$x = \frac{\sum_{i=1}^n x_i}{\sum_{i=1}^n k_i}$$

Germany

In the case of Germany, as the weighted factor varied on a month basis, division by 12 was also incorporated in the formula.

$$x = \frac{\sum_{i=1}^n w_i * x_i}{\frac{\sum_{i=1}^n w_i * k_i}{12}}$$

Belgium

$$x = \frac{\sum_{i=1}^n w_i * x_i}{\sum_{i=1}^n w_i * k_i}$$

In order to calculate the average availability per person according to locality and educational levels the above formulas were applied to the corresponding data sub - sets.

In Annex II.1, mean per capita availability, as well as availability by education level of household head and locality, are given for 45 - comparable between the DAFNE I countries - food groups. Annex II.2, presents similar data on the availability of major food groups, as well as graphs depicting the availability of selected food groups in the five DAFNE I countries.

B.7 Derivation of percentiles along with bootstrap confidence intervals

In the context of the DAFNE I project, individual consumption estimates (one per family) have been used for the estimation of percentile values for all food group distributions. In *Annex II.3*, data for fruits are given as an example. Estimates were calculated for all households and for consuming households only. These quantities along with their corresponding confidence intervals are presented in tables and histograms, by country.

Estimates of the mean, 25%, 50%, 75%, 90%, 95% and 97.5% centile values for all households are shown in the upper part of each table. The lower part contains the same quantities for consuming households only. An additional entry in the table is an estimate of the proportion of consumers for this specific food item. This proportion is calculated as the number of families having purchased the item at least once per year divided by the total number of families in the sample.

Each estimated quantity is accompanied by a confidence interval. These were calculated

using bootstrap. This is a non-parametric technique introduced by Efron (1979) and is widely used in statistics particularly in circumstances where one needs to calculate difficult functions of the data. The technique is based on repeated sampling from the data. The original sample is considered as the new population and repeated sampling is used to form new samples. For each of these samples the appropriate statistical quantity is calculated. Using B such samples one can calculate B estimates of the statistical quantity of interest. Thus, the empirical distribution of this quantity is formed. Confidence intervals are then based on this empirical distribution (for an excellent introduction about bootstrap one is referred to Efron and Tibshirani, 1993). For our purposes 500 bootstrap were used.

The last part of each page is devoted to histograms. These represent the distribution of individual consumption for consumers only when all values above 97.5% centile point have been excluded.

B.8 *Estimation of the individual food availability by age and gender*

Household Budget Surveys data are generated per household but the objective of the DAFNE project is to express food availability per capita by age. This can be accomplished on the basis of household food availability and distribution of the corresponding households by number of members, by age. Thus, if older people or very young individuals consume smaller quantities of particular foods the over-representation of these people in certain households would be reflected in correspondingly lower per capita consumption of these foods.

A simple linear regression model can be constructed with dependent variable the per capita availability of a particular food and predictor (independent) variables the number of household members belonging to specific age groups (six groups: 15-24 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years, 65 and over years).

The regression model has the following form:

$$y_j = m + \sum_{i=1}^6 n_{ij} + \varepsilon_j,$$

where y_j is the food availability per capita for household j , m is the observed average household food availability in the parent population, n_{ij} is the number of members of household j belonging to age group i and ε_j is an error term corresponding to household j .

In the context of the DAFNE project, the model was fitted by the method of weighted least squares with the weights (expansion factors) being the number of households of particular size in the whole population relative to that in the study sample. The intercept m of the model was considered fixed and it was set equal to the average household availability in the parent population (i.e. by adjusting the HBS sample average household availability according to the previously indicated weights). The overall fit of the model was evaluated using the F-statistic at the 5% significance level.

In this modelling procedure, the age group effect (partial regression coefficient) was the deviation from the observed household average availability. The food availability for an individual in a specific age group was calculated by subtracting from the individual

weighted average availability the average of all age groups effects and by adding the age group effect of the specific age group.

The proposed model could be used as the basis for developing more complicated models that take into account other socio-demographic variables such as sex, income and education. Use of appropriate conversion factors may translate the food availability into nutrients and allow estimation of nutrients consumed by an average individual belonging to a specific age group.

C. VALIDATION OF THE APPROACH - COMPARISON OF THE HBS WITH THE NUTRITION SURVEYS DATA

To validate the assessment of nutritional information through HBS, comparisons of food information derived from HBS with the information collected by special nutrition surveys have been conducted. As previously discussed, although HBS collect information on household rather than individual level, statistical procedures enable derivation of estimates per capita by age. In the context of the DAFNE I project, a simple regression-based procedure was developed in order to generate results by age from the Hungarian 1991 HBS and compare them to data from the 1985 -1988 First Hungarian Representative Nutrition Survey (FHRNS). The overall agreement was satisfactory even though the Nutrition Survey standard was based on just two 24 hour recalls. The correlation coefficient across six age groups was 0.68 for cereals, 0.67 for meats, 0.60 for milk, 0.98 for bread, 0.89 for cheese, 0.41 for fresh vegetables, 0.88 for fish and 0.54 for fats. Only with respect to fresh fruits was the correlation poor (0.12).

The results of this analysis suggested that nutrition data from HBS are sufficiently reliable to be used for public health purposes and can be indirectly linked to important socio-demographic parameters, like age.

The differences in absolute levels between HBS-derived individual availability and NS-estimated individual consumption have always been recognized and can be readily explained. However for intra-country studies absolute differences are less important than correlation patterns. Moreover, in international studies absolute differences can be easily accounted for by simple additions or subtractions.

In conclusion, nutrition data from HBS represent an important source of nutrition information. Moreover the ability to introduce comparability checks during the collection or analysis process could make these data useful for international comparisons, as well as for reliable assessment of time trends.

D. WORK FOR THE FUTURE

D.1 The PROCOME food codification system

In the context of the DAFNE project it was several times suggested that a proposal to EUROSTAT for revising the PROCOME classification on the fourth level and adding a fifth level for national needs should be made.

According to EUROSTAT, obtaining nutrition information from HBS data requires changes in the survey design and in the collection and processing phases. In this context, it is

important to have a unified questionnaire with a unified item classification, which will allow anyone involved in the area to compare food consumption in an easy, uniform and invariable way. In October 1994, the EUROSTAT Party of the EU proceeded to the harmonization of the HBS by revising the PROCOME classification. The new revised PROCOME version represents a fourth level of classification, taking into account the specific requirements of HBS. Among the aims of the revision, the need for updating the PROCOME classification, putting emphasis on certain goods (such as food) and improving comparability with other international classifications were stressed. Therefore, after finalizing the new PROCOME classification, EUROSTAT expected the Member States to use the first four levels, desirably by 1998, and reserve a fifth level for national needs.

It was claimed, however, that: "In all events, the choices made by Member States relating to the fourth level can be amended in the light of subsequent reflection in each Member State. For example, if the measuring of food quantities is standardized for nutritional study purposes, it might be necessary to expand the number of food headings or, if not, reduce them" The Household Budget Surveys' EUROSTAT Working Group prepared a preliminary version of what was called PROCOME and was afterwards suggested to be called COICOP-HBS in the near future.

Taking all these under consideration, the DAFNE team proceeded to some amendments and then proposed a fifth level for national needs. The issue was initially discussed in the DAFNE I Final Meeting (Rome, 26-27 November 1995). According to the proposals of the participants of the meeting and the correspondence that followed, a revised fourth level was formulated and it was presented in EUROSTAT in December 1995. Some of the DAFNE proposals were chosen to be part of the "explanatory notes" in the document to be prepared by EUROSTAT, however, the EUROSTAT Working Group responded that the DAFNE amendments could be instead included in a fifth level. As a result, there was an effort to expand the fourth level to a fifth more analytical one and the whole approach is presented in *Annex III*.

D.2 *Estimation of food consumption and nutrient intake from food availability - The issues of meals taken out of home and inedible material, and the use of conversion factors and food composition tables*

As stated before (paragraph A.2), HBS data present some problems when it comes to estimating food consumed out of home. In addition, HBS data refer to availability of food entering the household and not the actual consumption of food or intake of nutrients.

The only data concerning meals taken out of home that are collected in the HBS are those on their monetary cost. Small pilot studies will determine the extent to which people are eating out of home and provide information on the kind of foods consumed in these out of home meals.

Allowances for inedible material in the foods as purchased are also not included in the HBS. An edibility factor should be developed for calculating the edible portion.

An essential element in converting the quantity data into nutrients is the development of appropriate conversion factors. These are based on food composition tables. However, in this connection a problem may be posed by the fact that the list of food items in the

HBS may not be in sufficient detail to enable a direct application of these food composition tables. This may be so in the case of minor foods, fruit or vegetables which tend to be grouped together. In such a case it is proposed to create certain "average conversion factors". This means that the list of food items in the HBS need to be studied and a set of corresponding conversion factors has to be prepared.

ANNEX I.1

HBS data collection methodology

DAFNE I

HOUSEHOLD BUDGET SURVEYS
A. METHODOLOGY / GENERAL INFORMATION I

country	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
response date	1/5/87 - 30/4/88	January 1988	1988	1991	1988 - quarterly rotation in a yearly cycle
sample size (households)	3,235	45,085	6,489	11,813	29,664
response rate %	11	-	94	73	60
sampling frame	sub-sample stratified by socio-professional class and region, taken from the regional random sampled households in a foregoing socio-economic nationwide inquiry	micro-census 1987	census	master sample of the USHS (Unified System of HBS)	a register of statistical regions
number of regions	3	11	9	19 counties + capital	49 voivodships - whole country
people paid to participate	yes	yes	no	yes	yes
one-person household included	yes	yes	yes	yes	yes
cost of the survey	300 millions BF		100 millions GDR	100 millions HUF	

DAFNE I

HOUSEHOLD BUDGET SURVEYS
A. METHODOLOGY / GENERAL INFORMATION II

country	sample design	definition of a sample unit
BELGIUM	Random sampling combined with stratification by region and socio-professional class	Household: person or group of persons, with or without family relations, living together under the same roof, sharing the same food and putting partly their financial means together.
GERMANY	Stratification by household net income, socio-economic status of head of household, household size	Household: group of people living under the same roof and having a shared budget. Included are persons who are temporarily absent, if it provides for the bulk of their requirements, or if it is maintained by their earnings.
GREECE	Multistage stratified random sampling	Household: Person or group of persons, related or not, sharing the same dwelling, the same cooking facilities, and having common financial interests
HUNGARY	Stratified two- or three- stage sampling. Primary and secondary units (settlements and districts) are selected with probability proportional to size, then an equal number of households is chosen from each selected unit	Household: persons living in the same dwelling and sharing living costs completely or partly
POLAND	Two-stage stratified random selection. Statistical regions consisting of at least 250 dwellings constituted units of this first stage. At the second stage households were selected at random	Household: one or more persons sharing the same dwelling facilities and budget

DAFNE I

HOUSEHOLD BUDGET SURVEYS
B. SPECIFIC INFORMATION REGARDING DATA COLLECTION I

country	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
household income data	yes	yes	yes	yes	yes
sociodemographic information	yes	yes	yes	yes	yes
food data	yes	yes	yes	yes	yes
number of food items included in the questionnaire	221 (207 foods & 14 beverages)	103 (8 codes for meals out of home)	open questionnaire	67 (+ 4 codes for meals out of home)	81
number of food items recorded in values	180 (164 foods & 14 beverages)	102	129		81
number of food items recorded in quantities	221 (207 foods & 14 beverages)	73	88	55 + 1 of which only purchase quantity (bread)	72
number of food items presented in the published data	221	135 (aggregated items included)	61	31 + 4 in values 54 in quantities	48
aggregation of food items made before or after data collection	after	after	after	after	before

DAFNE I

HOUSEHOLD BUDGET SURVEYS
B. SPECIFIC INFORMATION REGARDING DATA COLLECTION II

country	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
% proportion of meal expenditure outside home	23.29% of the expenditure	23.8%	20.7%	approximately 10%	0.4-3.1% depending on the socio-economic group
% proportion from own production	3.11	1.0	8.0	18%	6.6-53.1 depending on the socio-economic group
alcoholic beverages included in values	yes	yes	yes	yes	yes
alcoholic beverages included in quantities	yes	yes	no	only wine	yes
tea, coffee, stimulants included in values	yes	yes	yes	yes	yes
tea, coffee, stimulants included in quantities	yes	yes	no	no	yes
consumption of own production of food recorded	yes	only for self employed	yes	yes	yes
information concerning women in pregnancy recorded	no	no	no	no	no
information concerning women in lactation recorded	no	no	no	no	no
meals of guests included	yes	yes	yes	yes	yes
household living conditions recorded	yes	yes	yes	yes	yes

DAFNE I

HOUSEHOLD BUDGET SURVEYS
C. OTHER INFORMATION REGARDING THE HOUSEHOLD BUDGET SURVEYS I

country	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
non-aggregated food items stored in magnetic tapes	yes	yes	yes	yes	no
number of non-aggregated food items stored in magnetic tapes	221	103	129	71	-
information regarding use of vitamin and mineral supplements recorded	no	no	no	no	no
extent of difference between the recorded food availability in the HBS and in the National Accounts (%)	not available	not available	14% though not directly comparable	roughly 18% for foods and 70% on beverages	2-30% depending on the socio-economic group (with respect to food calories)
existence of machinery for nutritional analysis	no	yes	no	no	yes
timing of next HBS	1 May 1995 - 30 April 1996	1993	1992/93	second half of 1992	conducted annually

DAFNE I

HOUSEHOLD BUDGET SURVEYS
C. OTHER INFORMATION REGARDING THE HOUSEHOLD BUDGET SURVEYS II

country	frequency of HBS	households (hh) excluded from HBS	handling of refusals
BELGIUM	in future annually	- collective hh	households that did not participate at all are deleted; the sample is weighted by ponderation factors
GERMANY	every 5 years	- hh of foreigners - institutions - hh with very high income	no random sampling; only hh on voluntary basis included
GREECE	every 5-6 years	- people working in the defense sector - diplomats - institutions - collective dwellings - hh with more than 3 boarders	hh not entering the survey were replaced by others with similar characteristics
HUNGARY	annually since 1993	- institutions - foreign residents - partly hh with member(s) working abroad	non-respondent hh are substituted by others, randomly selected from the same census district, socio-economic group and size
POLAND	annually	- persons conducting their own economic activity (exc. individual farmers) - living in boarding school, student hostels - hh of foreign residents - persons working in the armed forces and the police	non-respondent hh are substituted by others, with similar characteristics

DAFNE I

HOUSEHOLD BUDGET SURVEYS
C. OTHER INFORMATION REGARDING THE HOUSEHOLD BUDGET SURVEYS III

country	techniques for collecting food availability data	recording period for food	capturing of seasonal variability	nutrient conversion factors
BELGIUM	each purchase is recorded in a diary with its description, the quantity and the value for 1 year	1 year	recording period through the whole year	no
GERMANY	self recording of respondents in diaries for 1 month of the recording period (1 year)	1 month	1/12 of the sample hh keeps an income and expenditure diary for 1 month during the whole recording period (1 year) by rotation	no
GREECE	food accounts diary for 7 days	1 week	the sample is evenly distributed throughout the year	no
HUNGARY	diary keeping for 2 months: daily recording of quantities and expenditures on food purchased and weekly recording of food quantities consumed from own account production	2 months	the sample is evenly distributed throughout the year	from OETI
POLAND	food accounts for 3 months	3 months	the survey covers 1 year and results by month are available	from NFNI, Food Economics Department

DAFNE I

HOUSEHOLD BUDGET SURVEYS
C. OTHER INFORMATION REGARDING THE HOUSEHOLD BUDGET SURVEYS IV

country	handling of waste and losses within the hh	handling of pet foods	special handling of food stocks	special handling of large food purchases
BELGIUM	yes	no	no	no for 1995 recorded when amount > 1900 BF
GERMANY	no	recorded as a non-food item	no	no
GREECE	no	recorded under special code number	for certain foods	yes
HUNGARY	taken into account in interviewers manual and for the nutrient conversion factors	separately	expenditures and quantities recorded at the time of purchase	expenditures and quantities recorded at the time of purchase
POLAND	no	theoretically excluded	stocks of potatoes recorded	no

ANNEX I.2.a

Comparable categories of locality

DAFNE I

COMPARABLE CATEGORIES OF LOCALITY

	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
rural areas	- <25,000 inhabitants	- <5,000 inhabitants	-rural areas (0-1,999 inhabitants)	-village (< 10,000 inhabitants)	-rural area
semi-urban areas	- 25,000-100,000 inhabitants	- 5,000 - 19,999 inhabitants - 20,000 - 99,999 inhabitants	-semi-urban areas (2,000 - 9,999 inhabitants)	-town (10,000 - 60,000 inhabitants)	-city of <20,000 inhabitants -city of 20,000 to 100,000 inhabitants
urban areas	- >100,000 inhabitants	- 100,000 - 499,999 inhabitants - >500,000 inhabitants	-rest urban areas (>10,000 inhabitants) -Greater Salonica -Greater Athens	-Budapest (2,000,000 inhabitants)	-city of >100,000 inhabitants

ANNEX I.2.b

Comparable categories of education of household head

COMPARABLE CATEGORIES OF EDUCATION

education level of household head	BELGIUM	GERMANY*	GREECE	HUNGARY	POLAND
Illiterate/ Elementary education not completed	-No education	-	-Elementary school, not completed	-Elementary school not completed	-Persons with no education and self-taught persons -Elementary school not completed -Elementary schools ** -Elementary schools for adults **
Elementary education completed	-Primary school	-	-Elementary school, completed	-Elementary school completed	-Elementary school completed
Secondary education not completed	-Secondary school, lower level	-	-Obligatory education completed	-Apprenthis (tech. school) completed -Vocational school (e.g. typist training) completed	-Vocational education -Secondary education not completed -Vocational schools ** -Vocational schools for adults ** -Secondary schools ** -Secondary schools for adults ** -Technical secondary schools ** -Technical secondary schools for adults **
Secondary education completed	-Secondary school, upper level	-	-Secondary education, completed -University student	-Secondary school (general education) completed -Secondary school (specialized education) completed	-Secondary education completed -University education not completed -Colleges ** -Daily university ** -Evening university **
College / University completed	-Higher educ., non-university -University	-	-University, completed	-Technical high school (3-4 years) -University (4-5 years)	-University education completed

* no data on education collected

** codes referring to individuals still attending the schools

ANNEX I.2.c

Food aggregation tables

Explanatory notes

- The aggregation tables are preceded by a list of the comparable between DAFNE countries food groups. The level of detail is denoted by the use of the * symbol indicating a more analytical (desaggregated) level as the number of * increases. Sub-categories of the same food category are placed under the main category and to the right of it.
(e.g. *meat
 ** pork
 ** beef)
- In the aggregation tables, the use of *italics* indicates that the only available data for the specific food item are those on purchase value and no information on quantity is recorded. A list of the prices per unit used to calculate food quantities is given in Annex II.1.
- The aggregation table for each of the main food groups is followed by a number of notes which are either general for all countries (indicated by "A-number of note", e.g. A-2), or specific for one of the countries (indicated by "the official initials of the country - number of note" , e.g. GR-1). For each note there is specific reference in the aggregation tables, using the indication of the note (e.g. HU-3) as a superscript over a specific food code.
- Whenever a conversion factor is used it is placed right after the national food code of the specific food and an explanatory note is always made.
- When a unique food code splits into two or more different codes, the percentages used are mentioned specifically under a note. The splitting of certain codes in each country was conducted by the respective representatives, based on the information they collected from official sources, such as ministries, or the industry.

Comparable between DAFNE countries food groups
of different aggregation levels

- *Bread and rolls
- *Bakery products
- *Cereals and products (flour, bread, pasta and bakery products excluded)
- *Flour
- *Pasta

- *Meat
 - ** Red meat
 - ***Pork
 - ***Beef, veal and calf
 - ***Red meat other than pork or beef
 - **Poultry
 - **Offals
 - **Meat products
 - **Meat dishes

- *Fish and seafood
 - **Fish
 - **Seafood
 - **Fish dishes
- *Eggs

- *Cheese
- *Milk
- *Dairy products (milk and cheese excluded)

- *Total added lipids
 - **Lipids of animal fat
 - ***Butter
 - ***Lipids of animal origin (butter excluded)
 - **Lipids of vegetable origin
 - ***Vegetable oils
 - ***Vegetable fats (margarine included)
 - ****Vegetable fats (margarine excluded)
 - ****Margarine

- *Potatoes
- *Vegetables
 - **Fresh vegetables
 - ***Fresh leafy vegetables (cabbages excluded)
 - ***Cabbages
 - ***Tomatoes
 - ***Carrots
 - ***Onions and garlic
 - ***Other fresh vegetables
 - **Processed vegetables
- *Pulses

- *Nuts

Comparable between DAFNE countries food groups
of different aggregation levels
(continued)

*Fruits

- **Fresh fruits
 - ***Apples
 - ***Citrus fruits
 - ***Banana
 - ***Strawberries
 - ***Grapes
 - ***Cherries
 - ***Peaches and apricots
 - ***Pears
 - ***Plums
 - ***Other fresh fruits
- **Processed fruits

*Sugar

*Sugar products

*Beverages, alcoholic

**Wine

**Beer

**Spirits

*Beverages, non-alcoholic

**Mineral water

**Stimulants

***Coffee

***Tea and similar infusions

***Cocoa

**Soft drinks

DAFNE I - FOOD AGGREGATION FOR CEREALS

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
BREAD AND ROLLS									
13	Bread	111.4.01-111.4.15 111.4.16*240 111.4.17*56	Bread (different types) French type bread ^{BE-1} Rolls ^{BE-2}	511 512	White bread Gray bread	95 96*0.3	Bread Rolls only ^{HU-1}	1 2 3	Bread, rye Bread, mixed Bread, wheat
BAKERY PRODUCTS									
14	Rusks	111.5.01*80 111.5.02 111.5.07 111.5.04 111.5.05 111.5.06 111.5.08	Croissants, couques ^{BE-3} Dry sweets other than biscuits, cakes etc. Spiced bread Biscuits "Speculous" Salted biscuits Rusks	515 517 570	Crackers, rusks Other bakery products (dough based) Dried bakery products	96*0.7 100	Bakery products (e.g. croissant, filled included) ^{HU-1} Bakery products dried, sweet or salted (e.g. crackers, biscuits)	68	Biscuits
15	Biscuits (pastries included)	111.5.03	Pastries and pies	540	Fresh bakery products			4	Cakes and pastries
CEREAL AND PRODUCTS (flour, bread, pasta and bakery products excluded)									
18	Other cereal based products (dough, infant food, quaker etc.)	111.6.01 111.6.02 111.6.03	Cereal and semolina based products for infants and dietetic use Tapioca/other semolina based products Other cereal based products	732 770	Processed cereal products Baby food			6	Groats, flakes, (baby food included)
16	Rice	111.1.01	Rice	715	Rice	98	Rice, cereals (corn flour included)	8	Rice
12	Cereals	111.2.04 111.2.05 111.2.06	Oat porridge, oat flakes Barley malt Bran	718 719	Cereal seeds Other cereal products (non-wheat flour included)				

GREECE (GR) national food code	BELGIUM (BE) national food code	GERMANY (DE) national food code	HUNGARY (HU) national food code	POLAND (PL) national food code
FLOUR				
11 Flour	111.2.01 Wheat flour 111.2.02 Corn flour, rice flour, others 111.2.03 Semolina	711 Wheat flour	97 Flours (excluded flour for bread preparation at home)	5 Flour
PASTA				
17 Pasta	111.3.01 Macaroni, spaghetti 111.3.02 Mixed pasta dishes ^{BE-4}	731 Pasta	99 Pasta	7 Macaroni

Italics: no quantities available, only the purchase value is known

NOTES FOR BELGIUM:

- BE-1 Code "111.4.16" (french type bread): each piece weights 240 g on average.
- BE-2 Code "111.4.17" (rolls): each piece weights 56 g on average.
- BE-3 Code "111.5.01" (croissants, couques): the average weight for this code is 80 g per piece.
- BE-4 Code "111.3.02" (mixed pasta dishes): the ingredients of a 300 g package of mixed pasta dish is 250 g pasta and 50 g dried vegetables.

NOTES FOR HUNGARY:

- HU-1 Code "96" (bakery products, rolls): 30% rolls and 70% other bakery products.

DAFNE I - FOOD AGGREGATION FOR MEAT

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
RED MEAT									
PORK MEAT									
25	Pork, fresh	112.6.01*0.7	Minced meat ^{BE-1}	113	Pork	78	Pork	34	Pork, raw (fresh and frozen)
33	Pork, frozen	112.3.01 112.3.02 112.3.03	Pork chops Other pork meat Pork carcass	131*0.5	Minced meat ^{DE-1}				
BEEF VEAL AND CALF MEAT									
21	Beef, fresh	112.1.01	Entrecotes, roast beef	111	Beef	79	Beef and veal	35	Beef, raw
28	Beef, frozen	112.1.02	Standing beef	112	Calf			36	Veal, raw
22	Calf, fresh	112.1.03	Beef steak	131*0.5	Minced meat ^{DE-1}				
29	Calf, frozen	112.1.04 112.1.05 112.1.06 112.1.07 112.2.01 112.2.02 112.2.04 112.5.01 112.6.01*0.3 112.9.06	Minced beef steak Boiling beef Stew meat Beef carcass Veal Veal for stew Calf carcass Horse meat ^{BE-2} Minced meat ^{BE-1} Meat for hamburgers ^{BE-3}						
RED MEAT OTHER THAN PORK AND BEEF									
23	Lamb, fresh	112.4.01	Mutton/lamb meat (excl. offals)	115	Sheep/lamb	81	Sheep, goat, game, hare, pigeon	39	Other meat, raw
24	Sheep/goat fresh	112.8.01	Game, frog	117	Game				
31	Lamb, frozen	112.8.02	Game, frozen	119	Other meat				
32	Sheep/goat, frozen	112.8.03 112.7.05 112.7.06	Other meat Rabbit, fresh Rabbit, frozen						
OFFALS									
35	Other parts of frozen meat (=offals)	112.2.03	Calf liver, kidneys, sweetbreads	135	Offals, other carcasses products	80	Offals (of pork/ beef / veal origin)	40	Liver
27	Other parts of fresh meat (=offals)	112.6.03	Offals					41	Other offals, raw

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
POULTRY									
26	Poultry, fresh	112.7.01	Chicken, fresh	120	Poultry	83	Poultry (raw and prepared)	37	Hen and chicken
		112.7.02	Hen, fresh						
34	Poultry, frozen	112.7.03	Poultry, fresh					38	Other poultry
		112.7.04	Poultry, frozen						
MEAT PRODUCTS^{A-1}									
36*1.25	<i>Cold cut, cured meat, matured meat, etc.</i>	112.6.02	Fresh sausages	141	Cold cut	84*1.04	Meat products, canned meat, smoked meat ^{A-1}	43*1.25	Pork ham, pork loin, smoked boiled
		112.6.05	Ham	145	Ham			44*1.25	Sausage smoked
		112.6.06*1.25	Dried sausages	147	Bacon	91	Bacon (with lean stripes)	45*1.25	Other sausage
37	<i>Canned meat, ham, bacon</i>	112.6.07	Pate	150	Canned meat			46*1.25	Other meat products smoked
		112.6.08*1.25	Smoked and salted meat	160	Other meat products			47*1.25	Liver sausage barley black pudding
		112.6.09	Non-canned meat products					48	Canned meat
		112.6.10	Other canned meat products (frankfurters)						
		112.6.04	Bacon						
MEAT DISHES									
38	<i>Roasted meat, chicken, pizza, meat pie</i>	112.9.02	<i>Prepared meat (no additions)</i>			143	<i>Canned dishes prepared with meat</i>		
		112.9.03	<i>Prepared meat with additions (preserved or not)</i>						
		112.9.04	<i>Frozen prepared meat</i>						
		112.9.05	<i>Meat for fondue etc.</i>						

Italics : no quantities available, only the purchase value is known

GENERAL NOTES (A-):

A-1 The conversion factor to fresh meat equivalents is 1.25 for dried and smoked meat.

NOTES FOR BELGIUM:

- BE-1 Code "112.6.01" (minced meat);70% pork and 30% beef.
- BE-2 Code "112.5.01" (horse meat); the composition of horse meat is similar to the beef meat composition.
- BE-3 Code "112.9.06" (meat for hamburger): Hamburgers bought on the belgian market (not as fast foods) are mainly uncooked beef meat.

NOTES FOR GERMANY:

- DE-1 Code "131" (minced meat);50% pork and 50% beef origin.

NOTES FOR HUNGARY:

- HU-1 Code "84" (meat products, canned meat, smoked meat) :The conversion factor to fresh meat equivalent is 1.04 instead of 1.25 due to the different contribution of the meat types in this group.

DAFNE I - FOOD AGGREGATION FOR FISH AND SEAFOOD

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
FISH									
41,42,43	Fresh fish	113.1.01	Fresh sole	170	Fish and fish-fillets, fresh/ frozen	82*0.8	Fish, fresh, canned and smoked ^{HU-1}	49	Saltwater fish
		113.1.02	Fresh plaice					50	Freshwater fish
		113.1.03	Fresh cod					51	Salted herring
45	Frozen fish	113.1.04	Other fresh saltwater fishes	180*0.65	Canned fish only ^{DE-1}			52	Processed fish
		113.1.05	Frozen cod						
47	Fish cured, dried and smoked	113.1.06	Other frozen saltwater fishes						
		113.1.07	Fresh freshwater fishes						
48	Cured hake	113.1.08	Frozen freshwater fishes						
		113.2.01	Fish salted, dried, smoked						
49	Canned fish	113.2.02	Canned herring						
		113.2.03	Canned salmon						
		113.2.04	Canned sardines						
		113.2.05*0.5	Other canned fish, only ^{DE-1}						
SEAFOOD									
44	Fresh seafood	113.1.09	Fresh crustaceans, mollusks	180*0.35	Canned mollusks only ^{DE-1}	82*0.0	Seafood ^{HU-1}	52*0.0	Seafood ^{PL-1}
46	Frozen seafood	113.1.10	Frozen crustaceans, mollusks	190*0.03	Other crustaceans and mollusks only ^{DE-2}				
		113.2.05*0.5	Other canned crustaceans, mollusks only ^{DE-1}						
FISH DISHES									
		113.3.01	Fish dishes with other products ^{BE-2}	190*0.97	Other fish products, only ^{DE-2}	82*0.2	Fish dishes only ^{HU-1}		
		113.3.02	Frozen prepared fish dishes ^{BE-3}						

Italics: no quantities available, only the purchase value is known

NOTES FOR BELGIUM:

- BE-1 Code "113.2.05" (other canned fish, crustaceans, mollusks): 50% canned fish and 50% canned seafood.
- BE-2 Code "113.3.01" (fish dishes with other products): 75% fish, 25% vegetables and sauces.
- BE-3 Code "113.3.02" (frozen prepared fish dishes): 80% fish, 20% flour and spices.

NOTES FOR GERMANY:

- DE-1 Code "180" (canned fish, crustaceans, mollusks): 65% canned fish and 35% canned seafood.
- DE-2 Code "190" (other crustaceans, mollusks and fish products): 97% fish products and 3% seafood.

NOTES FOR HUNGARY:

- HU-1 Code "82" (fish, seafood and fish dishes): 80% fish and 20% fish dishes. The seafood contribution is negligible.

NOTES FOR POLAND:

- PL-1 The seafood contribution is negligible.

DAFNE I - FOOD AGGREGATION FOR EGGS AND DAIRY PRODUCTS

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
EGGS									
69	Eggs whole, egg powder	114.3.01	Eggs	250 255/50*15	Eggs fresh Eggs processed ^{DE.1}	85	Eggs	57	Eggs
CHEESE^{A.1}									
67	Soft cheese	114.2.01	Cottage cheese, etc. Processed cheese	245	Cottage cheese	87*1.425	Cheese (sheep cheese included) ^{HU.1}	60	Cottage cheese
68*1.5	Hard cheese	114.2.02*1.5 114.2.03*1.5 114.2.04 114.2.05*1.5 114.2.06*1.5	Hard/semi-hard cheese Soft cheese Cheese for diet Cheese dishes	248*1.5	Other cheese	88*1.5	Ewe cheese	61*1.5	Hard and processed cheese
MILK^{A.2}									
61	Fresh milk	114.1.01	Milk, whole fat	210	Drinking milk	86	Milk	58	Milk and milk beverages ^{PL.1}
64*2.2	Unsweetened condensed milk	114.1.02	Skimmed milk	220*3.8	Condensed milk, milk powder ^{DE.2}			59*7	Milk powder, condensed milk ^{PL.2}
65*8	Dried whole milk	114.1.03*2.2	Condensed milk						
DAIRY PRODUCTS (cheese and milk excluded)									
66	Yoghurt, milk based beverages	114.1.04*8	Milk preparation for infants, dietetic use Cream ^{BE.1}	231	Cream	88:	Other dairy products: Sourcream ^{HU.2}	62	Cream
63	Sweetened condensed milk	114.1.05*0.9 114.1.06*0.9	Other milk products (e.g. chocolate milk, butter milky ^{BE.2})	232 233	Yoghurt Other dairy products	88a*0.9 88b 88c 88d*0.9 88e	Curd Cocoa milk Sweet cream ^{HU.2} Kefir		
62	Chocolate milk	114.1.07	Other dairy products (e.g. yoghurt, desserts)	670	Ice cream	88f 88g	Yoghurt Yoghurt with fruits		
168	Ice cream	110.2.06*0.6	Ice cream ^{BE.3}						

Italics: no quantities available, only the purchase value is known

GENERAL NOTES:

- A-1 Hard cheese is converted to fresh cheese equivalents by multiplying with 1.5
- A-2 All milk items (e.g. fresh milk, dried milk, condensed milk) are converted to fresh milk equivalents:
1 unit condensed milk * 2.2 = 1 unit fresh milk.
1 unit dried milk * 8 = 1 unit fresh milk.

NOTES FOR BELGIUM:

- BE-1 Code "114.1.05" (cream): 1 lit cream = 0.9 kg cream.
- BE-2 Code "114.1.06" (other milk products): 1 lit chocolate milk = 0.9 kg chocolate milk.
- BE-3 Code "110.2.06" (ice cream): 1 lit ice cream = 0.6 kg ice cream.

NOTES FOR GERMANY:

- DE-1 Code "255" (eggs processed): the average weight of an egg is 50 g. Division of the quantity of code 255 by 50 gives the number of pieces of eggs.
Multiplication by 15 is used to convert pieces of processed eggs to pieces of fresh eggs.
- DE-2 Code "220" (condensed milk, milk powder): 72% condensed milk and 28% powdered milk. According to general note A-2: $[0.72 \cdot 2.2 + 0.28 \cdot 8] \cdot \text{quantity of code 220} = 3.8 \cdot \text{quantity of code 220} = \text{quantity of fresh milk}$.

NOTES FOR HUNGARY:

- HU-1 Code "87" (cheese): this food group contains both fresh and hard cheese, which makes the conversion factor for fresh cheese equivalents 1.425.
- HU-2 Code "88a" (sourcream) and code "88d" (sweet cream): 1 lit cream = 0.9 kg cream.

NOTES FOR POLAND:

- PL-1 Code "58" (liquid milk, milk beverages): consumption of milk beverages is negligible.
- PL-2 Code "59" (milk powder, condensed milk): multiplication by 7 is used to convert the quantity of code 59 to quantity of fresh milk.

DAFNE I - FOOD AGGREGATION FOR FAT AND OILS

GREECE (GR) national food code	BELGIUM (BE) national food code	GERMANY (DE) national food code	HUNGARY (HU) national food code	POLAND (PL) national food code
LIPIDS OF ANIMAL ORIGIN				
Butter				
53 Butter	115.1.02 115.1.01 115.1.03 Butter for cooking Butter Butter based products	270*0.92 Butter ^{DE-1}	89 Butter, butter cream/spread	53 Butter
Lipids of animal origin (butter excluded)				
56 Animal fat (excluded butter)	115.3.02 115.3.03 115.3.04 Pork fat Beef fat Other fats	270*0.08 295*0.15 Lard only ^{DE-1} Other cooking animal fats ^{DE-2} (shortenings)	90 Bacon (pure animal fat)	54 Animal fats, raw, melted
LIPIDS OF VEGETABLE ORIGIN				
VEGETABLE OILS				
51 Olive oil	115.4.04 Olive oil	293 Vegetable oils	92*0.9 Vegetable oils ^{HU-1}	56*0.7*0.9 Other vegetable oils only ^{PL-1, PL-2}
52 Vegetable oils	115.4.05 115.4.01 115.4.02 115.4.03 Other oils Peanut oil Safflower oil Corn oil, soya oil, sunflower oil			
VEGETABLE FATS (margarine included)				
Margarine				
54 Margarine	115.2.01 115.2.02 115.2.03 115.2.04 115.2.05 115.2.06 Diet margarine, unsalted Margarine corn based Other soft margarine Hard margarine Unsalted minarine Salted minarine	291 Margarine	93 Margarine	55 Margarine
Vegetable fats (margarine excluded)				
55 Vegetable cooking fats	115.3.01 Vegetable cooking fats	295*0.85 Other cooking vegetable fats ^{DE-2} (shortenings)	56*0.3 Vegetable fats only ^{PL-1}	

NOTES FOR GERMANY:

DE-1 Code "270" (butter): 92% butter and 8% lard.

DE-2 Code "295" (other cooking fats): 85% cooking fats of vegetable origin and 15% cooking fats of animal origin.

NOTES FOR HUNGARY:

HU-1 Code "92" (vegetable oil): 1 kg vegetable oil = 0.9 lit vegetable oil.

NOTES FOR POLAND:

PL-1 Code "56" (other vegetable fats and oils): 70% vegetable oils and 30% vegetable fats.

PL-2 Code "56" (other vegetable fats and oils): 1 kg vegetable oil = 0.9 lit vegetable oil.

DAFNE I - FOOD AGGREGATION FOR VEGETABLES AND POTATOES

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
POTATOES									
81	Potatoes, sweet potatoes	117.1.01	Potatoes new	410	Potatoes fresh	101	Potatoes	9	Potatoes
82	Potato products	117.1.02 117.1.03 117.2.01	Other potatoes Potato products Other tubers	420	Potato products				
FRESH VEGETABLES									
FRESH LEAFY VEGETABLES									
93	Greens	116.1.08	Salad	440	Leaf and stem vegetables	112*150	Lettuce ^{HU1}	15	Lettuce
102	Lettuce	116.1.10*376	Celery ^{BE1}						
107	Leek	116.1.11	Leek						
109	Spinach	116.1.15	Spinach						
		116.1.17*0.5	Other fresh green vegetables only ^{BE2}						
		116.1.18*0.6	Mixed green only ^{BE3}						
CABBAGES^{A1}									
101	Cabbages	116.1.02	Brussels sprouts	431	Cauliflower	111	Cabbages	14	Cabbages
98	Cauliflower	116.1.03*1055 116.1.04*1156	Cauliflower ^{BE4} Other cabbages ^{BE5}	433	Other cabbages			16	Cauliflower
TOMATOES									
111	Tomatoes	116.1.05	Tomatoes	451	Tomatoes	114	Tomatoes	13	Tomatoes

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
CARROTS									
95	Carrots	116.1.07	Carrots	465	Carrots	115*0.6	Carrots ^{HU2}	12	Carrots
OTHER FRESH VEGETABLES									
92	Cucumber	116.1.12	Chicory	455	Cucumber	115*0.4	Parsley root ^{HU2}	18	Cucumber
91	Globe artichoke	116.1.13	Asparagus	459	Other fresh fruity vegetables	116	Cucumber	19	Early vegetables
96	Baby squash	116.1.14	Salsify	469	Other fresh vegetables	120	Green	20	Other fresh vegetables
103	Eggplants	116.1.17*0.5	Other fresh vegetables ^{BE2}			121	Paprika, other fresh vegetables	11	Beets
104	Okra	116.1.18*0.4	Mixture of fresh vegetables ^{BE3}						
105	Beetroots								
106	Pepper								
113	Other vegetables								
112	French beans	116.1.06	Green beans			118	Green beans		
94	Green peas	116.1.01	Peas			119	Green peas		
97	Broad beans								
		116.1.16	Mushrooms and truffles			113	Mushrooms	21	Mushrooms, fresh
ONIONS, GARLIC									
75	Dried onions, garlic	116.1.09	Onions, shallots	461	Onions etc. fresh	117	Onions (fresh included)	17	Onions
99	Fresh onions								
108	Fresh garlic								

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
PROCESSED VEGETABLES									
57	Olives	16.3.07	Olives						
123	Pickles	116.5.06	Other canned vegetables (=pickles) ^{BE-7}			122	Pickles	23	Sauerkraut
121	Frozen vegetables					123	Pickled cabbage		
122	Canned vegetables	116.5.01	Preserved: Peas	470	Frozen vegetables	124	Preserved green peas, green beans	22	Frozen vegetables
124	Tomato paste	116.5.02	Beans in tomato sauce	480	Canned vegetables			24	Other processed vegetables
		116.5.03	Peas and carrots	499	Other vegetable products	125	Other preserved vegetables (excluded 122, 123, 124)		
		116.5.04	Tomatoes						
		116.5.05	Mixed vegetables						
		116.5.08	Soups						
		116.5.09	Frozen soups						
		116.5.10	Frozen vegetables and juices						
		116.2.03*0.15	Dried vegetables (pulses excluded) ^{BE-8}						
125	Tomato juice	116.5.07	Vegetable juice	810*0.33	Vegetable juices only ^{DE-1}	140 * 0.1	Vegetable juice only ^{HU-3}		
PULSES^{A-2}									
71	Beans	116.2.01	Dried peas	491	Pulses	102	Pulses	10	Pulses
72	Lentils	116.2.02	Dried beans	498	Soja products				
73	Chick peas	116.2.03*0.85	Other dried vegetables (pulses only) ^{BE-6}						
74	Other pulses								

Italics: no quantities available, only the purchase value is known

GENERAL NOTES:

- A-1 The cabbage group includes the brussels sprouts, the cauliflower and the other cabbages.
- A-2 Only the pulses are included.

NOTES FOR BELGIUM:

- BE-1 Code "116.1.10" (celery): the average weight per piece is 376 g.
- BE-2 Code "116.1.17" (other fresh green): 50% of this group refers to fresh green vegetables.
- BE-3 Code "116.1.18" (mixed green): 60% of this vegetable group is fresh green.
- BE-4 Code "116.1.03" (cauliflower): the average weight per piece is 1055 g.
- BE-5 Code "116.1.04" (other cabbages): the average weight per piece is 1156 kg.
- BE-6 Code "116.2.03" (pulses and other dried vegetables): 85% dried pulses and 15% other dried vegetables).
- BE-7 Code "116.5.06" (other canned vegetables): The contribution of preserved vegetables to baby foods is less than 5% in this group, thus it will be ignored.

NOTES FOR GERMANY:

- DE-1 Code "810" (vegetable juices):33% vegetable juices and 67% fruit juices.

NOTES FOR HUNGARY:

- HU-1 Code "112" (lettuce): the average weight per piece is 150 g.
- HU-2 Code "115" (carrots): 60% carrots and 40% parsley root.
- HU-3 Code "140" (fruit syrups, fruit and vegetable juices):50% syrups, 10% vegetable juices and 40% fruit juices.

DAFNE I - FOOD AGGREGATION FOR FRUITS AND NUTS

GREECE (GR) national food code	BELGIUM (BE) national food code	GERMANY (DE) national food code	HUNGARY (HU) national food code	POLAND (PL) national food code
NUTS^{PL-1}				
152 Nuts	116.3.10*0.22 116.4.05*0.20*0.22 116.6.03*0.15	351 Chestnuts, walnuts Nuts ^{BE-1} Nuts without shells ^{BE-2}	103 Nuts (without shells)	28*0.0 Nuts ^{PL-1} 31*0.0
FRESH FRUITS				
APPLES				
137 Apples	116.3.01 Apples	311 Apples	127 Apples	25 Apples
CITRUS FRUITS				
146 Lemon	116.4.02 Mandarin, clementines	341 Oranges, mandarins, clementines	141*0.67 Tropical fruits (only citrus fruits) ^{PL-1}	30 Citrus fruits
147 Mandarin	116.4.01 Orange	343 Grapefruits		
148 Orange	116.4.03 Other citrus fruits (lemons, grapefruits)	344 Other citrus fruit		
149 Other citrus fruits				
BANANAS				
139 Banana	116.4.04 Banana	345 Banana	141*0.33 Tropical fruits (only banana availability) ^{PL-1}	
STRAWBERRIES				
144 Strawberries	116.3.08 Strawberries	331 Strawberries 334 Other berries	133 Strawberries, raspberries, currant	29 Berries (strawberries included)

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
GRAPES									
142	Grapes	116.3.06	Grapes	337	Grapes	137	Grapes		
CHERRIES									
136	Cherries	116.3.04	Cherries	323	Cherries	130	Cherries		
133	Sour cherries					135	Sour cherries		
PEACHES AND APRICOTS									
141	Peach	116.3.03	Peach and apricots	321	Peach (apricots included)	128	Peach		
132	Apricot					129	Apricot		
PEARS									
131	Pears	116.3.02	Pears			134	Pears	26	Pears
PLUMS									
134	Plums	116.3.05	Plums			136	Plums	27	Plums
OTHER FRESH FRUITS									
138	Loquat	116.3.09	Mixed fruits fresh	315	Other fresh malaceous fruits	138	Other fresh fruits	28	Other tree fruits
143	Figs	116.3.11	Other fresh fruits (tropical excluded)	325	Other fresh stone fruits	31	Other tropical fruits		
145	Other fruits	116.4.05*0.8	Other tropical fruits and nuts (only the fruits part) ^{BE-1}	346	Other tropical fruits				
135	Watermelons					131	Watermelons		
140	Melons					132	Melons (sugar melons)		

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
PROCESSED FRUITS									
151	Dried fruits	116.6.03*0.85	Dried fruits only (no nuts without shells) ^{BE2}	357	Dried fruits				
		116.6.02	Frozen fruits	370	Frozen fruits			32	Frozen fruits
		116.6.05	Fruit juices	810*0.67	Fruit juices only ^{DE-1}	140*0.4	Fruit juices only ^{HU-2}		
153	Preserved fruits	116.6.01	Canned fruits	360	Canned fruits	139*0.5	Preserved fruits ^{HU-3}	33*0.5	Processed fruits ^{PL-2}

Italics: no quantities available, only the purchase value is known

GENERAL NOTES

A-1 The conversion factor from fresh nuts with shells to dried nuts without shells is 0.22.

NOTES FOR BELGIUM:

BE-1 Code "116.4.05" (other tropical fruits and nuts): 80% tropical fruits and 20% nuts. Multiplication by 0.22 is used to convert fresh nuts with shells to dried nuts without shells (see general note A-1)
 BE-2 Code "116.6.03" (dried fruits and nuts without shells): 85% dried fruits and 15% nuts without shells.

NOTES FOR GERMANY:

DE-1 Code "810" (fruit juices): 67% fruit juices and 33% vegetable juices.

NOTES FOR HUNGARY:

HU-1 Code "141" (tropical fruits): 67% citrus fruits and 33% bananas.
 HU-2 Code "140" (fruit syrups, fruit and vegetable juices): 50% syrups, 10% vegetable juices and 40% fruit juices.
 HU-3 Code "139" (preserved fruits): 50% marmalade and jams and 50% other canned fruits.

NOTES FOR POLAND:

PL-1 Code "28" and "31" (nuts): the amount of nuts included under these codes is negligible.
 PL-2 Code "33" (processed fruits): 50% marmalade and jams and 50% other canned fruits.

DAFNE I - FOOD AGGREGATION FOR SUGAR AND SUGAR PRODUCTS (chocolate included)

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
SUGAR									
161	Sugar	118.1.01 118.1.02 118.1.03 118.1.04	Cube sugar White sugar Brown sugar Other types of sugar	610	Sugar	104	Sugar	63	Sugar
SUGAR PRODUCTS									
162	Honey, syrup, glucose	110.1.02	Honey	630	Chocolate and products	105*0.9	Honey, candies, chocolates	70	Honey
164	Candies and other sweets	110.1.01	Syrup spread					64	Sweets
167	Confectionery: sweets glazed fruit, rice pudding etc.	110.2.01	Sugar products: toffee, caramels etc.	650	Sugar products		confectionery products ^{MU.1}	65	Chocolate
169	Other confectionery: chewing gum, white chocolate	110.2.03	Candied almonds, pralines	681	Syrup			66	Chocolate products
166	Chocolates, pralines	110.2.02 110.2.04 110.2.05	Couverture Chocolate Chocolate based products	687	Syrup spread (marmalade excluded)			69	Other sugar products
165	Fruits in syrup, jelly	110.1.03	Jam, marmalade jelly, compote	390	Other processed fruits	139*0.5	Preserved fruits ^{MU.2}	33*0.5	Processed fruits ^{PL.1}
163	Marmalade, compotes	116.6.04	Glazed fruits	684	Fruit spread (marmalade etc.)	140*0.5	Fruit syrups only ^{MU.3}		

Italics: no quantities available, only the purchase value is known

NOTES FOR HUNGARY:

- HU-1** Code "105" (honey, candies, chocolates confectionery products, (cocoa powder=10% excluded here); cocoa powder, which makes 10% of this code has been classified in the beverages group (ice cream has been classified to the dairy group (GR, BE))
- HU-2** Code "139" (preserved fruits): 50% marmalade and jams and 50% other canned fruits.
- HU-3** Code "140" (fruit syrups, fruit and vegetable juices): 50% syrups, 10% vegetable juices and 40% fruit juices.

NOTES FOR POLAND:

- PL-1** Code "33" (processed fruits): 50% marmalade and jams and 50% other canned fruits.

DAFNE I - FOOD AGGREGATION FOR BEVERAGES

GREECE (GR)		BELGIUM (BE)		GERMANY (DE)		HUNGARY (HU)		POLAND (PL)	
national food code		national food code		national food code		national food code		national food code	
BEVERAGES NON ALCOHOLIC									
STIMULANTS									
Coffee									
171	Coffee beans, powder	119.1.01 119.1.02 119.1.03	Ground coffee Instant coffee Chicory, succory coffee	830 845 841	Coffee/tea similar infusions Coffee extracts Roasted coffee	152	Coffee	72	Coffee
Tea and similar infusions									
172	Tea	119.2.01	Tea and infusions	850	Tea	153	Tea	71	Tea
Cocoa									
173	Cocoa	119.2.02	Cocoa and similar powder products	620	Cocoa products (chocolate excluded)	105*0.1	Cocoa powder only ^{HU,1}	67	Cocoa
MINERAL WATER									
192	Mineral water, soda	120.1.01	Mineral water, gassy water	821	Table water	154*0.2	Carbonated water only ^{HU,2}	76*0.25	Mineral water only ^{PL,1}
SOFT DRINKS AND SIMILAR BEVERAGES									
191	Other beverages and juices	120.1.02 120.1.03	Aperitifs (non-alcoholic) Other non-alcoholic beverages	825 829	Soft drinks (with caffeine) Refreshments, soft drinks	154*0.8	Carbonated beverages only ^{HU,2}	76*0.75	Other soft drinks only ^{PL,1}

GREECE (GR) national food code	BELGIUM (BE) national food code	GERMANY (DE) national food code	HUNGARY (HU) national food code	POLAND (PL) national food code
BEVERAGES ALCOHOLIC				
WINE				
201 Wine	130.2.01 Wine	881 Grape wine	155 Wine, must ^{HU3}	
202 Sparkling wine	130.2.02 Cider	885 Sparkling grape wine		
	130.2.03 Champagne, sparkling wine	889 Fruit wine		
BEER				
203 Beer	130.1.01 Table beer	870 Beer	156 Beer	
	130.1.02 Beer pills			
	130.1.03 Other beers			
SPIRITS				
204 Other alcoholic beverages (brandy, ouzo, whiskey etc.)	130.2.04 Aperitifs	860 Spirits	157 Other alcoholic beverages	
	130.2.05 Whiskey			
	130.2.06 Brandy			
	130.2.07 Genievre			
	130.2.08 Liqueur, other spirits			

Italics: no quantities available, only the purchase value is known

NOTES FOR HUNGARY:

- HU-1 Code "105" (cocoa powder only): 10% of this code refers to cocoa powder.
- HU-2 Code "154" (carbonated water and beverages): 20% carbonated water and 80% carbonated beverages.
- HU-3 Code "155" (wine, must): the must consumption is negligible.

NOTES FOR POLAND:

- PL-1 Code "76" (mineral water and other soft drinks): 25% mineral water and 75% other soft drinks.

DAFNE I - FOOD AGGREGATION FOR MISCELLANEOUS FOODS

GREECE (GR) national food code	BELGIUM (BE) national food code	GERMANY (DE) national food code	HUNGARY (HU) national food code	POLAND (PL) national food code
DISHES				
	110.3.05 Miscellaneous dishes (may contain meat and fish)	780 Ready dishes	144 Preserved dishes without meat 145 Snack food	75 Other convenience food
OTHER FOOD				
174 Savory snacks	110.3.01 Salt	750 Spices, baking additions etc.	146 Seasonings and miscellaneous	73 Condiments
175 Other foods (spices, salt, mayonnaise, ketchup, baby foods, canned foods, ready soups, etc.)	110.3.02 Vinegar 110.3.03 Mustard etc. 110.3.04 Spices, condiments 110.3.06 Yeast, essences, gelling agents, etc.) 112.9.01 Meat extracts			74 Dehydrated foods 77 Other food stuffs

Italics: no quantities available, only purchase value is known

ANNEX II.1

Average per capita availability of 45 food groups

- grand mean**
- availability by education**
- availability by locality**

Explanatory notes

- The tables of results are preceded by :
 - i. A list of abbreviations and their meaning, which helps the reader understand the content of the tables of results
 - ii. A list of prices per unit of the food items for which data on monetary value only (and not on quantity) were recorded. These prices per unit were used for the indirect calculation of the available food quantities.
- It should be stated that results on food availability per food code are also recorded. in the DAFNE databank,For the purposes of this compendium tables or graphs or results are given only for the comparable between countries food groups.
- Since no data on education are collected in the context of the German HBS, no data on food availability by education in Germany are included in the tables presented here.
- Wheneve the dash (-) sign appears in the tables, it denotes that data on the availability of the specific food are not recorded in the specific country.

DAFNE I

Abbreviations of aggregated food groups

BREADRO	bread and rolls
CERBAK	cereal and bakery products (grains, flour, pasta excluded)
RICCER	rice and cereals
FLOUR	flour
PASTA	pasta
PORK	pork meat
BEEFVEA	beef, veal and calf meat
OMEAT	red meat other than pork or veal
POULTRY	poultry
OFFALS	offals
MEATPRO	canned meat and meat products
MEATDIS	meat preparations and dishes
FISH	fish (fresh, frozen, processed)
SEAFOOD	seafood
FISHDIS	fish products and dishes
EGGS	eggs
CHEESE	cheese
MILK	milk
ODAIRY	other dairy products (milk and cheese excluded)
BUTTER	butter
ANIMFAT	animal fat (butter excluded)
VEGOIL	vegetable oils (olive oil included)
VEGEFAT	vegetable fats
POTATO	potatoes
FRGRVEG	fresh green vegetables
CABBAGE	cabbages
TOMATO	tomatoes
CARROTS	carrots
OFRVEGE	other fresh vegetables
ONIOGAR	onions, shallots, garlic
PROCVEG	processed vegetables
PULSES	pulses
NUTS	nuts
APPLES	apples
CITRUS	citrus fruits
BANANA	bananas
OFRFRUI	other fresh fruits
PROCFRU	processed fruits
SUGAR	sugar
SUGPROD	honey, chocolate and sugar products
WINE	wine
BEER	beer
SPIRITS	spirits
COFETEA	coffee, tea and infusions
COCOA	cocoa powder

DAFNE I

Prices per unit of the food items
for which data on quantity do not exist
(expressed in the national currency of each country)

BELGIUM

CEREALS

- Dried sweets (111.5.01): 178 BEF/kg
- Pastries and tarts (111.5.03): 356 BEF/kg
- Other cereal based products (111.6.03): 120 BEF/kg
- Mixed pasta dishes (111.3.02) : 100 BEF/kg

MEAT

- Hamburgers (112.9.06): 256 BEF/kg
- Offals (112.6.03): 135 BEF/kg
- Prepared meat (no additives) (112.9.02): 330 BEF/kg
- Prepared meat (preserved or not)(112.9.03): 275 BEF/kg
- Frozen prepared meat (112.9.04): 232 BEF/kg
- Meat for fondue (112.9.05): 350 BEF/kg

FISH AND SEAFOOD

- Fish salted, dried smoked (113.2.01): 336 BEF/kg
- Canned herring (113.2.02): 205 BEF/kg
- Fresh crustaceans, molluscs (113.1.09): 520 BEF/kg
- Frozen crustaceans, molluscs (113.1.10): 520 BEF/kg
- Other canned fish, seafood (113.2.05): 205 BEF/kg
- Fish dishes (113.3.01): 278 BEF/kg
- Frozen fish dishes (113.3.02) : 330 BEF/kg

EGGS AND DAIRY PRODUCTS

- Cheese dishes (114.2.06): 350 BEF/kg
- Other dairy products (114.1.07): 78 BEF/kg
(for yoghurt which makes 40% of this food group)
- Ice cream (110.2.06): 140 BEF/l

POTATOES AND VEGETABLES

- Dried vegetables (116.2.03):
 - 95% dried pulses 62 BEF/kg
 - 5% other dried vegetables 150 BEF/kg
- Salad (116.1.08): 130 BEF/kg
- Leek (116.1.111): 60 BEF/kg
- Carrots (116.1.07): 28 BEF/kg
- Fresh vegetables (116.1.17): 98 BEF/kg
- Mixture of fresh vegetables (116.1.18): 130 BEF/kg
- Onions, shallots (116.1.09): 19 BEF/kg
- Canned vegetables (116.5.06): 100 BEF/kg
- Soups (116.5.08): 60 BEF/l
- Frozen soups (116.5.09): 50 BEF/l
- Frozen vegetables and juices (116.5.10): 58 BEF/l

FRUITS AND NUTS

- Chestnuts, walnuts (116.3.10): 150 BEF/kg
- Other tropical fruits and nuts (116.4.05): 120 BEF/kg
(nuts contribution is 20% and
fruits contribution is 80%)
- Nuts without shells (116.6.03): 490 BEF/kg

• Dried fruits (116.6.03):	84 BEF/kg
• Other citrus fruits (116.4.03) :	50 BEF/kg
• Mixed fresh fruits (116.3.09):	60 BEF/kg
• Other fresh fruits (tropical excl.)(116.3.11):	100 BEF/kg
• Frozen fruits (116.6.02):	133 BEF/kg
• Jams (glazed fruits) (116.6.04) :	300 BEF/kg
• Canned fruits (116.6.01):	78 BEF/kg

SUGAR PRODUCTS

• Sugar products (110.2.01):	200 BEF/kg
• Vegetable juices (116.5.07):	82 BEF/l

MISCELLANEOUS

• Miscellaneous dishes (110.3.05):	350 BEF/kg
• Mustard etc. (110.3.05):119 BEF/Kg (10% toppings, 40% sauces and 50% mayonnaise)	
• Yeast essence etc. (110.3.06):	1000 BEF/kg
• Meat extracts (112.9.01):	250 BEF/kg

GERMANY

CEREALS

• Other bakery products (dough based), (517):	5.4 DM/kg
• Fresh bakery products (with fillings)(540):	11.9 DM/kg
• Dried bakery products (570):	9.1 DM/kg
• Cereal seeds (718):	3.6 DM/kg
• Other cereal products (719):	3.6 DM/kg
• Other processed cereal products (732):	7.06 DM/kg

MEAT

• Canned meat (150):	11.02 DM/kg
• Other meat products (160):	8.14 DM/kg

FISH AND SEAFOOD

• Canned fish and seafood (180):	10.4 DM/kg
• Other fish and seafood products (190):	9.71 DM/kg

EGGS AND DAIRY PRODUCTS

• Condensed, powdered milk (220):	3.00 DM/kg
• Other dairy products (233):	4.52 DM/kg
• Eggs (processed) (255):	4.96 DM/kg
• Ice cream (670):	7.11 DM/kg

POTATOES AND VEGETABLES

• Fruity vegetables (459):	4.9 DM/kg
• Frozen vegetables (470):	3.7 DM/kg
• Canned vegetables (480):	4.19 DM/kg
• Other vegetable products (499):	7.26 DM/kg

FRUITS AND NUTS

• Other fresh malaceous fruits (315):	3.3 DM/kg
• Other fresh stone fruits (325):	3.5 DM/kg
• Other fresh berries (334):	11.7 DM/kg
• Other tropical fruits (346):	3.12 DM/kg
• Nuts (without shells)(351):	21.7 DM/kg

•	Dried fruits (357):	5.1 DM/kg
•	Canned fruits (360):	0.0025 DM/kg
•	Frozen fruits (370):	11.7 DM/kg
•	Other processed fruits (390):	9.2 DM/kg

SUGAR PRODUCTS

•	Sugar products (650):	9.2 DM/kg
•	Syrup, sweet spread (687):	7.0 DM/kg

MISCELLANEOUS

•	Ready dishes (780):	5.9 DM/kg
•	Spices etc. (750):	13.79 DM/kg

GREECE

CEREALS

•	Biscuits (15):	380 GDR/kg
•	Other cereal based products (18):	350 GDR/kg

MEAT

•	Other parts of frozen meat (offals) (35):	300 GDR/ kg
•	Other parts of fresh meat (offals) (27):	400 GDR/ kg
•	Cold cut etc. (36):	600 GDR/kg
•	Canned meat etc. (37):	700 GDR/kg
•	Dishes with meat (38):	500 GDR/kg

FISH AND SEAFOOD

•	Canned fish (49):	600 GDR/kg
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EGGS AND DAIRY PRODUCTS

•	Soft cheese (67) :	500 GDR/kg
•	Hard cheese (68):	750 GDR/kg
•	Yoghurt etc. (66) :	270 GDR/kg
•	Ice cream (168):	350 GDR/kg

FRUITS AND NUTS

•	Nuts (152) :	900 GDR/kg
•	Dried fruits (151):	500 GDR/kg
•	Fruits in syrup, jelly etc. (165):	760 GDR/kg
•	Preserved fruits (153):	120 GDR/kg

SUGAR PRODUCTS

•	Candies etc. (164):	380 GDR/kg
•	Confectionery (167) :	250 GDR/kg
•	Other confectionery (169):	1000 GDR/kg
•	Chocolates, pralines (166):	600 GDR/kg

BEVERAGES

•	Cocoa (173):	850 GDR/kg
•	Mineral water (192):	35 GDR/kg
•	Other beverages (191):	100 GDR/kg
•	Wine (201):	350 GDR/kg
•	Sparkling wine (202) :	400 GDR/kg
•	Beer (203):	190 GDR/kg
•	Other alcoholic beverages (204) :	700 GDR/kg

MISCELLANEOUS

- Snacks (174): 200 GDR/kg
- Other foods (175): 750 GDR/kg

HUNGARY

MEAT

- Other canned dishes prepared with meat (143): 110 HUF/kg

SUGAR PRODUCTS

- Honey, candies, chocolates etc. (105): 400 HUF/kg

BEVERAGES

- Coffee (152): 500 HUF/kg
- Cocoa powder (105, 10%): 400 HUF/kg
- Tea (153): 380 HUF/kg
- Carbonated beverages (154): 35 HUF/kg
- Beer (156): 65 HUF/kg
- Other alcoholic beverages (157): 520 HUF/kg

MISCELLANEOUS

- Preserved dishes without meat (144): 70 HUF/kg
- Snack food (145): 190 HUF/kg
- Seasonings (146): 450 HUF/kg

POLAND

BEVERAGES

- Mineral water (76, 25%): 6.4 ZLOT/100g
- Soft drinks (76, 75%): 15 ZLOT/100g

MISCELLANEOUS

- Other convenience food (75): 41 ZLOT/100g
- Condiments(73): 290 ZLOT/100g
- Dehydrated foods (74): 36 ZLOT/100g



Overall mean and average availability by education and locality
(g / person /day)

BREADRO	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	161		269	265	326
elementary completed	172		233	241	292
secondary incomplete	150		198	199	246
secondary completed	142		183	182	229
university	120		171	159	204

LOCALITY					
rural	152	93	261	243	290
semi - urban	148	91	218	199	246
urban	133	92	199	170	213

OVERALL MEAN	147	92	218	211	255
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Overall mean and average availability by education and locality
(g / person /day)

CERBAK	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	37		22	21	15
elementary completed	45		23	22	13
secondary incomplete	45		30	23	14
secondary completed	49		34	26	16
university	51		37	28	20

LOCALITY					
rural	44	72	20	21	11
semi - urban	47	74	29	25	16
urban	53	74	31	26	18

OVERALL MEAN	47	74	27	24	15
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

RICCER	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	14		26	20	38
elementary completed	5.1		21	16	22
secondary incomplete	4.4		18	12	16
secondary completed	5.4		16	11	15
university	6.0		16	9.2	14

LOCALITY					
rural	4.5	9.6	27	16	22
semi - urban	4.9	8.8	21	12	16
urban	7.5	8.3	17	11	14

OVERALL MEAN	5.2	8.8	20	13	18
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Overall mean and average availability by education and locality
(g / person /day)

FLOUR	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	24		49	108	88
elementary completed	18		34	74	65
secondary incomplete	14		33	48	47
secondary completed	12		17	49	45
university	9.9		15	37	35

LOCALITY					
rural	16	25	64	79	67
semi - urban	13	20	34	57	46
urban	14	13	16	40	37

OVERALL MEAN	14	18	30	63	52
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

PASTA	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	7.6		32	8.7	7.8
elementary completed	6.8		29	9.0	5.3
secondary incomplete	7.3		28	7.1	4.3
secondary completed	7.3		26	7.6	5.0
university	7.8		23	7.1	5.3

LOCALITY					
rural	7.1	9.6	35	7.2	4.4
semi - urban	7.3	8.7	25	8.0	4.9
urban	7.5	8.0	26	9.7	5.6

OVERALL MEAN	7.3	8.6	28	8.0	4.9
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Overall mean and average availability by education and locality
(g / person /day)

PORK	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	30		19	61	53
elementary completed	40		22	59	48
secondary incomplete	34		18	53	41
secondary completed	30		18	50	39
university	25		17	47	35

LOCALITY					
rural	36	44	25	61	52
semi - urban	33	37	22	53	39
urban	25	33	17	45	34

OVERALL MEAN	33	37	20	55	43
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

BEEFVEA	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	40		57	3.0	19
elementary completed	50		62	4.1	16
secondary incomplete	41		68	3.6	16
secondary completed	38		70	5.2	19
university	35		78	5.7	22

LOCALITY					
rural	40	21	58	2.8	13
semi - urban	42	21	56	4.5	20
urban	39	21	70	6.8	22

OVERALL MEAN	41	21	65	4.2	18
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Overall mean and average availability by education and locality
(g / person /day)

OMEAT	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	13		32	2.4	3.1
elementary completed	12		27	2.4	2.2
secondary incomplete	6.5		27	2.2	1.4
secondary completed	5.0		16	2.2	1.5
university	7.6		15	2.2	1.4

LOCALITY					
rural	6.9	1.3	38	2.7	2.7
semi - urban	8.2	1.6	31	2.5	1.2
urban	7.8	1.6	17	1.1	0.7

OVERALL MEAN	7.8	1.5	24	2.3	1.7
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

POULTRY	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	23		38	76	43
elementary completed	24		34	61	39
secondary incomplete	20		36	47	31
secondary completed	19		32	41	29
university	19		33	36	23

LOCALITY					
rural	20	13	34	63	42
semi - urban	21	14	31	46	26
urban	20	14	35	42	25

OVERALL MEAN	21	14	34	52	33
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Overall mean and average availability by education and locality
(g / person /day)

OFFALS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	3.6		4.9	10	4.7
elementary completed	4.9		6.3	10	4.4
secondary incomplete	4.4		7.0	7.5	4.1
secondary completed	4.9		6.0	9.4	4.8
university	4.1		6.1	8.1	4.5

LOCALITY					
rural	3.7	4.0	6.5	6.4	2.7
semi - urban	4.7	3.4	6.7	10	5.3
urban	5.2	2.8	5.8	13	5.9

OVERALL MEAN	4.6	3.3	6.1	9.1	4.4
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality (g / person /day)					
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MEATPRO	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	45		8.9	66	96
elementary completed	55		13	68	91
secondary incomplete	49		12	66	86
secondary completed	45		14	66	86
university	39		16	62	82

LOCALITY					
rural	48	67	11	70	85
semi - urban	48	63	12	65	87
urban	42	60	14	62	91

OVERALL MEAN	47	63	13	66	87
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Overall mean and average availability by education and locality (g / person /day)					
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MEATDIS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	9.3		9.4	0.7	---
elementary completed	10		12	1.4	---
secondary incomplete	14		14	1.7	---
secondary completed	16		16	2.2	---
university	18		13	2.6	---

LOCALITY					
rural	12	---	8.7	1.1	---
semi - urban	15	---	12	1.5	---
urban	15	---	15	3.4	---

OVERALL MEAN	14	---	13	1.7	---
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

FISH	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	10		35	2.8	16
elementary completed	12		37	3.4	15
secondary incomplete	11		37	3.5	14
secondary completed	13		31	4.1	17
university	16		34	3.7	17

LOCALITY					
rural	11	5.5	43	3.4	12
semi - urban	14	6.0	36	3.5	16
urban	14	7.3	32	3.9	19

OVERALL MEAN	13	6.3	35	3.5	15
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Overall mean and average availability by education and locality
(g / person /day)

SEAFOOD	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	8.6		3.8	---	---
elementary completed	10		4.3	---	---
secondary incomplete	9.2		5.0	---	---
secondary completed	9.3		3.7	---	---
university	9.6		3.8	---	---

LOCALITY					
rural	8.6	1.2	4.8	---	---
semi - urban	9.6	1.4	4.2	---	---
urban	11	1.7	3.8	---	---

OVERALL MEAN	9.5	1.4	4.1	---	---
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person / day)

FISHDIS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	1.7		---	0.7	---
elementary completed	2.8		---	0.9	---
secondary incomplete	3.8		---	0.9	---
secondary completed	3.9		---	1.0	---
university	4.6		---	0.9	---

LOCALITY					
rural	3.3	3.3	---	0.9	---
semi - urban	3.9	4.0	---	0.9	---
urban	3.6	5.7	---	1.0	---

OVERALL MEAN	3.7	4.4	---	0.9	---
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Overall mean and average availability by education and locality
(pieces / person / day)

EGGS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	0.3		0.5	0.8	0.8
elementary completed	0.5		0.5	0.7	0.7
secondary incomplete	0.4		0.5	0.6	0.6
secondary completed	0.3		0.4	0.6	0.6
university	0.3		0.6	0.6	0.6

LOCALITY					
rural	0.3	0.4	0.7	0.7	0.7
semi - urban	0.4	0.5	0.5	0.6	0.6
urban	0.3	0.5	0.4	0.5	0.6

OVERALL MEAN	0.4	0.5	0.5	0.7	0.6
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(ml/person/day)

MILK	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	174		192	295	482
elementary completed	160		219	254	368
secondary incomplete	147		247	214	292
secondary completed	152		243	237	285
university	153		251	244	273

LOCALITY					
rural	169	217	226	243	378
semi - urban	147	201	191	246	297
urban	153	209	232	248	250

OVERALL MEAN	153	207	226	245	317
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Overall mean and average availability by education and locality
(g/person/day)

CHEESE	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	36		50	7.6	48
elementary completed	37		51	8.4	39
secondary incomplete	38		55	8.3	34
secondary completed	44		57	14	43
university	47		68	18	53

LOCALITY					
rural	38	37	52	7.1	36
semi - urban	41	46	54	11	39
urban	47	50	56	17	45

OVERALL MEAN	41	45	55	11	39
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Overall mean and average availability by education and locality
(g/person/day)

ODAIRY	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	35		24	47	36
elementary completed	41		32	43	28
secondary incomplete	42		31	39	23
secondary completed	43		41	48	24
university	54		45	58	22

LOCALITY					
rural	43	52	28	40	27
semi - urban	44	59	32	45	24
urban	48	62	37	59	23

OVERALL MEAN	44	59	34	45	25
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Overall mean and average availability by education and locality
(g/person/day)

BUTTER	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	8.3		2.9	3.7	27
elementary completed	15		0.8	3.4	26
secondary incomplete	13		1.0	2.9	25
secondary completed	11		1.1	3.6	26
university	11		1.6	4.3	27

LOCALITY					
rural	15	15	2.1	3.2	24
semi - urban	12	14	0.9	3.7	27
urban	14	15	1.0	3.7	27

OVERALL MEAN	13	15	1.3	3.5	26
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Overall mean and average availability by education and locality
(g / person / day)

ANIMFAT	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	0.7		0.0	40	31
elementary completed	1.4		0.1	33	21
secondary incomplete	1.3		0.0	24	14
secondary completed	1.0		0.2	20	12
university	0.9		0.1	14	8.1

LOCALITY					
rural	1.5	1.8	0.1	35	20
semi - urban	1.1	1.6	0.1	24	14
urban	1.1	1.6	0.1	16	12

OVERALL MEAN	1.2	1.6	0.1	27	16
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Overall mean and average availability by education and locality
(ml / person / day)

VEGEOIL	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	15		96	17	6.6
elementary completed	10		89	14	5.3
secondary incomplete	7.8		82	12	4.3
secondary completed	7.8		68	15	4.9
university	8.3		61	14	4.8

LOCALITY					
rural	8.6	5.0	112	13	4.6
semi - urban	8.4	4.9	85	14	5.0
urban	8.6	5.2	69	15	5.1

OVERALL MEAN	8.5	5.0	82	14	4.8
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality (g / person /day)					
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VEGEFAT	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	22		5.3	7.3	14
elementary completed	27		6.3	6.9	13
secondary incomplete	23		8.8	5.8	12
secondary completed	20		7.3	8.8	12
university	16		6.3	10	10

LOCALITY					
rural	21	18	5.3	6.5	13
semi - urban	23	18	5.9	7.5	13
urban	17	17	7.2	9.9	12

OVERALL MEAN	22	18	6.6	7.5	12
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Overall mean and average availability by education and locality (g / person /day)					
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POTATO	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	194		160	196	423
elementary completed	247		163	153	352
secondary incomplete	206		151	118	287
secondary completed	153		146	124	270
university	128		134	111	214

LOCALITY					
rural	193	92	180	141	324
semi - urban	190	109	133	136	311
urban	159	112	148	139	257

OVERALL MEAN	187	107	155	139	301
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

FRGRVEG	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	29		50	5.0	2.8
elementary completed	24		44	4.5	2.3
secondary incomplete	22		43	3.2	1.9
secondary completed	23		42	3.1	2.6
university	26		41	2.9	3.2

LOCALITY					
rural	22	9.8	44	4.5	2.0
semi - urban	23	12	43	3.7	2.2
urban	26	15	44	2.4	2.7

OVERALL MEAN	23	13	44	3.8	2.3
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Overall mean and average availability by education and locality
(g / person /day)

CABBAGE	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	23		23	34	43
elementary completed	22		22	27	38
secondary incomplete	18		21	19	31
secondary completed	18		20	20	31
university	18		22	15	26

LOCALITY					
rural	18	14	21	28	35
semi - urban	19	17	23	21	34
urban	19	20	22	17	29

OVERALL MEAN	19	18	22	23	33
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality (g / person /day)					
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TOMATO	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	31		98	36	31
elementary completed	20		90	30	28
secondary incomplete	18		76	23	24
secondary completed	19		83	26	28
university	21		77	24	29

LOCALITY					
rural	18	10	101	32	26
semi - urban	20	12	84	25	27
urban	21	16	82	24	29

OVERALL MEAN	20	13	87	27	27
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Overall mean and average availability by education and locality (g / person /day)					
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CARROTS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	13		5.2	21	37
elementary completed	11		5.6	17	27
secondary incomplete	11		5.9	13	23
secondary completed	12		8.2	14	24
university	15		11	12	24

LOCALITY					
rural	10	5.5	3.5	18	28
semi - urban	12	7.6	4.8	14	25
urban	16	9.0	8.4	14	21

OVERALL MEAN	12	7.7	6.7	15	25
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

OFRVEGE	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	30		82	104	91
elementary completed	31		79	97	75
secondary incomplete	30		72	78	65
secondary completed	28		71	90	71
university	28		70	82	72

LOCALITY					
rural	26	16	83	95	72
semi - urban	31	20	68	87	68
urban	29	25	75	85	71

OVERALL MEAN	29	21	76	90	71
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Overall mean and average availability by education and locality
(g / person /day)

ONIOGAR	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	17		19	32	28
elementary completed	13		16	29	20
secondary incomplete	12		14	23	17
secondary completed	12		15	23	18
university	15		14	21	18

LOCALITY					
rural	10	7.4	16	28	19
semi - urban	13	10	15	23	18
urban	17	12	16	25	18

OVERALL MEAN	13	11	16	26	19
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality (g / person /day)					
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PROCVG	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	34		14	15	31
elementary completed	44		15	16	28
secondary incomplete	45		19	14	23
secondary completed	44		16	17	24
university	50		19	19	25

LOCALITY					
rural	38	51	15	12	27
semi - urban	46	59	15	16	22
urban	54	62	16	25	26

OVERALL MEAN	46	59	16	16	25
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Overall mean and average availability by education and locality (g / person /day)					
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PULSES	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	1.3		22	8.3	5.5
elementary completed	0.6		18	7.2	3.9
secondary incomplete	0.3		14	5.6	2.8
secondary completed	0.4		11	4.8	2.8
university	0.6		9.6	4.0	2.6

LOCALITY					
rural	0.4	0.7	24	7.6	3.9
semi - urban	0.5	0.9	15	5.2	2.5
urban	0.6	0.9	12	4.6	2.8

OVERALL MEAN	0.5	0.8	16	6.1	3.2
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality

(g / person /day)

NUTS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	0.4		2.8	4.7	---
elementary completed	0.3		3.3	3.4	---
secondary incomplete	0.3		3.8	2.5	---
secondary completed	0.3		4.4	3.2	---
university	0.5		5.1	2.7	---

LOCALITY					
rural	0.3	1.4	2.7	3.9	---
semi - urban	0.3	1.5	4.0	3.0	---
urban	0.5	1.4	4.1	2.4	---

OVERALL MEAN	0.3	1.5	3.7	3.2	---
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Overall mean and average availability by education and locality

(g / person /day)

APPLES	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	52		61	60	52
elementary completed	50		59	50	45
secondary incomplete	43		60	42	43
secondary completed	46		66	53	52
university	45		70	61	61

LOCALITY					
rural	45	36	56	50	45
semi - urban	46	35	52	53	47
urban	48	39	66	49	52

OVERALL MEAN	46	36	62	51	47
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

CITRUS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	56		114	9.1	7.4
elementary completed	45		107	9.9	7.2
secondary incomplete	42		99	9.9	8.0
secondary completed	47		127	14	11
university	48		154	19	15

LOCALITY					
rural	39	27	92	8.6	5.5
semi - urban	46	32	102	11	9.3
urban	55	34	130	19	13

OVERALL MEAN	45	32	117	12	9.0
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Overall mean and average availability by education and locality
(g / person /day)

BANANA	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	20		1.3	4.5	---
elementary completed	16		2.7	4.9	---
secondary incomplete	15		4.9	4.9	---
secondary completed	19		5.1	6.8	---
university	19		6.7	9.2	---

LOCALITY					
rural	16	23	1.8	4.2	---
semi - urban	17	27	5.6	5.6	---
urban	19	26	4.1	9.6	---

OVERALL MEAN	17	26	3.7	5.8	---
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

OFRFRUI	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	124		167	91	42
elementary completed	44		152	79	39
secondary incomplete	40		135	68	35
secondary completed	42		166	82	42
university	45		173	89	49

LOCALITY					
rural	42	53	173	77	40
semi - urban	42	67	168	84	38
urban	48	81	150	75	40

OVERALL MEAN	43	69	158	80	39
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Overall mean and average availability by education and locality
(g / person /day)

PROCFRU	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	31		0.0	6.4	5.5
elementary completed	35		0.0	8.5	4.5
secondary incomplete	43		0.0	10	4.3
secondary completed	50		0.0	12	4.9
university	62		0.0	15	5.7

LOCALITY					
rural	43	71	0.0	7.4	4.3
semi - urban	47	75	0.0	11	4.6
urban	53	71	0.0	14	5.0

OVERALL MEAN	47	73	0.0	10	4.6
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

SUGAR	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	36		45	88	121
elementary completed	30		42	66	102
secondary incomplete	23		35	51	83
secondary completed	21		35	51	81
university	17		30	42	73

LOCALITY					
rural	27	28	50	70	102
semi - urban	22	24	41	57	83
urban	21	18	34	42	76

OVERALL MEAN	23	23	39	59	89
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Overall mean and average availability by education and locality
(g / person /day)

SUGPROD	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	30		27	13	18
elementary completed	31		37	17	16
secondary incomplete	32		44	21	17
secondary completed	33		56	25	18
university	33		65	30	19

LOCALITY					
rural	32	252	29	16	17
semi - urban	32	223	44	22	17
urban	35	252	49	28	18

OVERALL MEAN	32	238	43	21	17
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(ml / person / day)

WINE	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	17		17	46	---
elementary completed	23		13	42	---
secondary incomplete	27		14	31	---
secondary completed	38		8.7	34	---
university	48		10	34	---

LOCALITY					
rural	25	35	23	48	---
semi - urban	33	40	14	32	---
urban	44	48	8.0	26	---

OVERALL MEAN	33	42	13	37	---
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Overall mean and average availability by education and locality
(ml / person / day)

BEER	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	43		13	33	---
elementary completed	85		18	43	---
secondary incomplete	80		17	44	---
secondary completed	86		19	44	---
university	76		27	48	---

LOCALITY					
rural	71	148	20	42	---
semi - urban	87	149	14	40	---
urban	75	140	18	50	---

OVERALL MEAN	82	146	18	43	---
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality (ml / person / day)					
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SPIRITS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	7.0		4.9	5.7	---
elementary completed	12		5.7	4.8	---
secondary incomplete	12		4.8	4.5	---
secondary completed	14		6.5	4.5	---
university	15		7.2	4.7	---

LOCALITY					
rural	12	6.1	6.4	5.9	---
semi - urban	13	7.6	6.0	4.2	---
urban	14	9.6	5.6	3.8	---

OVERALL MEAN	13	8.0	5.8	4.8	---
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Overall mean and average availability by education and locality (g / person / day)					
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COFETEA	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	16		5.3	7.7	3.9
elementary completed	19		5.0	7.1	3.6
secondary incomplete	16		4.9	5.3	3.6
secondary completed	15		5.7	6.4	4.2
university	14		4.2	7.1	4.7

LOCALITY					
rural	15	14	5.0	6.2	3.2
semi - urban	16	17	4.3	6.5	4.0
urban	18	19	5.2	7.7	4.6

OVERALL MEAN	16	17	5.1	6.6	3.8
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The dash (-) sign, where it appears, stands for non-recorded foods.

Overall mean and average availability by education and locality
(g / person /day)

COCOA	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	1.3		0.2	0.6	0.4
elementary completed	0.7		0.3	0.8	0.4
secondary incomplete	0.8		0.5	0.9	0.4
secondary completed	1.0		0.5	1.1	0.5
university	1.0		0.3	1.3	0.5

LOCALITY					
rural	1.3	2.6	0.4	0.8	0.4
semi - urban	0.8	2.0	0.3	0.9	0.4
urban	0.8	1.6	0.4	1.2	0.5

OVERALL MEAN	0.9	2.0	0.4	0.9	0.4
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The dash (-) sign, where it appears, stands for non-recorded foods.

ANNEX II.2

Availability of major food groups and selected food items (tables and graphs)

Note:

No data on education are collected in the context of the German HBS, therefore no data on food availability by education in Germany are included in the tables and graphs.

Overall mean and average availability by education and locality
(g / person / day)

MEAT	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	164		168	219	219
elementary completed	196		177	207	201
secondary incomplete	169		182	181	180
secondary completed	157		174	177	180
university	148		178	164	168

LOCALITY					
rural	168	149	181	207	197
semi-urban	172	141	170	181	178
urban	154	133	174	174	179

OVERALL MEAN	168	140	176	190	186
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Overall mean and average availability by education and locality
(g / person / day)

FISH AND SEAFOOD	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	21		39	3	16
elementary completed	25		42	4	15
secondary incomplete	24		42	4	14
secondary completed	26		35	5	17
university	31		38	5	17

LOCALITY					
rural	23	10	48	4	12
semi-urban	27	11	41	4	16
urban	29	15	36	5	19

OVERALL MEAN	26	12	40	4	15
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Overall mean and average availability by education and locality
(g / person / day)

FRESH VEGETABLES	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	142		276	232	233
elementary completed	121		257	205	192
secondary incomplete	111		233	159	161
secondary completed	112		238	176	176
university	122		237	156	172

LOCALITY					
rural	104	63	268	205	182
semi-urban	118	79	237	174	174
urban	127	96	247	166	171

OVERALL MEAN	116	82	252	185	177
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Overall mean and average availability by education and locality
(g / person / day)

TOTAL VEGETABLES	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	176		290	246	264
elementary completed	165		272	220	219
secondary incomplete	156		252	174	185
secondary completed	156		254	193	200
university	173		255	175	198

LOCALITY					
rural	142	115	284	217	209
semi-urban	164	138	253	190	197
urban	181	158	263	191	197

OVERALL MEAN	162	141	267	201	202
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Overall mean and average availability by education and locality
(g / person / day)

FRESH FRUITS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	251		344	164	101
elementary completed	155		320	144	92
secondary incomplete	141		298	125	86
secondary completed	153		364	156	105
university	156		403	178	124

LOCALITY					
rural	142	139	323	143	90
semi-urban	150	161	328	155	94
urban	169	180	350	153	105

OVERALL MEAN	151	163	341	149	96
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Overall mean and average availability by education and locality
(g / person / day)

TOTAL FRUITS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	283		344	171	107
elementary completed	190		320	152	97
secondary incomplete	184		298	135	90
secondary completed	203		364	168	110
university	219		403	193	130

LOCALITY					
rural	185	210	323	148	94
semi-urban	197	236	328	166	99
urban	222	251	350	167	110

OVERALL MEAN	198	236	341	159	100
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Overall mean and average availability by education and locality (g / person / day)					
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TOTAL LIPIDS	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	46		105	68	78
elementary completed	54		96	58	65
secondary incomplete	45		92	45	55
secondary completed	41		77	48	55
university	36		69	42	50

LOCALITY					
rural	47	40	119	58	62
semi-urban	44	39	92	49	58
urban	40	39	77	45	55

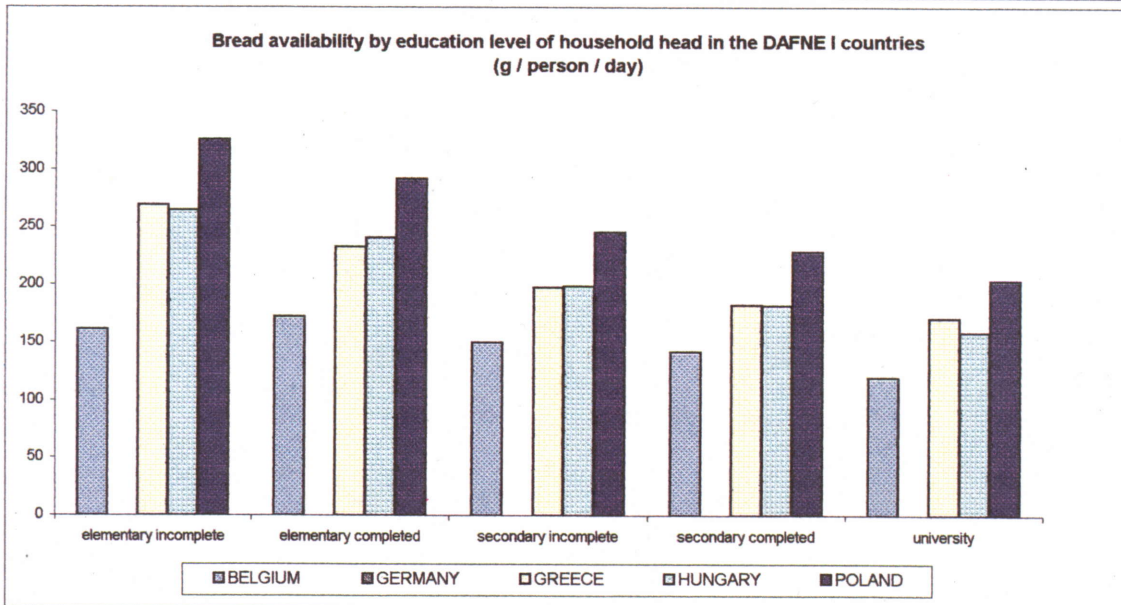
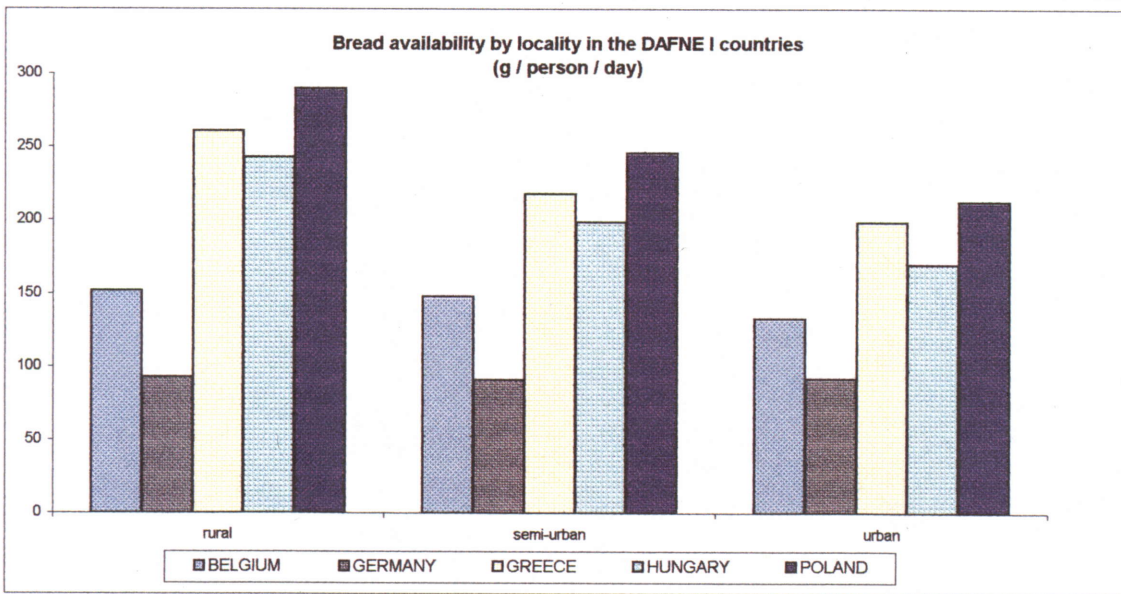
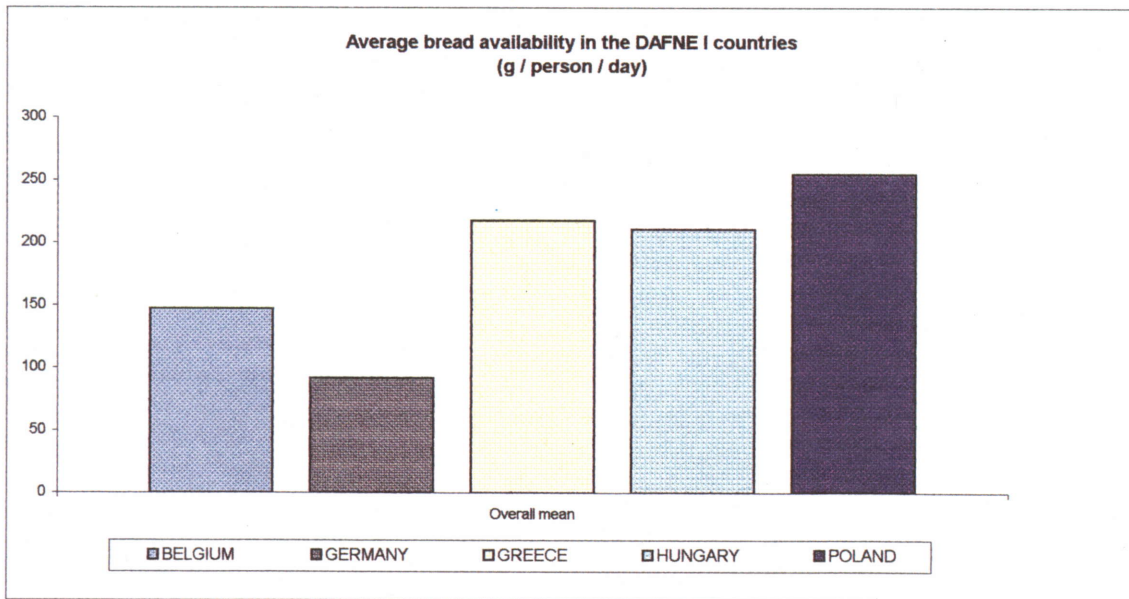
OVERALL MEAN	44	39	90	52	59
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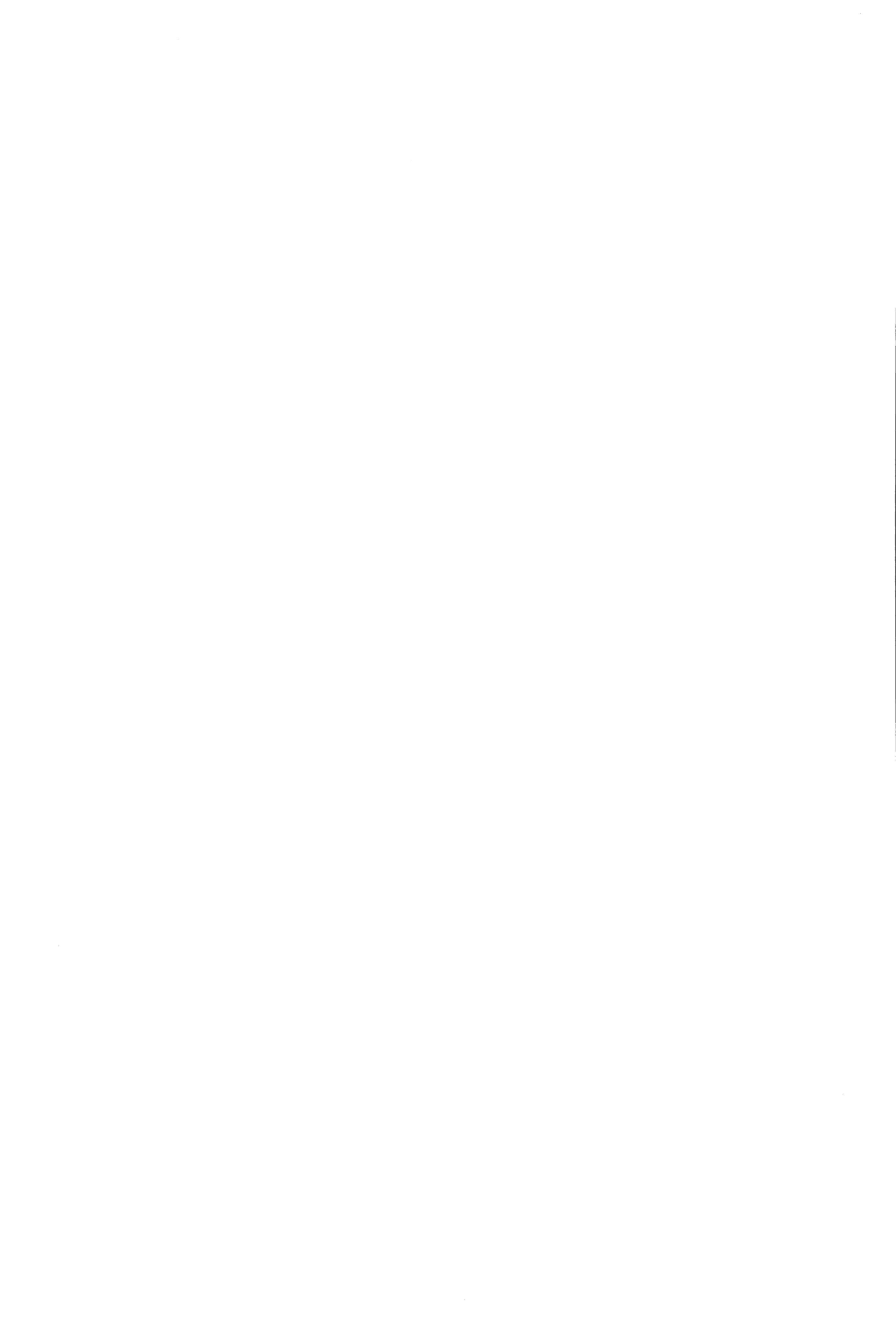
Overall mean and average availability by education and locality (ml / person / day)					
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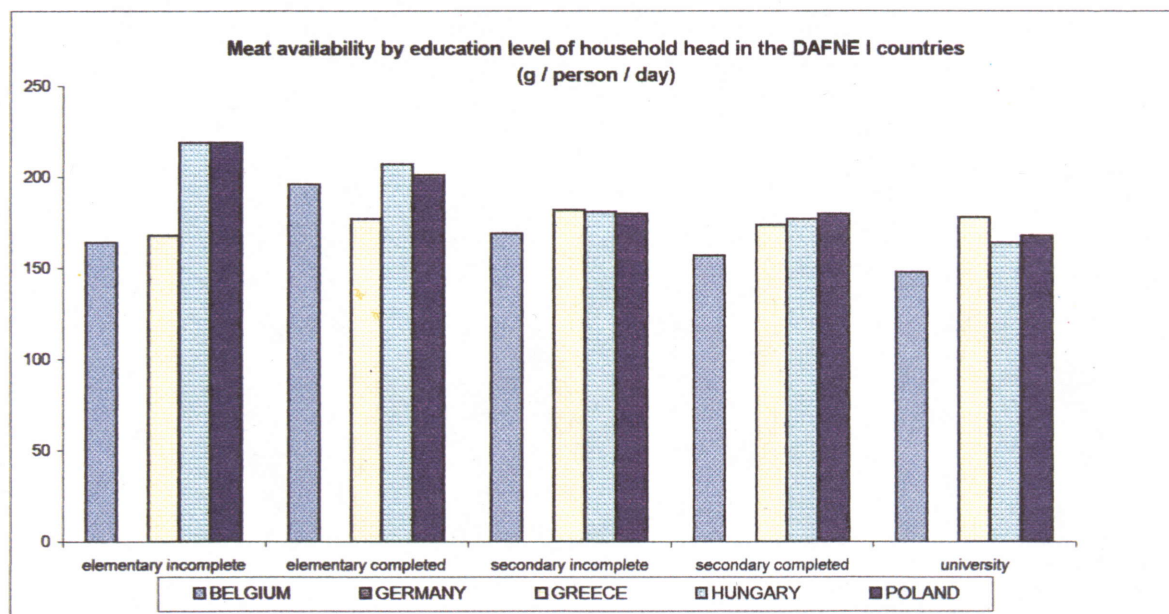
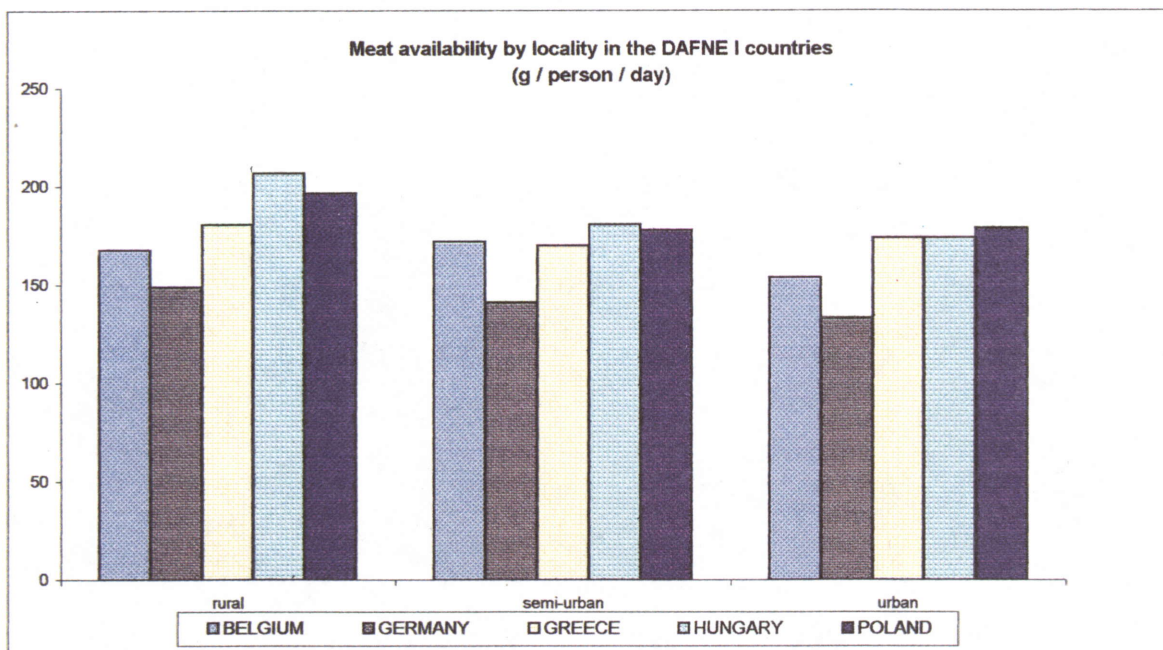
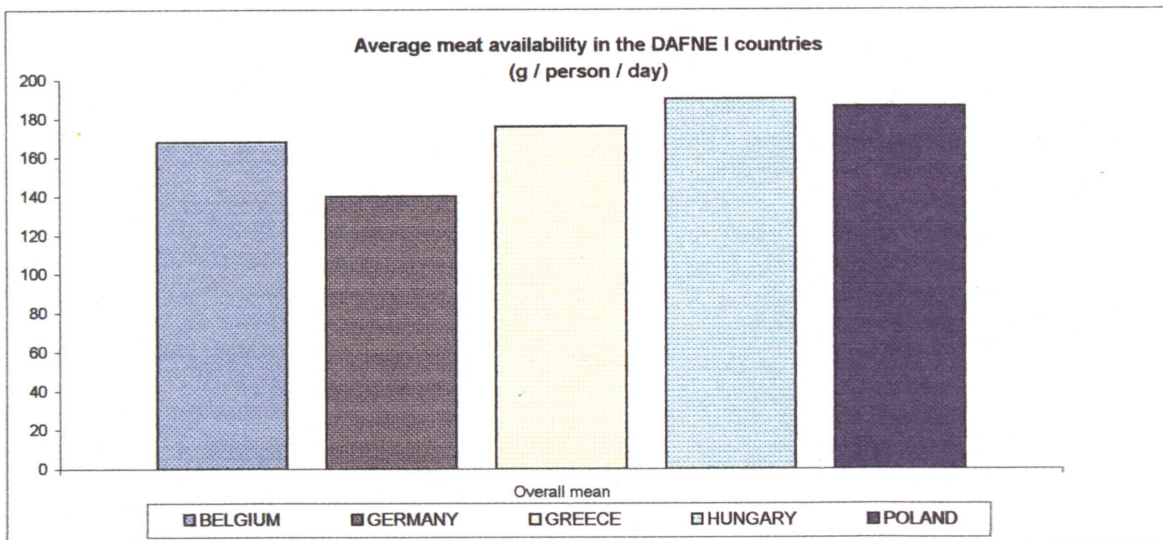
ETHANOL (from alcoholic beverages)	BELGIUM	GERMANY	GREECE	HUNGARY	POLAND
EDUCATION					
elementary incomplete	5.9		3.9	7.9	-
elementary completed	9.9		4.0	7.6	-
secondary incomplete	10		3.8	6.5	-
secondary completed	12		4.0	6.8	-
university	13		4.5	6.9	-

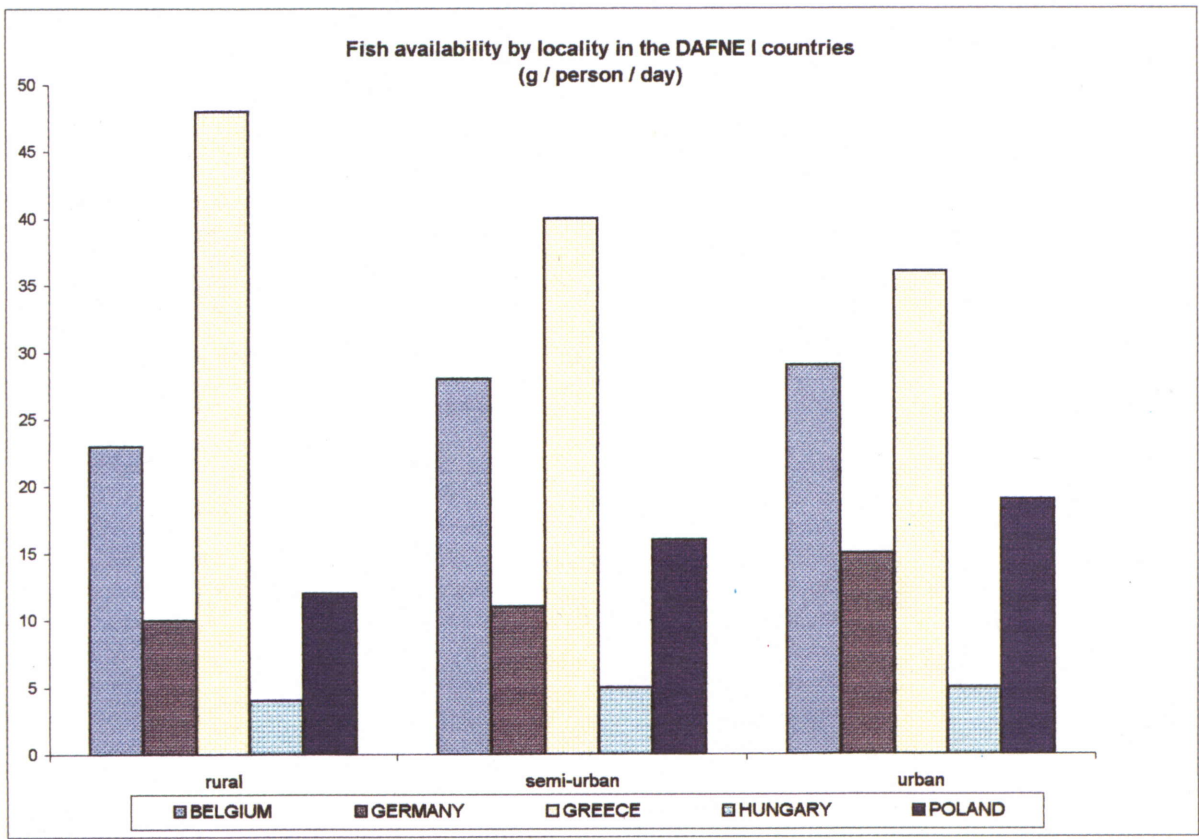
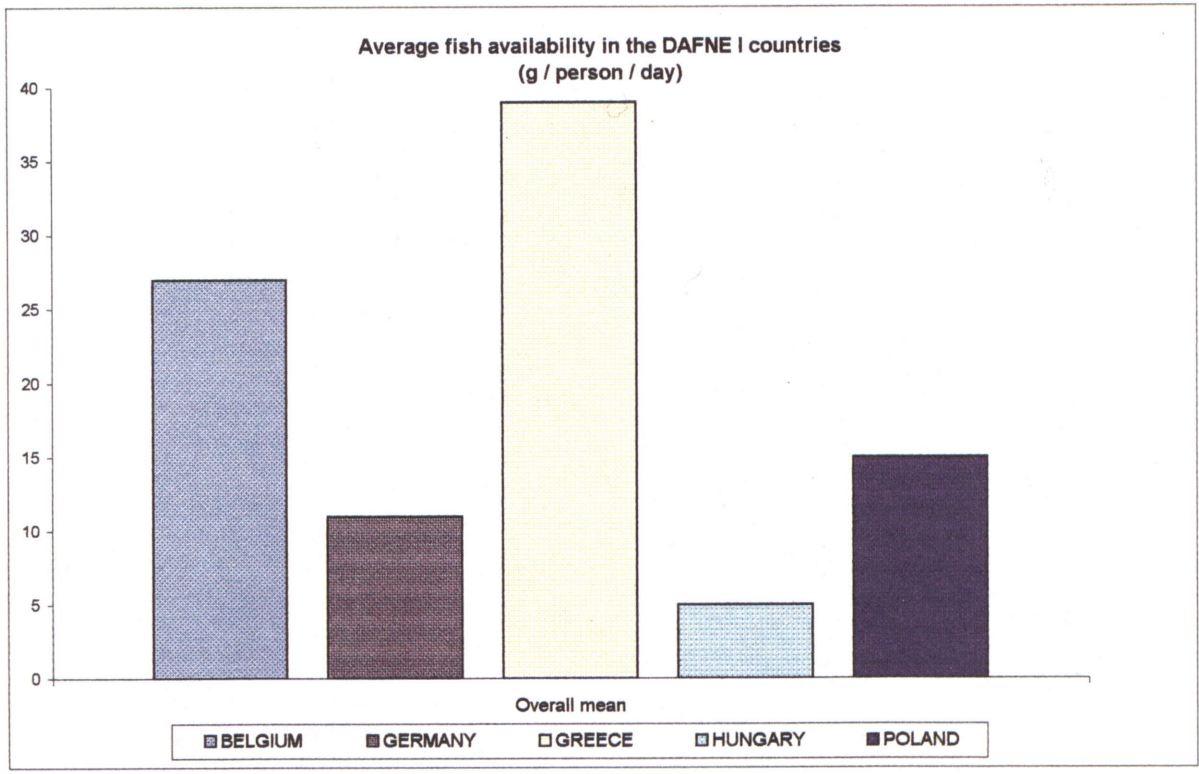
LOCALITY					
rural	9.5	12	5.3	8.5	-
semi-urban	11	13	4.1	6.3	-
urban	12	14	3.3	5.9	-

OVERALL MEAN	11	13	4.0	7.1	-
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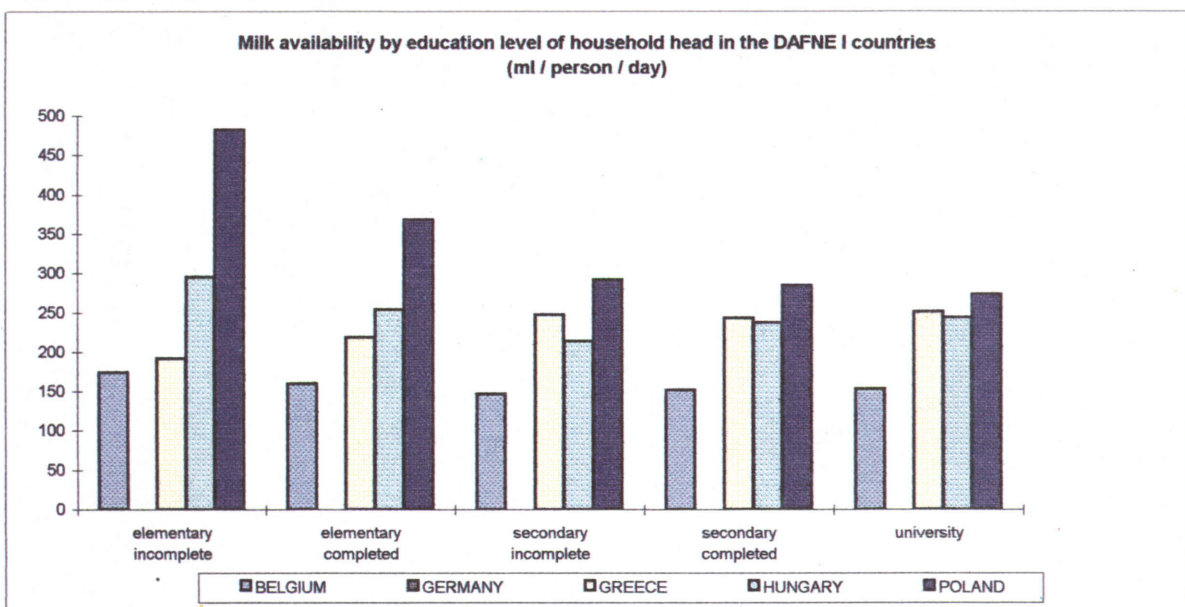
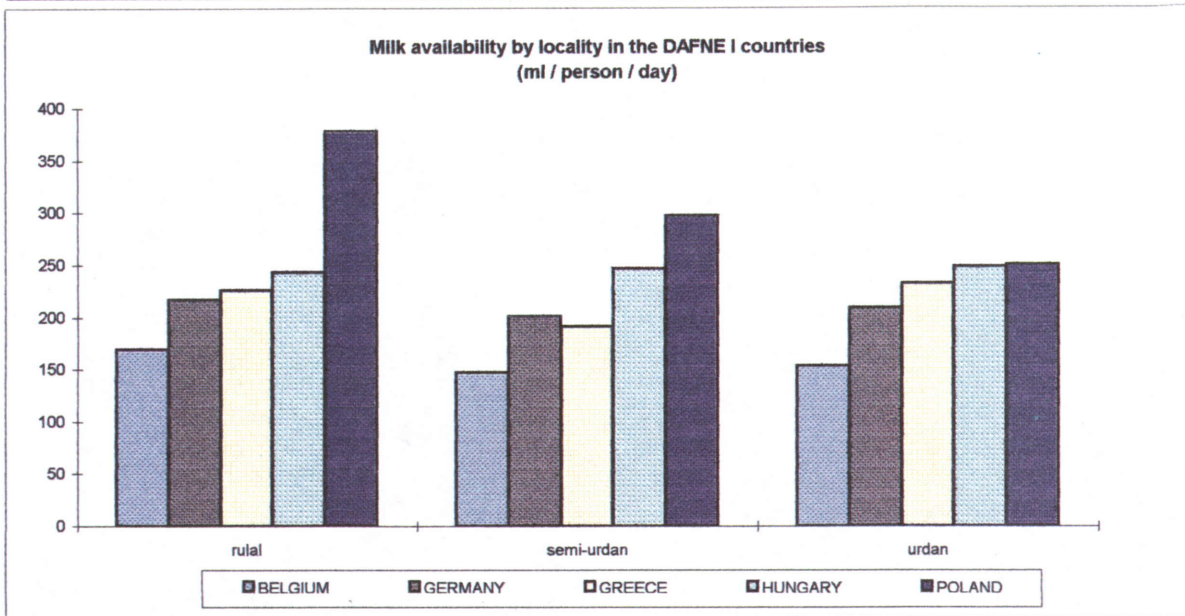
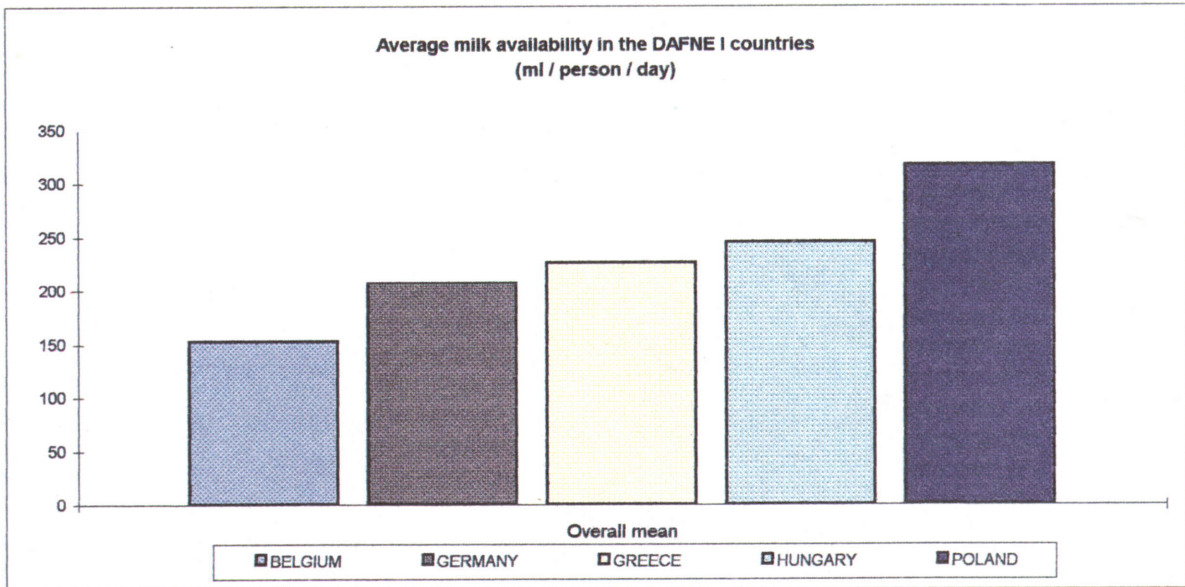


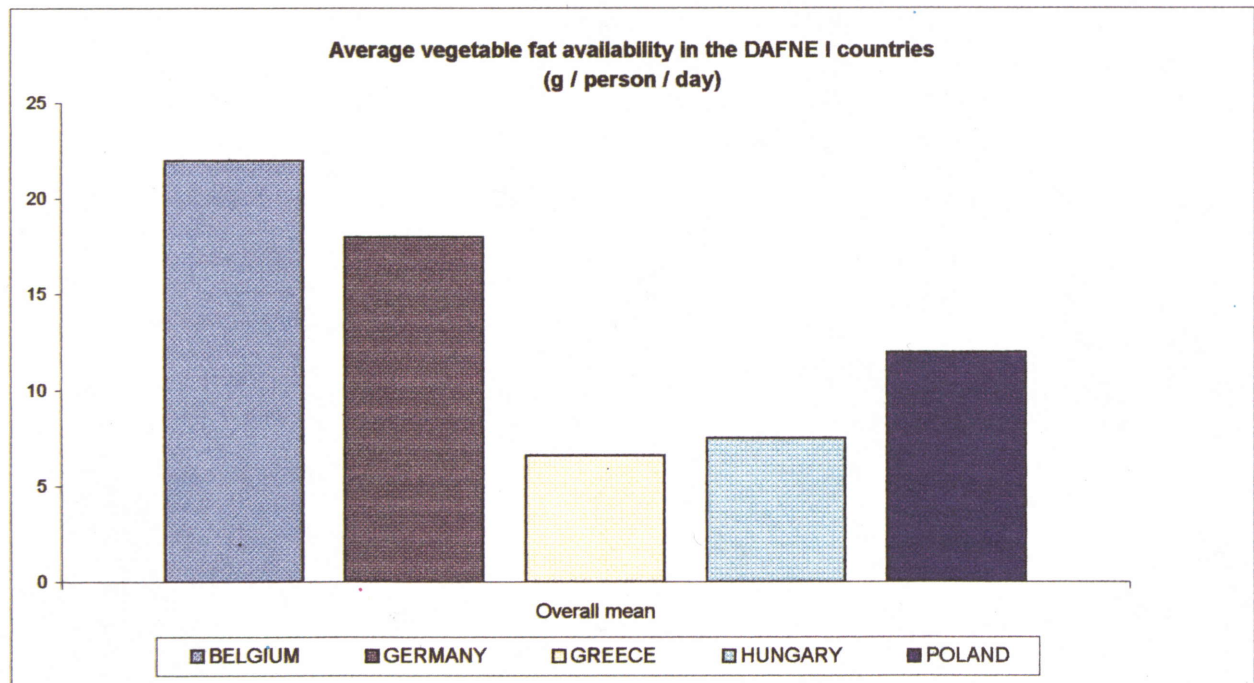
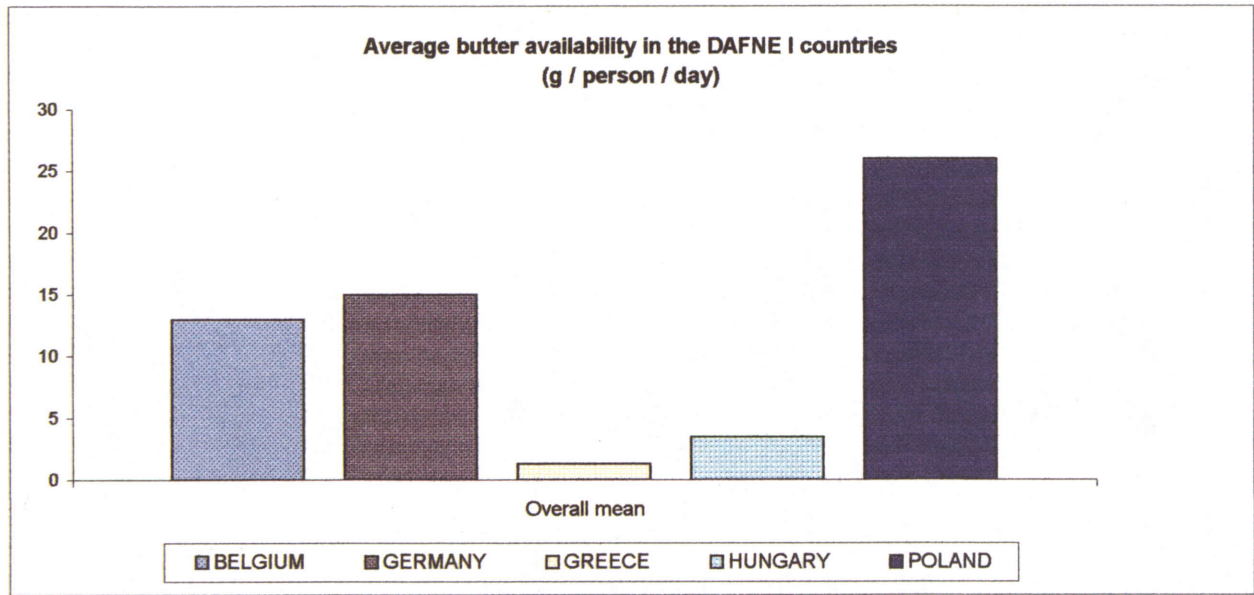
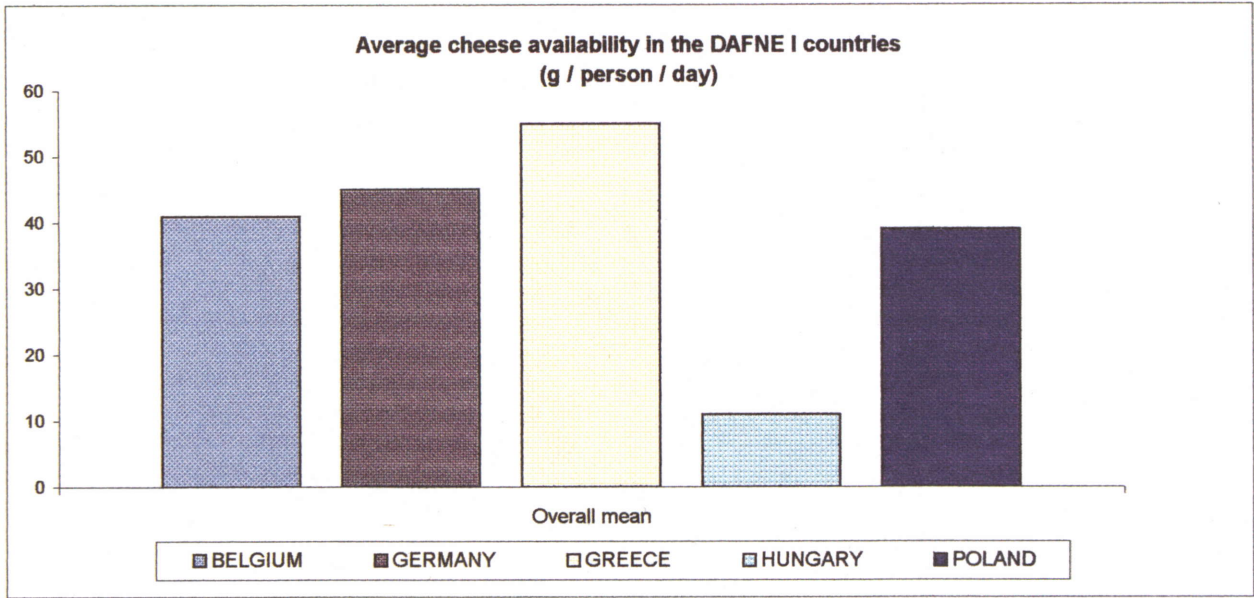


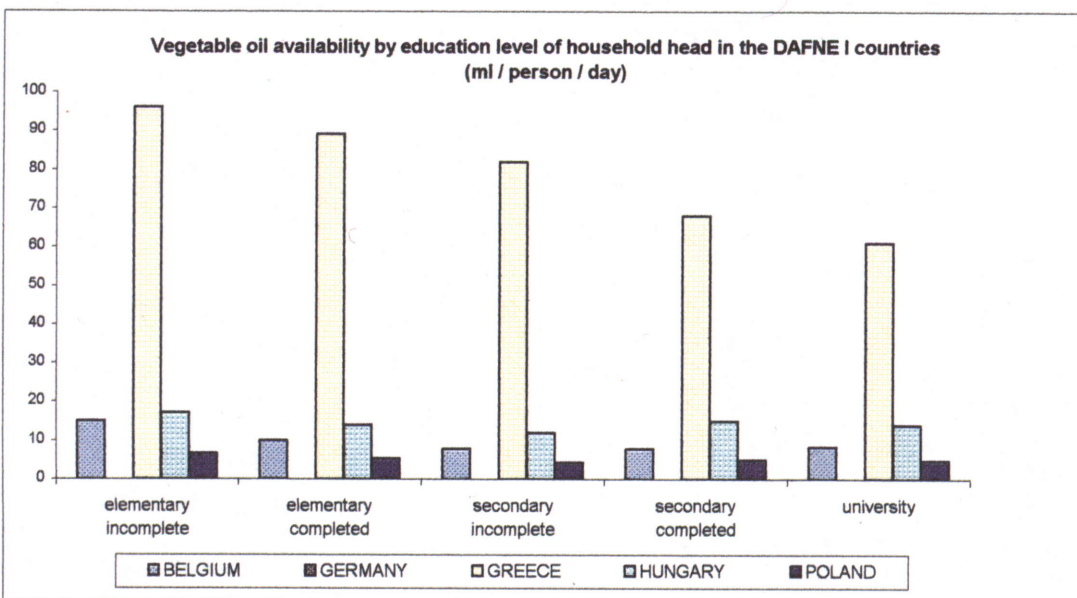
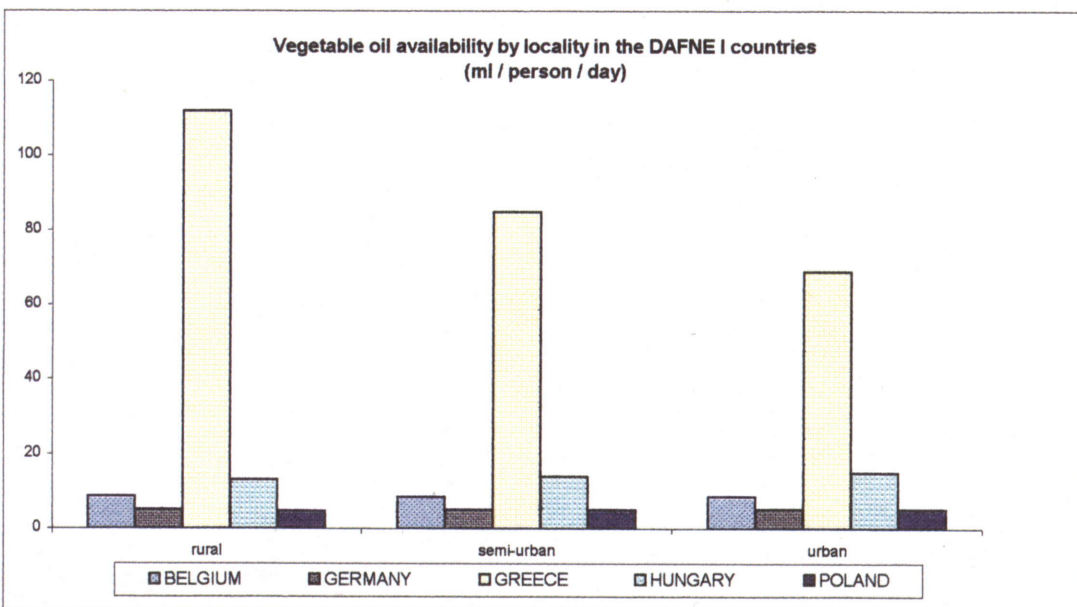
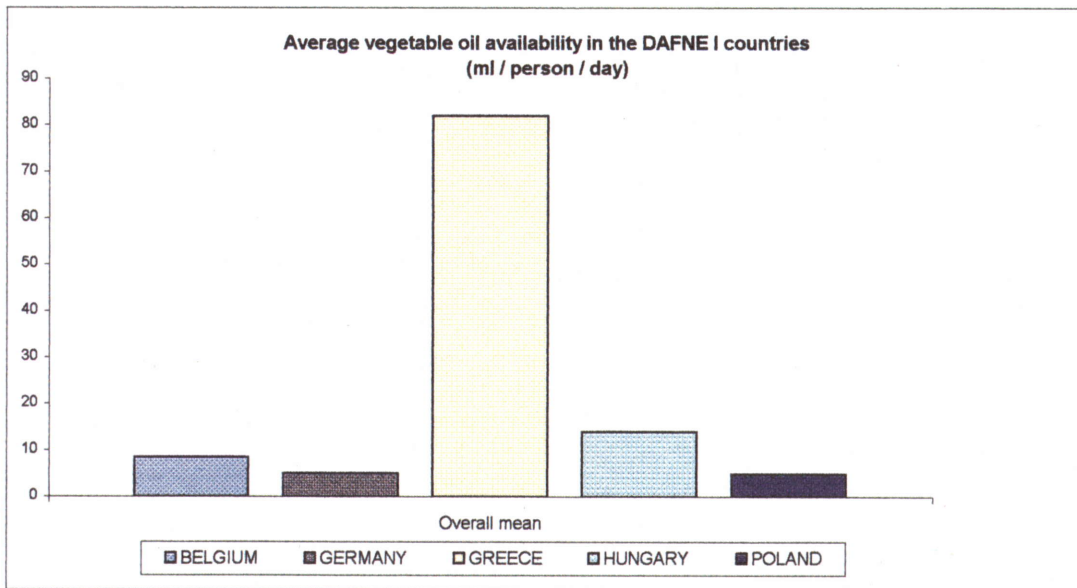


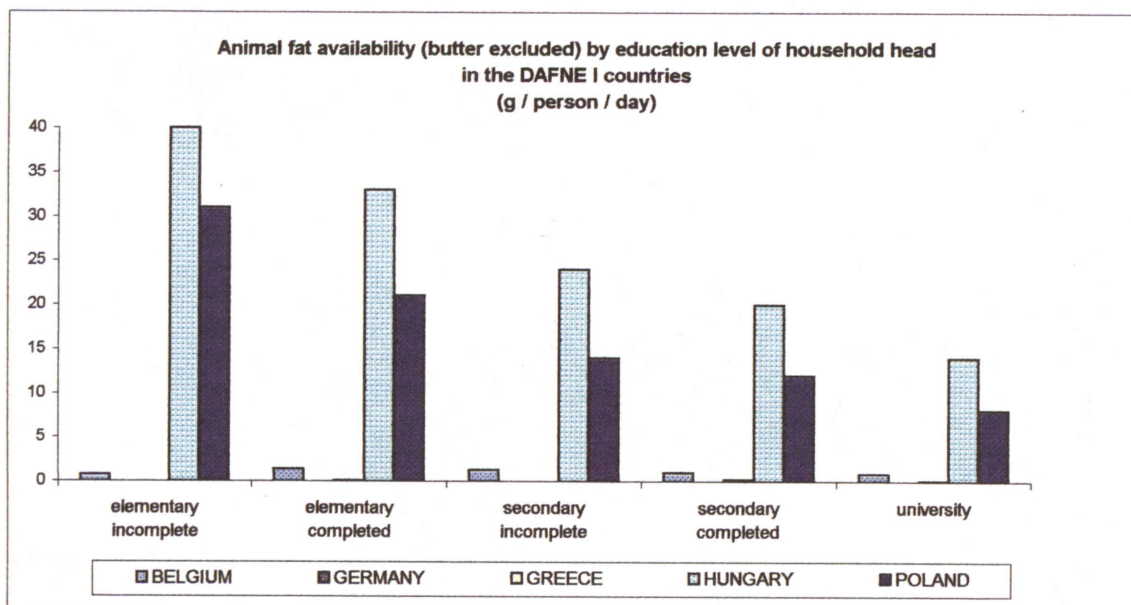
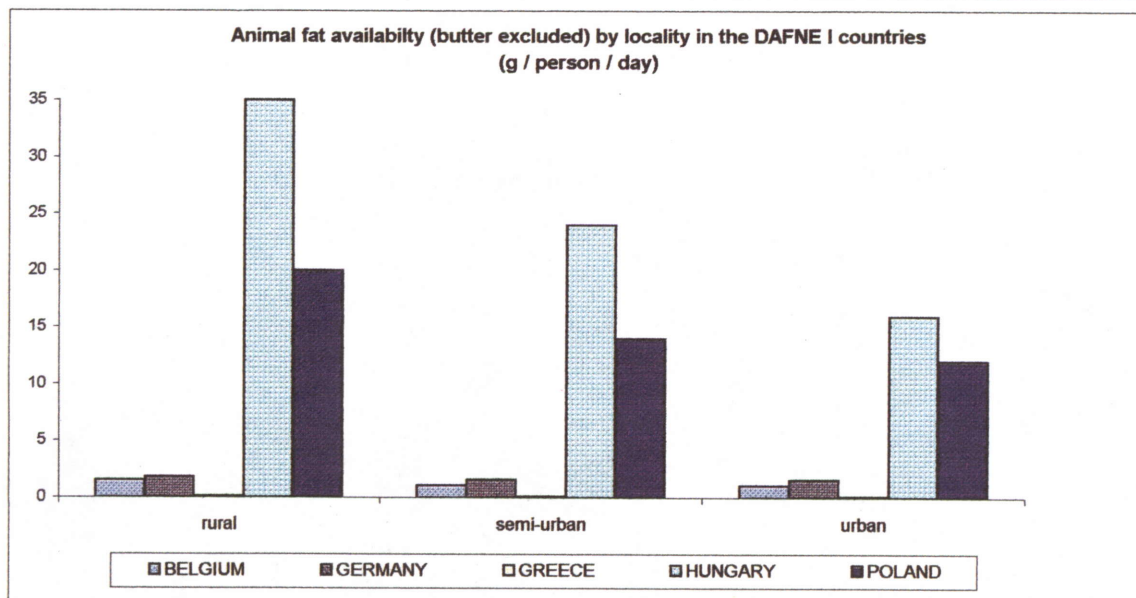
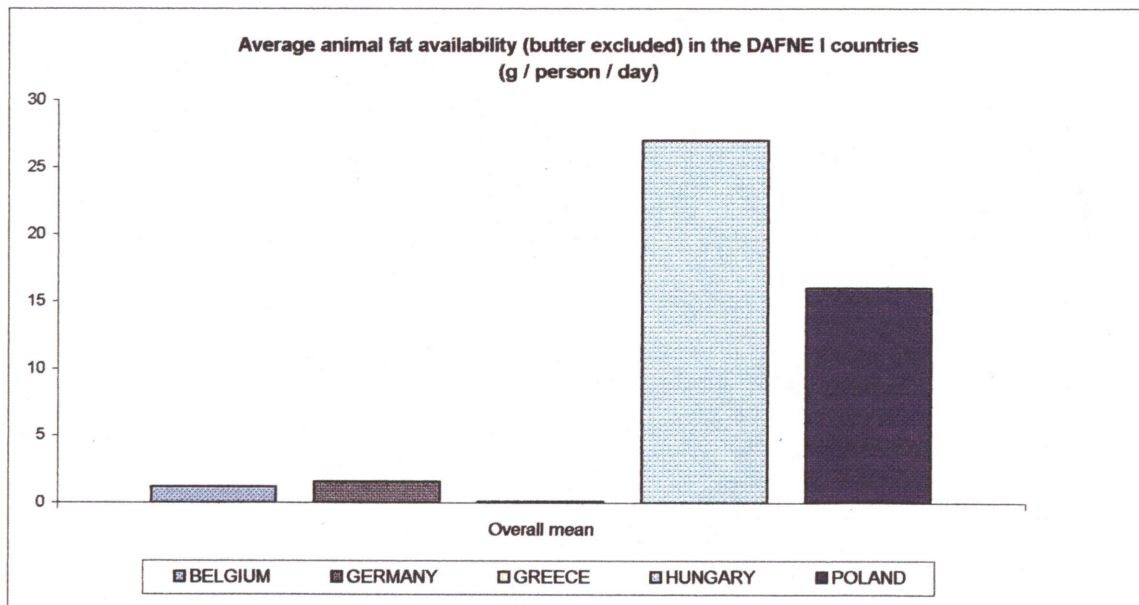


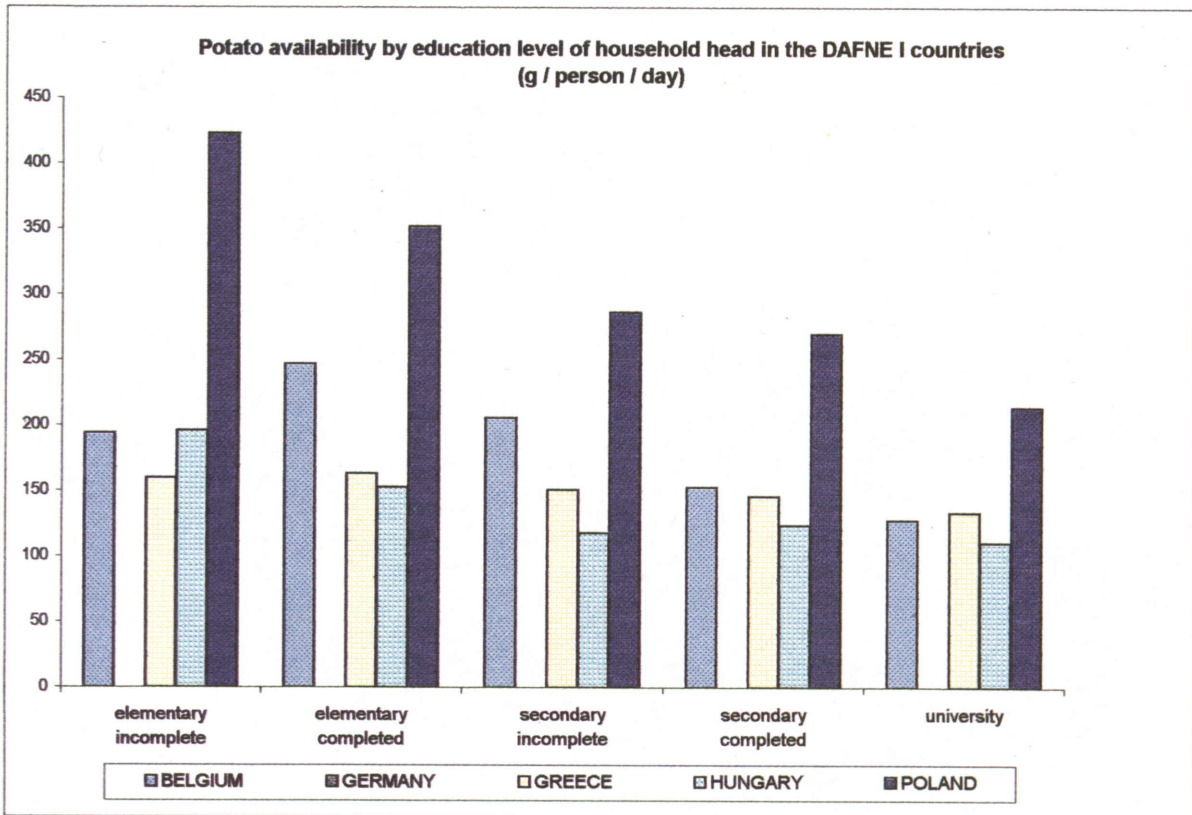
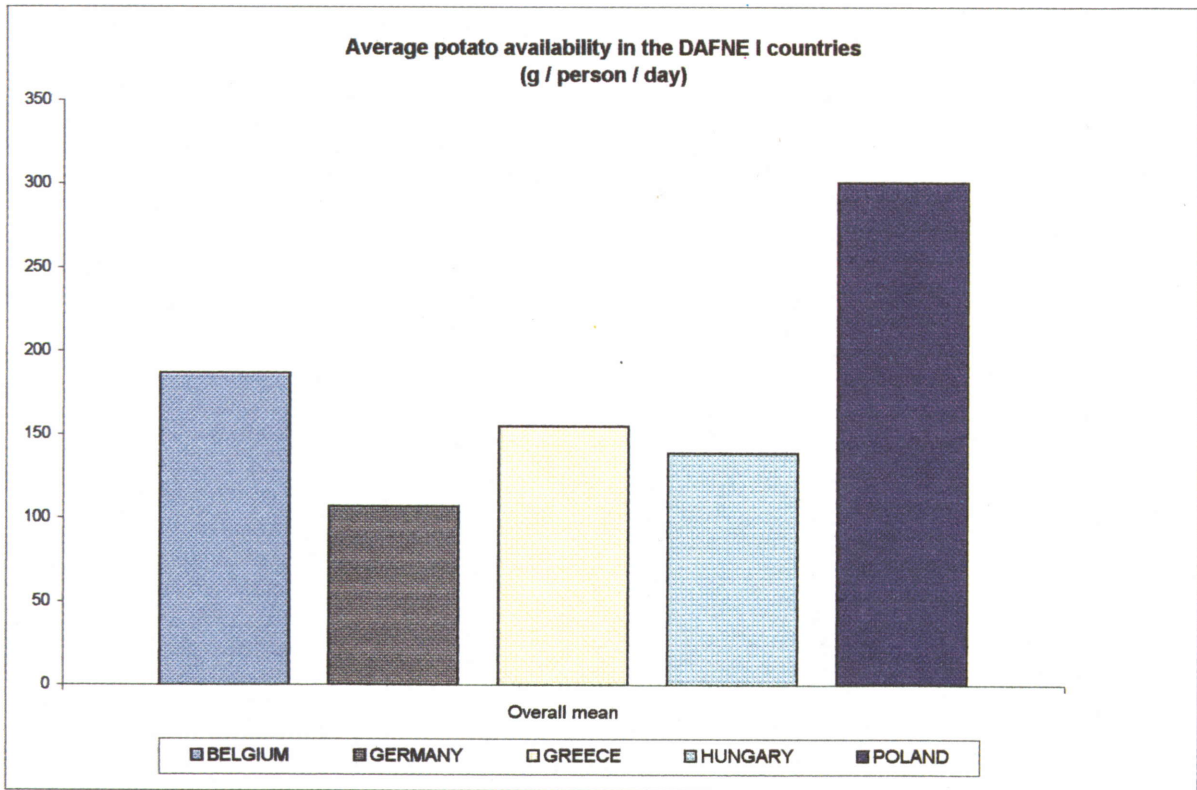




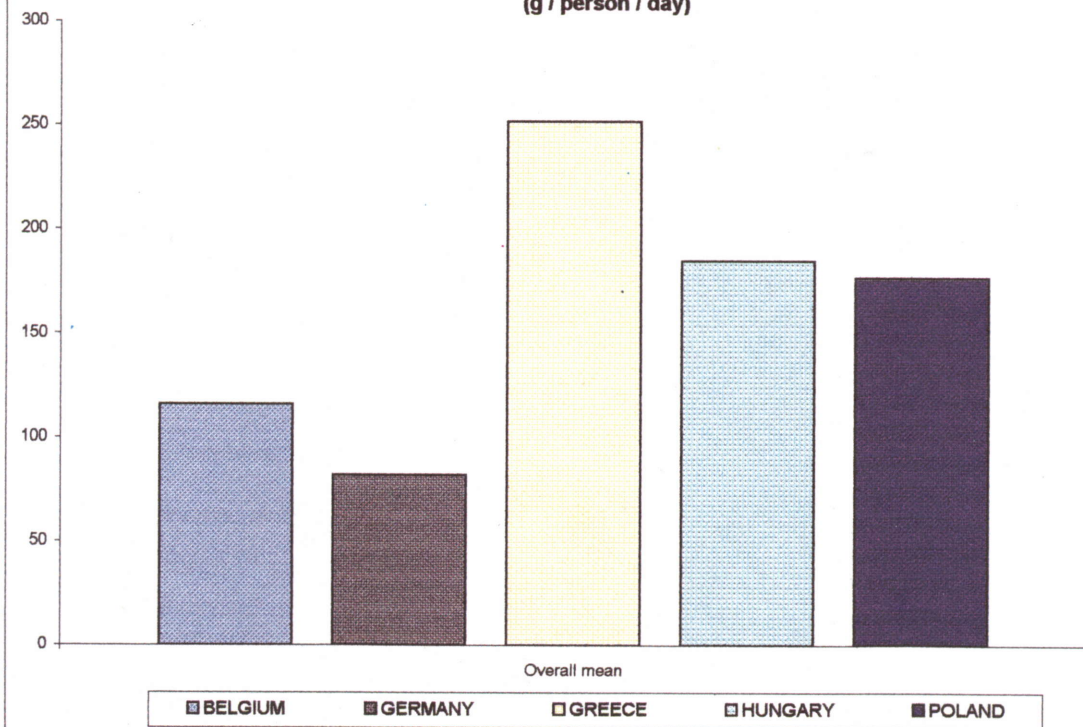




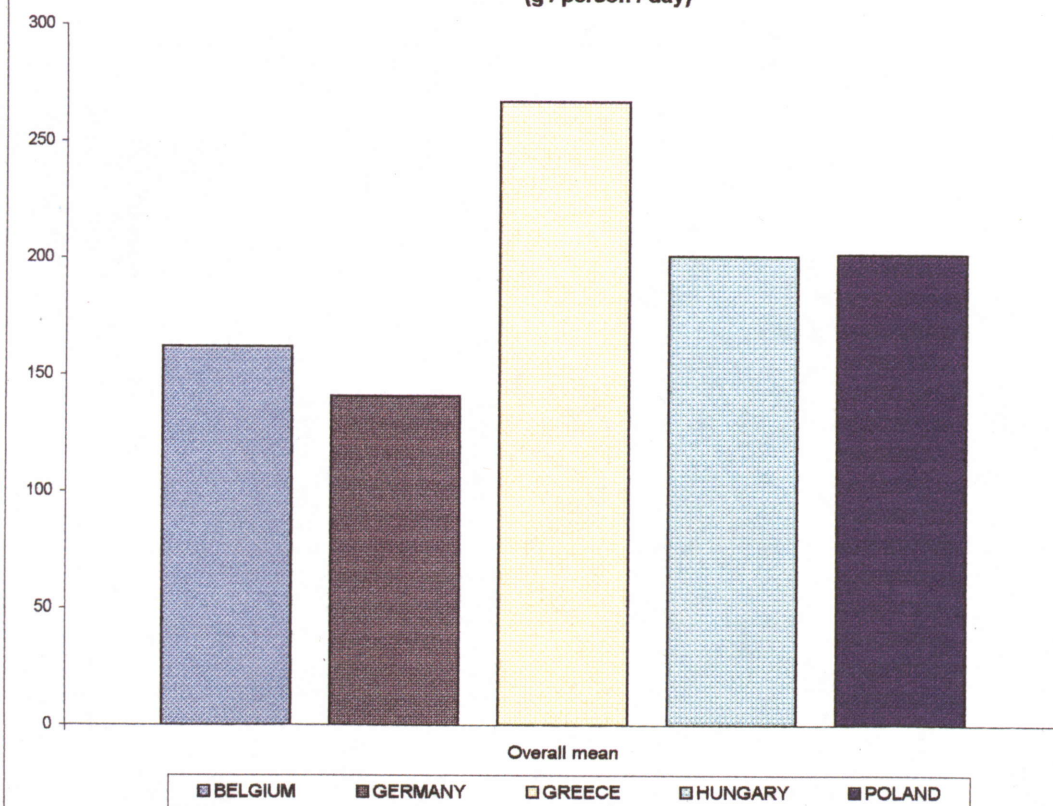


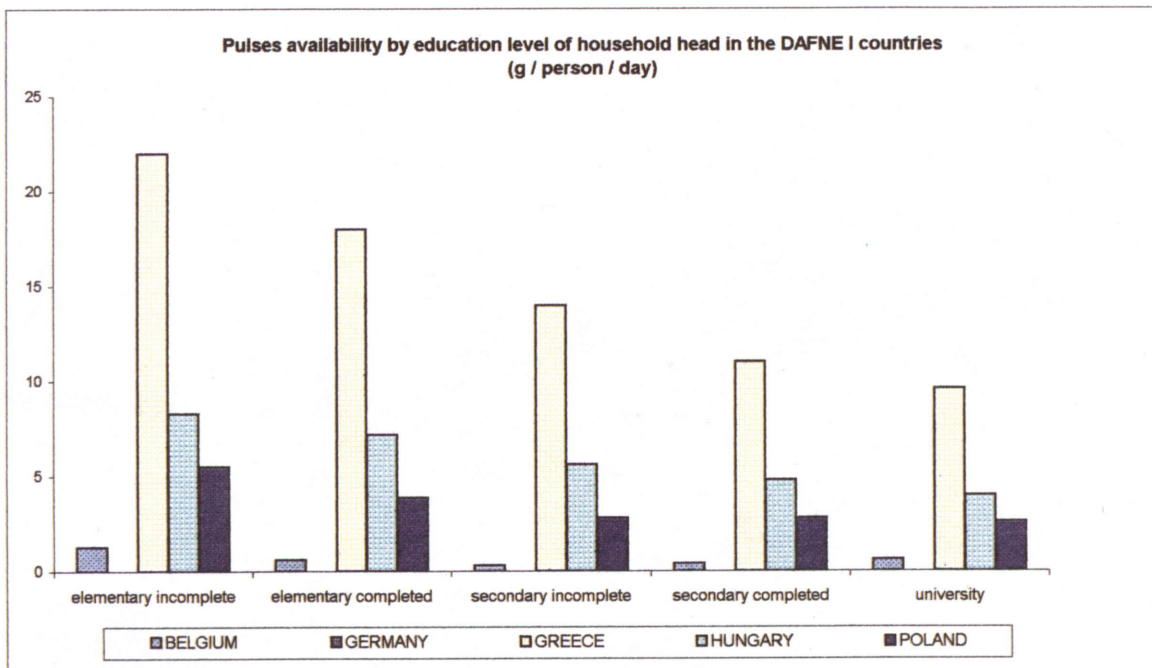
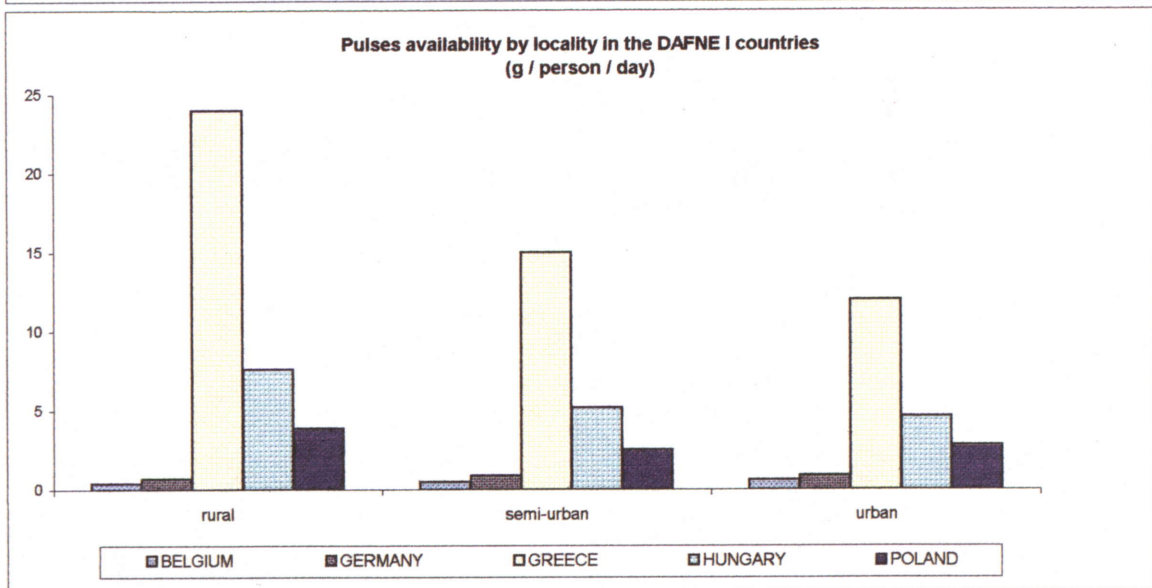
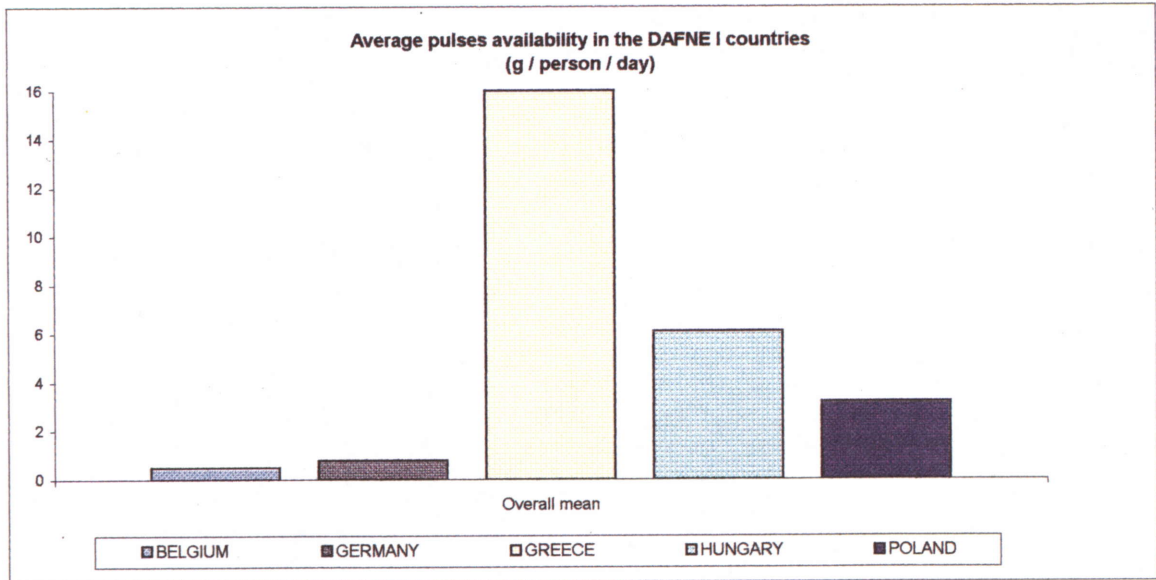


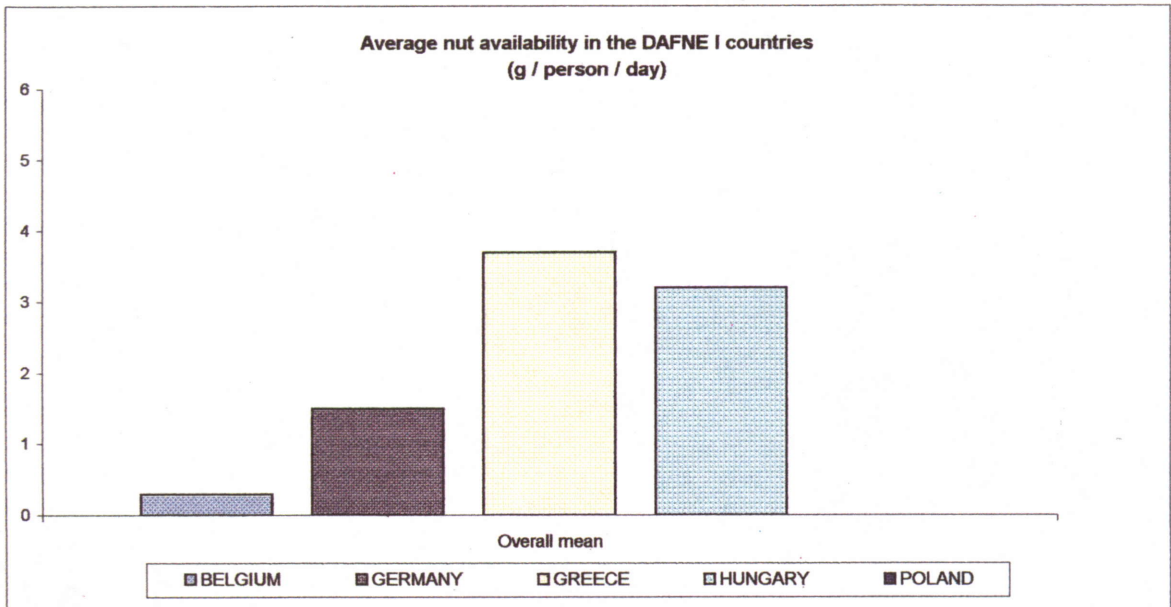
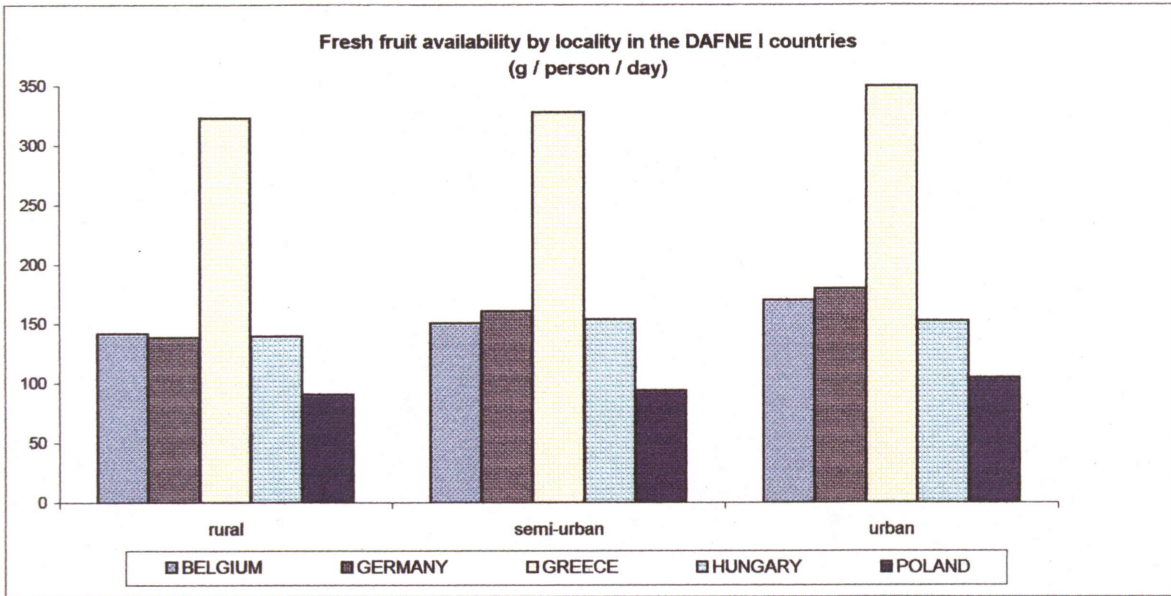
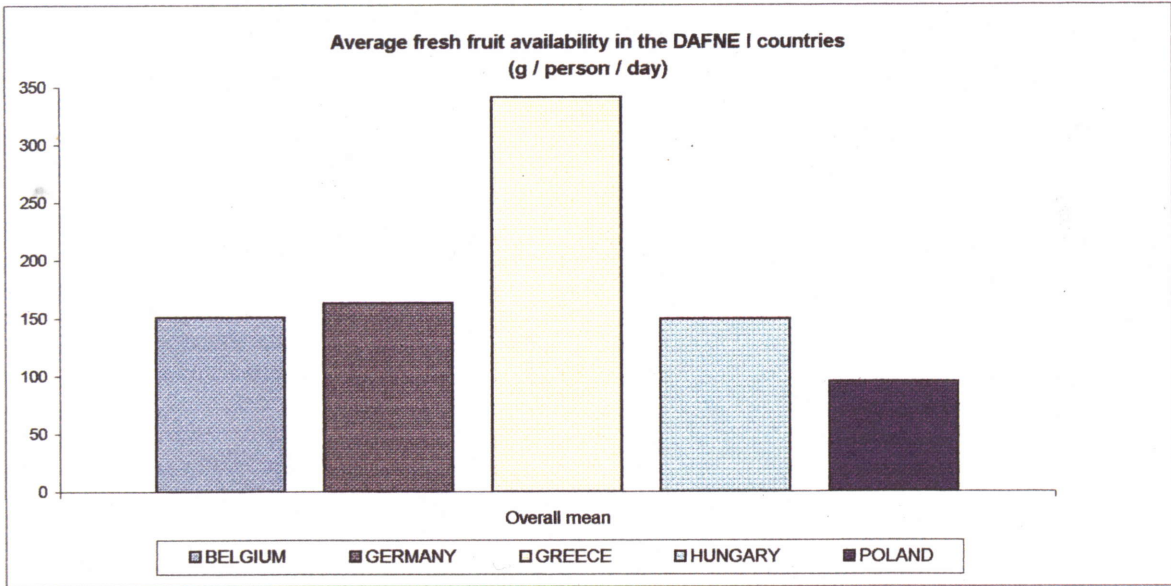
Average fresh vegetable availability in the DAFNE I countries
(g / person / day)



Average vegetable availability in the DAFNE I countries
(g / person / day)



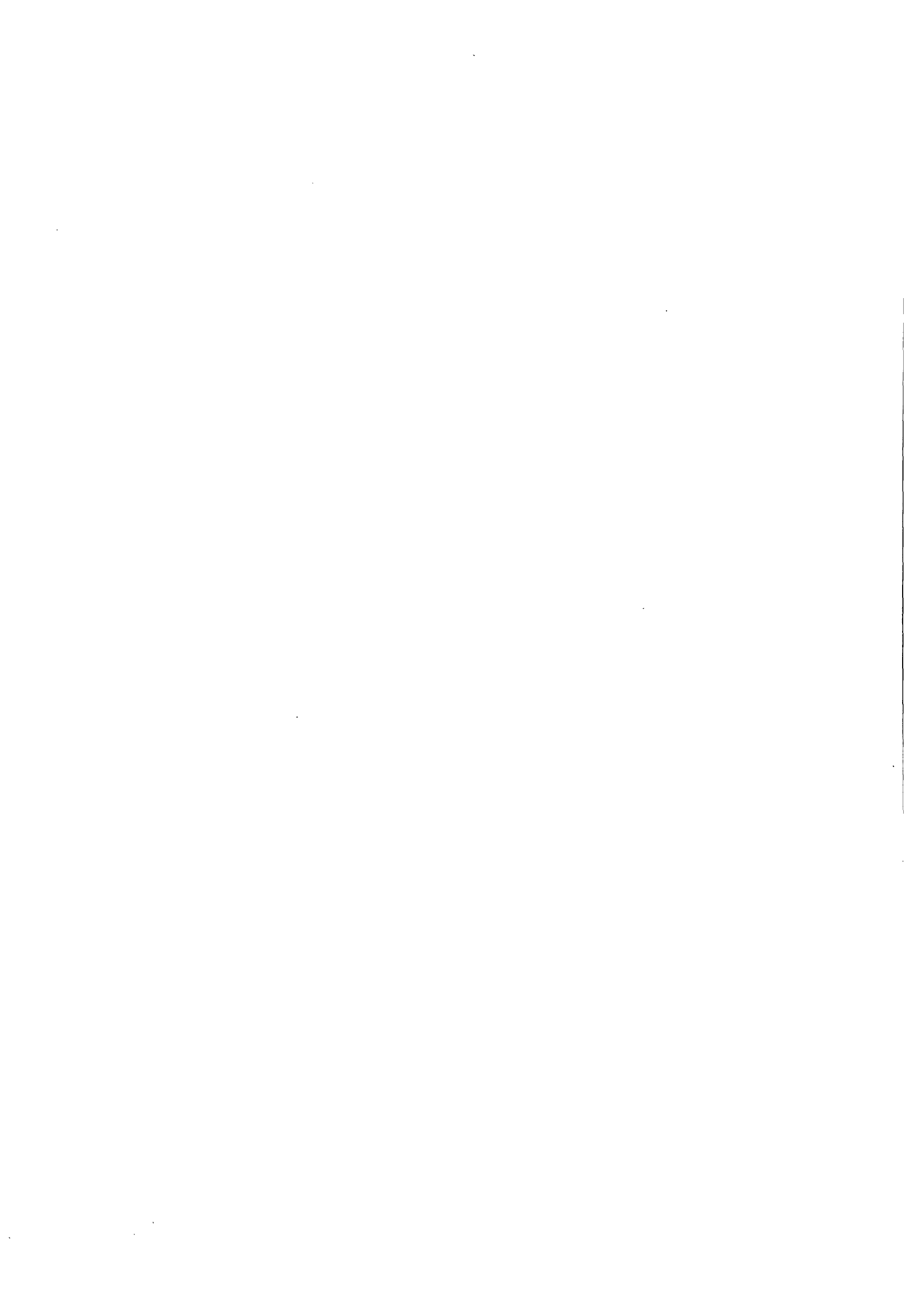




ANNEX II.3

Distribution of availability of fruits in total and fresh fruits among:

- **all households**
- **households of consumers**

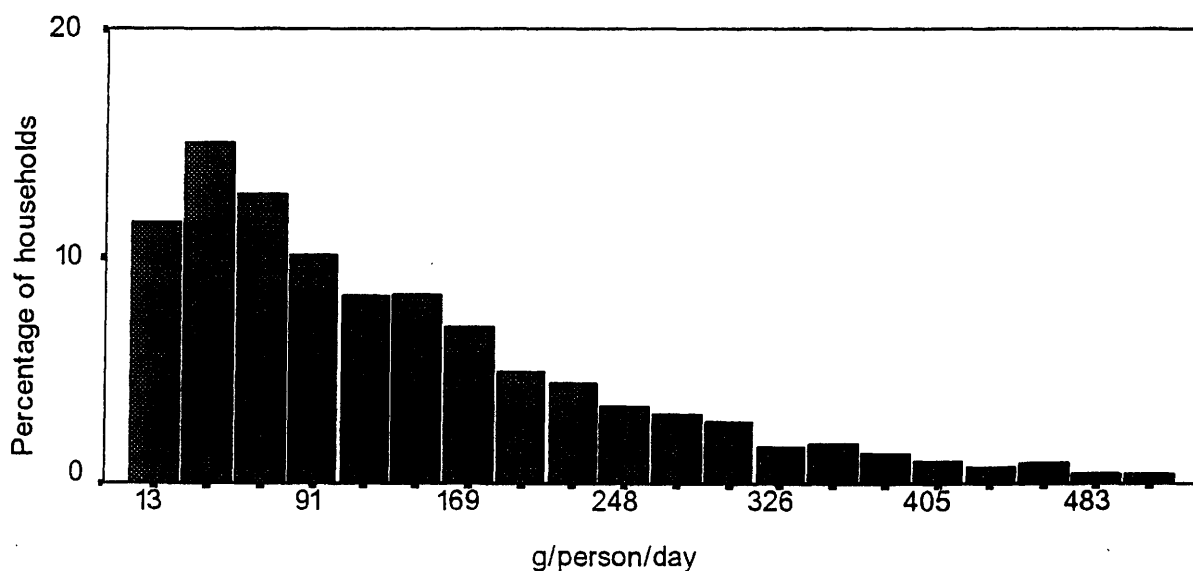


Fresh Fruits

	Observed values (g/person/day)	95% Confidence Intervals	
A. All households			
Mean availability	151	145	157
25th centile	50	47	53
50th centile	109	103	116
75th centile	202	195	211
90th centile	320	306	338
95th centile	417	400	442
97.5th centile	522	491	552
Proportion of consumers (%)	99.7	99.5	99.9
B. Consumers only			
Mean availability	151	146	157
25th centile	51	47	54
50th centile	109	104	117
75th centile	202	195	211
90th centile	320	306	338
95th centile	417	400	444
97.5th centile	98	494	553

Distribution of availability among consumers

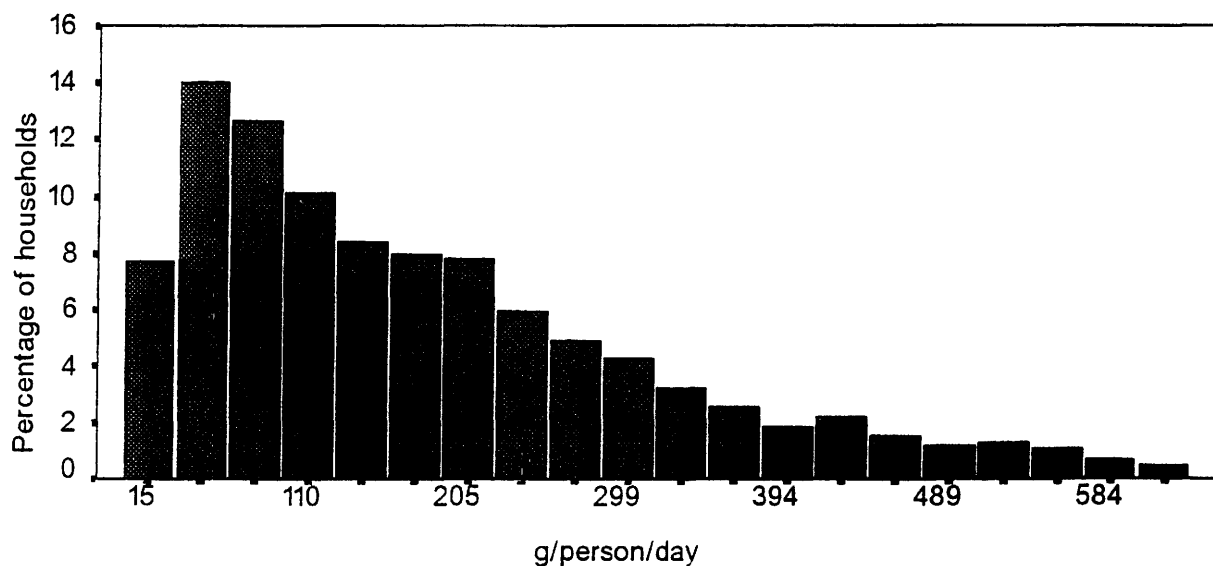
(non-consumers and values greater than the 97.5 centile point are excluded)



Fruits

	Observed values (g/person/day)	95% Confidence Intervals	
A. All households			
Mean availability	198	191	205
25th centile	73	69	76
50th centile	151	143	158
75th centile	265	255	274
90th centile	418	400	436
95th centile	528	507	545
97.5th centile	631	587	663
Proportion of consumers (%)	99.8	99.5	99.9
B. Consumers only			
Mean availability	198	192	206
25th centile	74	70	76
50th centile	151	143	158
75th centile	265	255	275
90th centile	418	400	436
95th centile	528	507	546
97.5th centile	631	587	663

Distribution of availability among consumers
(non-consumers and values greater than the 97.5 centile point are excluded)

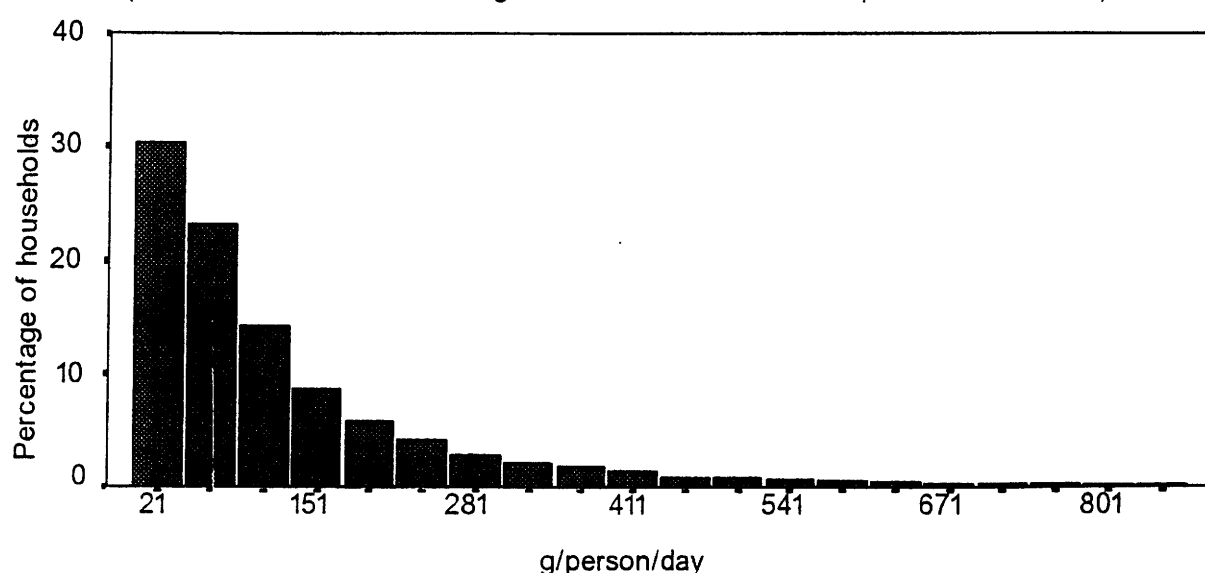


Fresh fruits

	Observed values (g/person/day)	95% Confidence Intervals	
A. All households			
Mean availability	163	157	167
25th centile	32	31	33
50th centile	76	74	78
75th centile	168	165	172
90th centile	352	341	360
95th centile	550	532	578
97.5th centile	850	789	900
Proportion of consumers (%)	95.9	95.5	96.1
B. Consumers only			
Mean availability	170	164	175
25th centile	37	35	38
50th centile	81	79	83
75th centile	175	171	179
90th centile	362	351	369
95th centile	567	541	592
97.5th centile	867	809	931

Distribution of availability among consumers

(non-consumers and values greater than the 97.5 centile point are excluded)

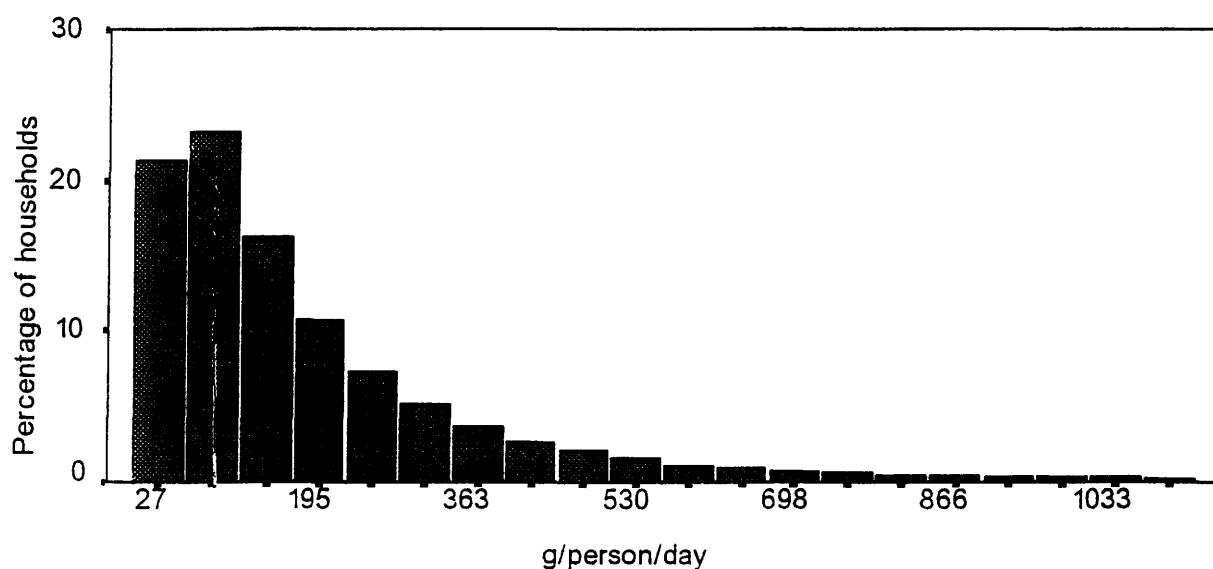


Fruits

	Observed values (g/person/day)	95% Confidence Intervals	
A. All households			
Mean availability	236	231	242
25th centile	63	61	64
50th centile	129	127	132
75th centile	259	253	265
90th centile	491	477	504
95th centile	744	717	770
97.5th centile	1109	1053	1180
Proportion of consumers (%)	98.3	98.1	98.5
B. Consumers only			
Mean availability	240	235	247
25th centile	66	65	67
50th centile	132	130	135
75th centile	262	256	268
90th centile	496	483	509
95th centile	750	724	777
97.5th centile	1118	1066	1194

Distribution of availability among consumers

(non-consumers and values greater than the 97.5 centile point are excluded)



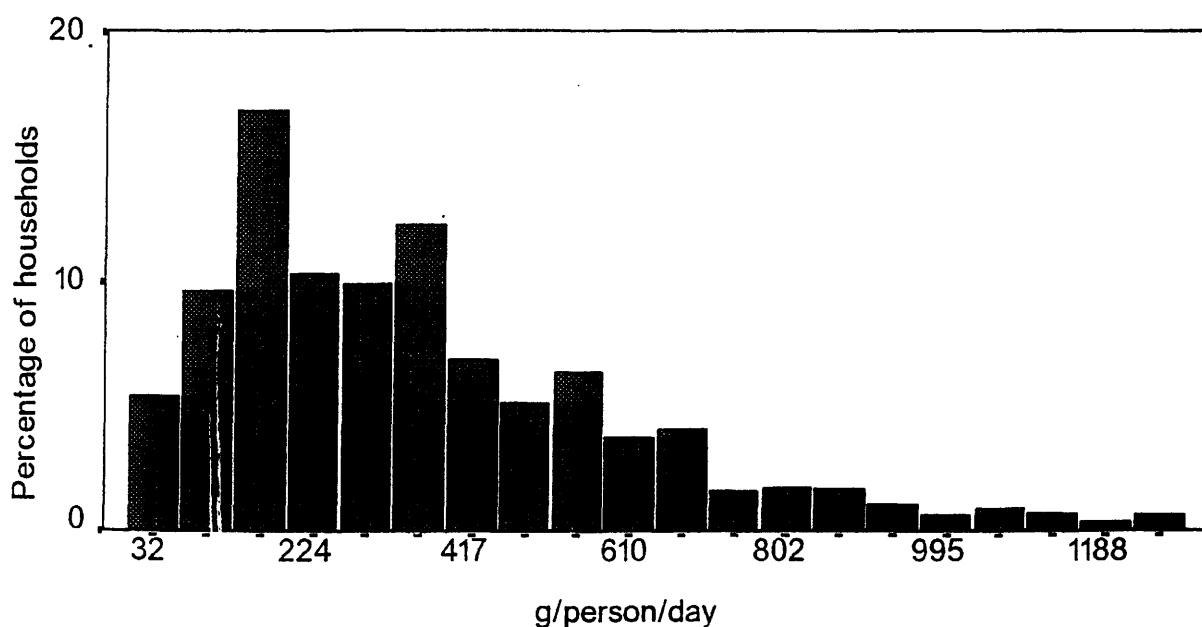
Fresh fruits

Observed values 95% Confidence Intervals
(g/person/day)

A. All households		Observed values	95% Confidence Intervals	Observed values
		(g/person/day)		
Mean availability		341	333	349
25th centile		94	94	117
50th centile		258	235	282
75th centile		469	469	469
90th centile		728	704	751
95th centile		962	939	986
97.5th centile		1221	1174	1288
Proportion of consumers (%)		85.9	85.0	86.8
B. Consumers only				
Mean availability		397	388	407
25th centile		188	188	188
50th centile		305	286	329
75th centile		516	493	516
90th centile		775	751	798
95th centile		1033	986	1080
97.5th centile		1284	1221	1338

Distribution of availability among consumers

(non-consumers and values greater than the 97.5 centile point are excluded)



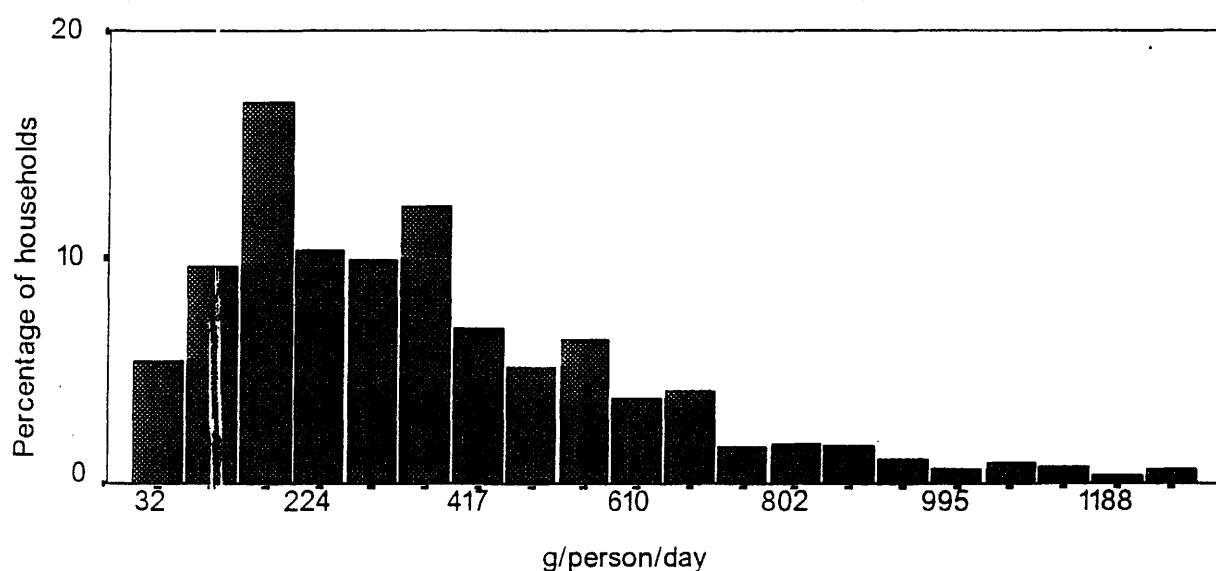
Fruits

Observed values 95% Confidence Intervals
(g/person/day)

A. All households			
Mean availability	341	332	349
25th centile	94	94	117
50th centile	258	235	282
75th centile	469	469	469
90th centile	728	704	751
95th centile	962	939	986
97.5th centile	1221	1174	1268
Proportion of consumers (%)	85.9	85.0	86.6
B. Consumers only			
Mean availability	397	386	404
25th centile	188	188	188
50th centile	305	282	329
75th centile	516	493	516
90th centile	775	751	798
95th centile	1033	986	1080
97.5th centile	1284	1221	1314

Distribution of availability among consumers

(non-consumers and values greater than the 97.5 centile point are excluded)

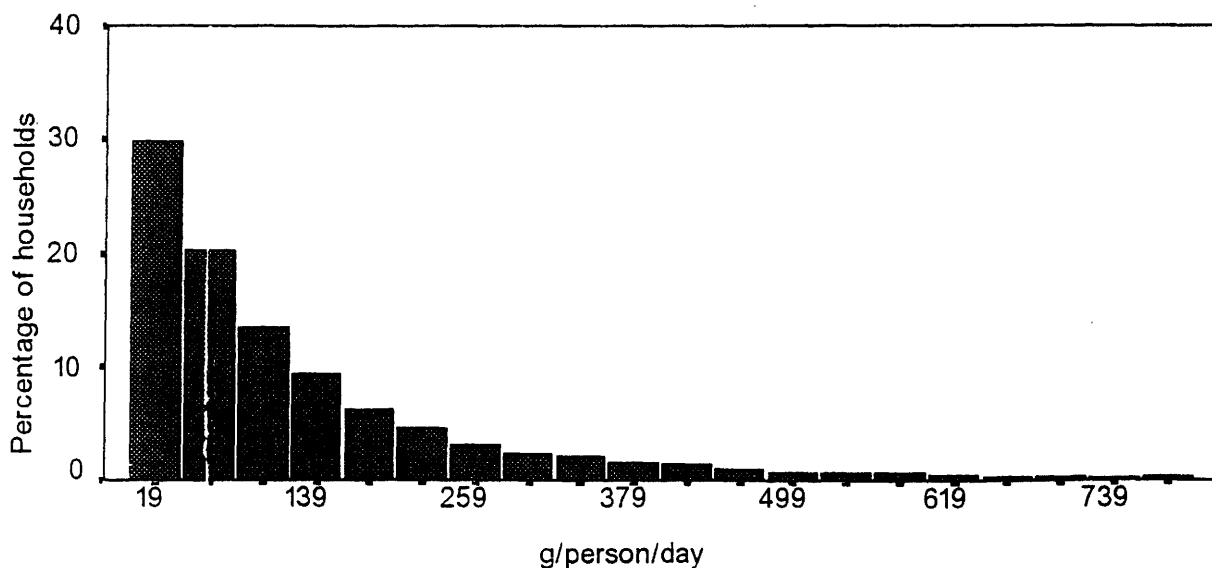


Fresh fruits

	Observed values (g/person/day)	95% Confidence Intervals	
A. All households			
Mean availability	149	145	152
25th centile	28	27	29
50th centile	76	74	78
75th centile	173	169	177
90th centile	358	345	366
95th centile	538	514	560
97.5th centile	783	727	829
Proportion of consumers (%)	95.0	94.6	95.4
B. Consumers only			
Mean availability	157	153	160
25th centile	34	33	34
50th centile	83	80	84
75th centile	181	176	186
90th centile	367	358	380
95th centile	552	530	573
97.5th centile	800	751	849

Distribution of availability among consumers

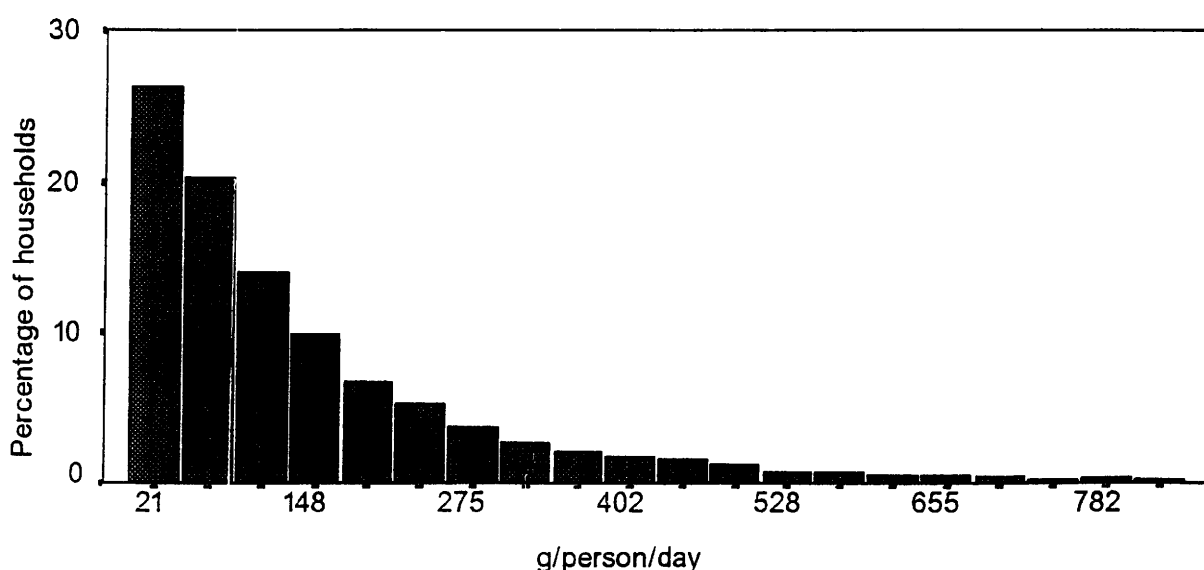
(non-consumers and values greater than the 97.5 centile point are excluded)



Fruits

	Observed values g/person/day	95% Confidence Intervals	
A. All households			
Mean availability	170	166	175
25th centile	39	37	40
50th centile	93	91	97
75th centile	205	199	211
90th centile	400	383	411
95th centile	582	559	598
97.5th centile	833	787	885
Proportion of consumers (%)	97.8	97.5	98.1
B. Consumers only			
Mean availability	174	170	178
25th centile	41	40	42
50th centile	97	94	101
75th centile	209	203	214
90th centile	406	387	417
95th centile	587	566	611
97.5th centile	846	795	905

Distribution of availability among consumers
(non-consumers and values greater than the 97.5 centile point are excluded)



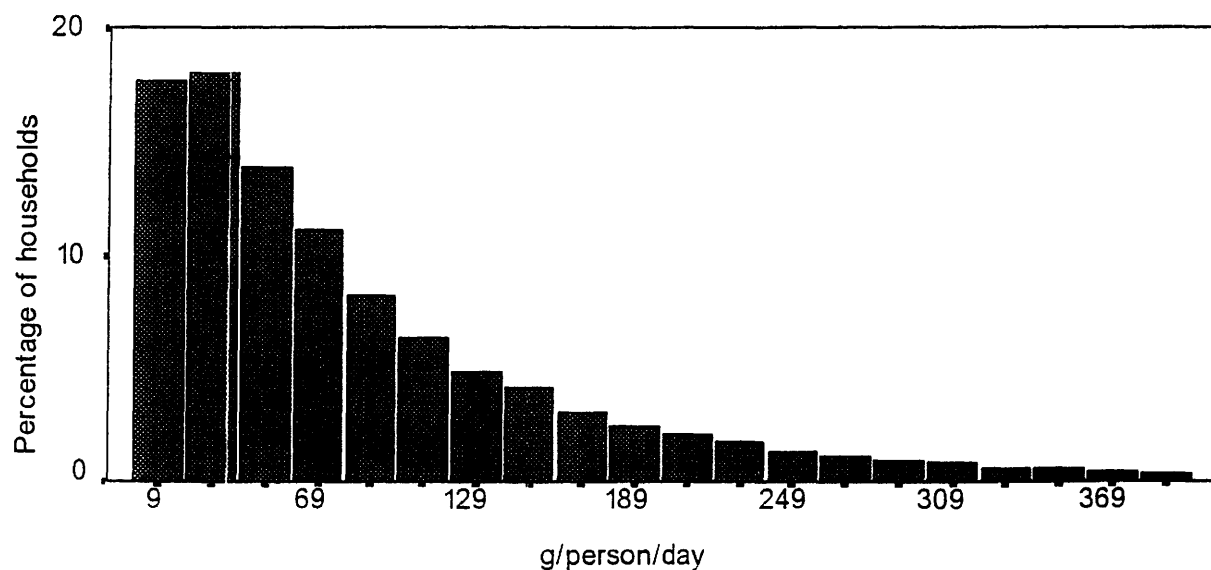
Fresh fruits

Observed values 95% Confidence Intervals
(g/person/day)

A. All households			
Mean availability	96	94	97
25th centile	27	26	27
50th centile	60	59	61
75th centile	123	121	126
90th centile	220	217	223
95th centile	302	297	309
97.5th centile	395	386	404
Proportion of consumers (%)	97.7	97.5	97.8
B. Consumers only			
Mean availability	98	96	99
25th centile	29	28	29
50th centile	63	61	63
75th centile	126	123	128
90th centile	222	219	227
95th centile	306	300	312
97.5th centile	399	389	411

Distribution of availability among consumers

(non-consumers and values greater than the 97.5 centile point are excluded)

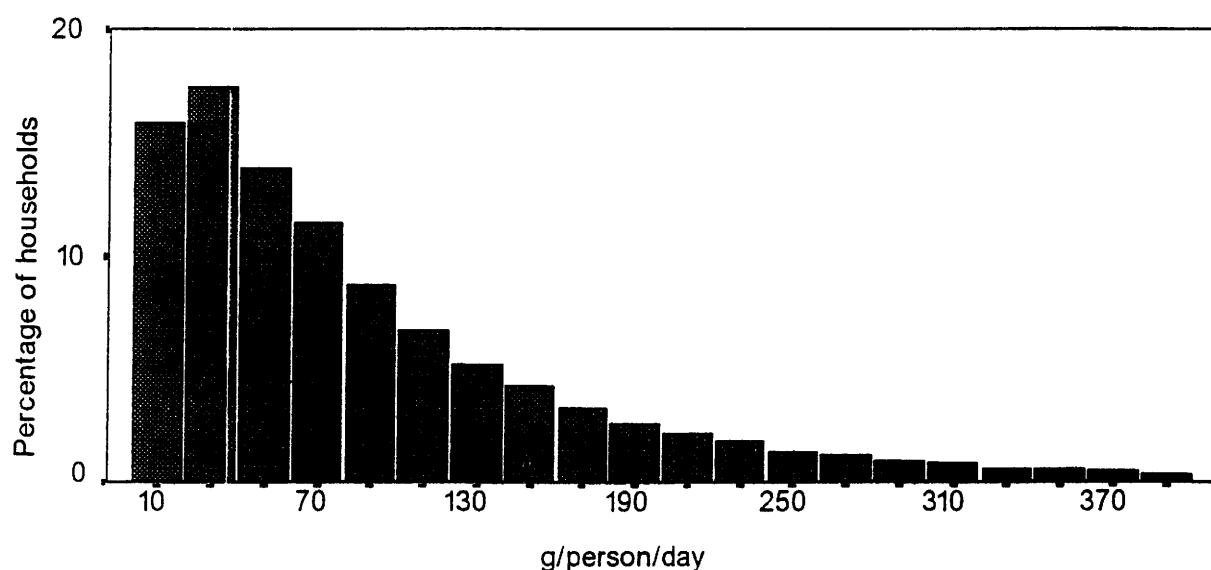


Fruits

	Observed values g/person/day	95% Confidence Intervals	
A. All households			
Mean availability	100	99	101
25th centile	30	30	31
50th centile	65	64	66
75th centile	129	127	131
90th centile	226	222	229
95th centile	308	303	314
97.5th centile	400	391	411
Proportion of consumers (%)	99.2	99.1	99.3
B. Consumers only			
Mean availability	101	100	102
25th centile	31	30	31
50th centile	66	65	67
75th centile	130	128	132
90th centile	226	223	230
95th centile	309	304	314
97.5th centile	401	391	413

Distribution of availability among consumers

(non-consumers and values greater than the 97.5 centile point are excluded)



ANNEX III

Suggestions on the PROCOME (COICOP - HBS) food coding system



DAFNE SUGGESTIONS
ON THE PROCOME (COICOP-HBS) FOOD CODING SYSTEM

PROCOME (Eurostat version) The new COICOP-HBS	Revised PROCOME on a national level (fifth level)
<u>1.1.1 Bread and cereals</u>	<u>1.1.1 Bread and cereals</u>
1.1.1.1 Rice	1.1.1.1 Rice
1.1.1.2 Bread	1.1.1.2 Bread 1.1.1.2.a. wholemeal (incl. wholegrain) 1.1.1.2.b. white (not sweetened)
1.1.1.3 Pasta (incl. pasta containing meat or fish)	1.1.1.3 Pasta (incl. pasta containing meat or fish)
1.1.1.4 Flour	1.1.1.4 Flour (incl. semolina)
1.1.1.5 Pastries, cakes	1.1.1.5 Pastries, cakes (sweetened bakery products, with or without fillings / eg. tarts, cookies, cake mixes, sweet dough, croissants, mixed rolls)
1.1.1.6 Crackers, rusks	1.1.1.6 Crackers, rusks, dough (low sugar, low fat /salted incl., sweetened excl.)
1.1.1.7 Other cereals and preparations (preparations based on cereals -corn flakes-, maize -grains-, couscous, quiches, pizzas, dietary and babyfood products based on flour or starch -less than 50% cocoa).	1.1.1.7.a Other cereals (eg. barley, wheat, rye, maize, corn, corn-on-the-cob) 1.1.1.7.b Breakfast cereals (eg. corn flakes, oats, muesli, bran)

THE DAFNE PROJECT (Data Food Networking)

<u>1.1.2 Meat</u>	<u>1.1.2 Meat</u>
1.1.2.1 Beef meat (fresh and frozen)	Beef meat (fresh and frozen)
1.1.2.2 Veal meat (fresh and frozen)	Veal meat (fresh and frozen)
1.1.2.3 Pork (fresh and frozen)	Pork (fresh and frozen)
1.1.2.4 Mutton, lamb and goat's meat (fresh and frozen)	Mutton, lamb and goat's meat (fresh and frozen)
1.1.2.5 Poultry (fresh or frozen)	Poultry (fresh or frozen)
1.1.2.6 Delicatessen (excl. fat bacon and other edible animal fats)	Cold cuts and sausages / Delicatessen 1.1.2.6.a High fat content (eg. bacon, salami) 1.1.2.6.b Low fat content (eg. ham, turkey)
1.1.2.7 Processed meat and other products containing meat (incl. canned meat)	Processed meat and other products containing meat (incl. canned meat)
1.1.2.9 Other meats (fresh and frozen) (horse, edible offal, rabbits, game, marine mammals)	1.1.2.9.a Offal 1.1.2.9.b Other meats (eg. horse, rabbits, game, marine mammals)
<u>1.1.3 Fish</u>	<u>1.1.3 Fish</u>
1.1.3.1 Fish (fresh & frozen)	Fish (fresh and frozen)
1.1.3.2 Fish, dried & smoked	Fish, dried & smoked
1.1.3.3 Crustacean & other seafood (fresh or frozen)	Crustacean and other seafood (fresh or frozen)
1.1.3.4 Other fish products (canned or processed) (caviar and its substitutes, canned fish and canned crustaceans)	Other fish products (canned or processed) (caviar and its substitutes, canned fish and canned crustaceans)

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<u>1.1.4 Milk cheese and eggs</u>	<u>1.1.4 Milk cheese and eggs</u>
1.1.4.1 Whole milk	1.1.4.1 Whole milk (incl. pasteurized, sterilized milk)
1.1.4.2 Lower fat milk	1.1.4.2 Lower fat milk (semi-, skimmed-milk)
1.1.4.3 Preserved milk (powder and condensed)	1.1.4.3.a Powdered 1.1.4.3.b Condensed
1.1.4.4 Yoghurts	1.1.4.4 Fermented milk products (except cheese) and whey (eg. yoghurt, buttermilk, kefir, kummiss)
1.1.4.5 Cheese	1.1.4.5 Cheese
1.1.4.6 Other milk based products (milk based desserts, fresh cream, milk based beverages)	1.1.4.6 Other dairy products (milk based desserts, fresh cream, milk based beverages /excl. ice cream)
1.1.4.7 Eggs	1.1.4.7 Eggs
<u>1.1.5 Oils and fats</u>	<u>1.1.5 Oils and fats</u>
1.1.5.1 Butter	1.1.5.1 Butter
1.1.5.2 Margarine and other vegetable fats (incl. peanut butter)	1.1.5.2.a Margarine 1.1.5.2.b Other vegetable fats (eg. peanut butter, palm butter, etc. /margarine excl.)
1.1.5.3 Olive oil	1.1.5.4 Olive oil
1.1.5.4 Edible oil (except olive oil)	1.1.5.5 Vegetable oil (except olive oil)
1.1.5.9 Other animal fat (incl. lard)	1.1.5.9 Other animal fat (eg. lard, pure fat bacon) 1.1.5.9.a Mixed animal-vegetable fats

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<u>1.1.6 Fruits</u>	<u>1.1.6 Fruits</u>
1.1.6.1 Oranges (orange, lemon, mandarin, grapefruit, etc)	1.1.6.1 Oranges (orange, lemon, mandarin, grapefruit, etc)
1.1.6.2 Bananas	1.1.6.2 Bananas
1.1.6.3 Apples	1.1.6.3 Apples
1.1.6.4 Pears	1.1.6.4 Pears
1.1.6.5 Stone fruits (apricot, plum, peach, avocado, cherries, etc)	1.1.6.5.a Peaches, apricots, nectarines, etc 1.1.6.5.b Cherries 1.1.6.5.c Plums 1.1.6.5.d Avocado
1.1.6.6 Berries (grapes, strawberries)	1.1.6.6.a Strawberries 1.1.6.6.b Other berries 1.1.6.6.c Grapes
1.1.6.7 Other fresh fruits (other tropical fruit, melon, etc)	1.1.6.7.a Melons 1.1.6.7.b Other tropical fruits (avocado excl) 1.1.6.7.c Other fresh fruits
1.1.6.8 Dried fruits	1.1.6.8.a Dried fruits 1.1.6.8.b Nuts / with shells 1.1.6.8.c Nuts / without shells 1.1.6.8.d Chestnuts (with shells)
1.1.6.9 Frozen & preserved fruits (incl. babyfood or dietary food based exclusively on fruit)	1.1.6.9 Frozen & preserved fruits (incl. babyfood or dietary food based exclusively on fruit)

THE DAFNE PROJECT (Data Food Networking)

1.1.7 Vegetables (other than potatoes and other tubers)	1.1.7 Vegetables (other than potatoes and other tubers)
1.1.7.1 Leaf and stem vegetables and culinary herbs (lettuce, chicory, endive, celery, cress, spinach, parsley, etc)	1.1.7.1 Leaf and stem vegetables and culinary herbs (lettuce, chicory, endive, celery, cress, spinach, parsley, etc)
1.1.7.2 Cabbages (broccolis, cauliflower)	1.1.7.2 Cabbages (broccolis, cauliflower)
1.1.7.3 Vegetables grown for their fruit (cucumber, tomato, aubergine, courgette, sweetcorn, beans, etc)	1.1.7.3.a Tomato 1.1.7.3.b. Cucumber, courgette, pumpkin, etc 1.1.7.3.c Paprika, peppers 1.1.7.3.d Other fresh vegetables grown for their fruit (eg. aubergine, asparagus, artichoke) 1.1.7.3.e Fresh husks (green beans, peas, et.)
1.1.7.4 Root crops, non-starchy bulbs and mushrooms (incl. carrot, beet root, radish, turnip, onion, leek, asparagus, artichoke, etc / excl. garlic, other spices and condiments)	1.1.7.4.a Mushrooms 1.1.7.4.b Onions and shallots 1.1.7.4.c Other root crops, non-starchy bulbs (eg. carrot, beet root, radish, turnip, leek, asparagus, artichoke)
1.1.7.5 Dried vegetables	1.1.7.5.a Dried vegetables
1.1.7.6 Frozen vegetables	1.1.7.5.b Pulses 1.1.7.6 Frozen vegetables
1.1.7.7 Preserved and processed vegetables and other vegetable products (incl. babyfood or dietary food based exclusively on vegetables)	1.1.7.7.a Pickles 1.1.7.7.b Other preserved and processed vegetables and other vegetable products (incl. babyfood or dietary food based exclusively on vegetables)
1.1.7.8 Potatoes	1.1.7.8 Potatoes
1.1.7.9 Potato products; manioc and other tuber vegetables (incl. flakes, crisps, sweet potatoes, etc. / excl. potato starch, tapioca, soups)	1.1.7.9.a Potato products / Without added lipids (eg. flakes, puree) 1.1.7.9.b Potato products / With added lipids (eg. frozen chips, croquettes) 1.1.7.9.c Other tubers (eg. manioc)

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<p><u>1.1.8. Sugar, jam, honey, chocolate and confectionery</u></p> <p>1.1.8.1 Sugar (canned or beet sugar refined or unrefined)</p> <p>1.1.8.2 Jam, marmalade, honey (incl. compotes and jellies)</p> <p>1.1.8.3 Chocolate</p> <p>1.1.8.4 Confectioneries (chewing gum, sweets, etc)</p> <p>1.1.8.5 Edible ice</p> <p>1.1.8.6 Other sugar products (dietary, culinary and baby food products -more than 50% cocoa-, dessert preparations, syrup for culinary use / excl. syrup for the preparation of beverages)</p>	<p><u>1.1.8. Sugar, honey, chocolate and confectionery</u></p> <p>1.1.8.1 Sugar (canned or beet sugar refined or unrefined)</p> <p>1.1.8.2.a Honey, syrup</p> <p>1.1.8.2.b Marmalade, jam, jelly</p> <p>1.1.8.2.c Compotes</p> <p>1.1.8.3 Chocolate and chocolate products</p> <p>1.1.8.4 Confectioneries (chewing gum, sweets, etc)</p> <p>1.1.8.5 Edible ice (dairy and non-dairy)</p> <p>1.1.8.6 Other sugar products (dietary, culinary and baby food products -more than 50% cocoa-, dessert preparations, syrup for culinary use / excl. syrup for the preparation of beverages)</p>
<p><u>1.1.9. Salt, spices, sauces, and food products n.e.c</u></p> <p>1.1.9.1 Sauces & condiments (mustard, ketchup, vinegar)</p> <p>1.1.9.2 Salt and spices (incl. garlic, ginger, pimento, etc)</p> <p>1.1.9.3 Soups, preparations, yeast (incl. babyfood or dietary food preparations -except those mentioned above-, baker's yeast and powders)</p> <p>1.1.9.9 Other food products n.e.c</p>	<p><u>1.1.9. Salt, spices, sauces, and food products n.e.c</u></p> <p>1.1.9.1 Sauces & condiments (eg. mustard, ketchup, vinegar)</p> <p>1.1.9.2.a Salt</p> <p>1.1.9.2.b Garlic</p> <p>1.1.9.2.c Spices (eg. ginger, pimento)</p> <p>1.1.9.3.a Soups, preparations, yeast (incl. babyfood or dietary food preparations -except those mentioned above-, baker's yeast and powders)</p> <p>1.1.9.9.a Savory snacks (potatoes crisps excl.)</p> <p>1.1.9.9.b Soya products</p> <p>1.1.9.9.c Artificial sweeteners</p> <p>1.1.9.9.c Other food products</p>

THE DAFNE PROJECT (Data Food Networking)

1.2 BEVERAGES	1.2 BEVERAGES
<u>1.2.1 Coffee, tea, cocoa</u>	<u>1.2.1 Coffee, tea, cocoa</u>
1.2.1.1 Coffee	1.2.1.1.a Coffee powder 1.2.1.1.b Instant coffee 1.2.1.1.c Coffee substitutes
1.2.1.2 Tea, infusions	1.2.1.2.a Tea 1.2.1.2.b Herbal infusions
1.2.1.3 Cocoa	1.2.1.3 Cocoa powder (incl. instant)
<u>1.2.2 Other non-alcoholic beverages</u>	<u>1.2.2 Other non-alcoholic beverages</u>
1.2.2.1 Mineral water	1.2.2.1 Mineral water
1.2.2.2 Soft drinks (incl. sodas, lemonades)	1.2.2.2.a Ordinary soft drinks (incl. cola type drinks, lemonades) 1.2.2.2.b Light soft drinks (incl. sodas)
1.2.2.3 Fruit juices (incl. syrups for the preparation of beverages)	1.2.2.3 Fruit juices (incl. syrups for the preparation of beverages)
1.2.2.4 Vegetable juices	1.2.2.4 Vegetable juices
<u>1.2.3 Alcoholic beverages</u>	<u>1.2.3 Alcoholic beverages</u>
1.2.3.1 Spirits (liqueurs, brandies, aperitifs other than wine-based)	1.2.3.1 Spirits (liqueurs, brandies, aperitifs other than wine-based)
1.2.3.2 Wine (incl. champagne and sparkling wines)	1.2.3.2 Wine (incl. champagne and sparkling wine)
1.2.3.3 Beer	1.2.3.3 Beer
1.2.3.4 Other alcoholic beverages (eg. cider, wine-based aperitifs, etc)	1.2.3.4 Other alcoholic beverages (eg. cider, wine-based aperitifs, etc)

THE DAFNE PROJECT (Data Food NEtworking)

	1.9 MEALS CONSUMED OUT OF HOME
9 HOTELS, CAFES, RESTAURANTS	
9.1 Catering	
9.1.1 Restaurants, cafes	1.3.1 Chocolates and confectionery
9.1.1.1 Restaurants (holidays) (meals incl.)	1.3.2 Alcoholic beverages
9.1.1.2 Restaurants (others) (meals incl.)	1.3.3 Non-alcoholic beverages
9.1.2 Canteens	1.3.4 French fries, chips and other savory snacks
9.1.2.0 Canteens	1.3.5 Sandwiches, hamburgers, pizzas, hot dogs, pies, toasts
	1.3.6 Bakery products
	1.3.7 Salads
	1.3.8 Complete dishes / Menu





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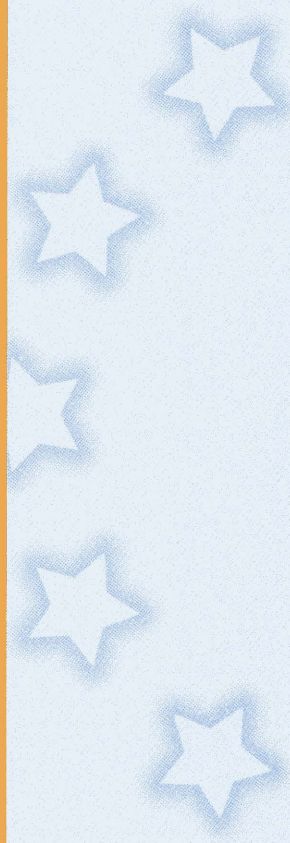
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